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FINDNPARK ANDROID APP

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ABSTRACT

Last few years India use more car and bike, that's why the number of cars and bikes has increased, and various problem arrives, one of the measure problem is to find a parking spot for park car or bike, for this reason we make a app for finding parking slot. To make things easier for parking car or bike of owner it is important to have app for finding parking slot. Searching for the parking space is a time consuming, when you visiting shopping mall, cinema hall or unknown area then it's really hard to find parking space. Using this app the driver can select the desire spot to park. And also we have given the total no. of empty slot and where the parking slot is, this help driver to park easily.

Keyword: - Application, Google Map APIs/SDK, Android Studio

1. Introduction

In this project we introduce the concept of FindNPark Android app which is based on android version 5.0 lollipop or above. This project is implemented using Android Studio, Google maps API and SDK.. When user can't find parking slots for parking car nearby him, then he can use our app for finding slot. This app will be very useful for those people who are visiting new places and those people who don't know much about the new places.

Living in urban area could get little hectic, especially when you are out in your car for some reason and need to find parking slot for park your car, and like everyone follow traditional way to of driving around the parking area, to find the free space but what when there is no free slot for park your car, you lost your time and also fuel. For finding parking slot you can use FindNPark app this app will help you to finding parking slot and booking slot.

This app saves your time and also your fuel. And this app show exact location of closest parking area. And you can book parking slot even before entering a parking slot

2. SCOPE OF PROJECT AND LIMITATION

a) Scope

- It can be used without Sign-Up process.
- Easy to use and find exact location of parking space.
- It's save your time and fuel.

b) Limitations

- It requires android smartphone.
- It requires internet connection.
- It cannot run on computer system.

3. BASIC CONCEPT OF APPLICATION

This application use for finding parking slot and booking slot even before entering a parking slot, this app not use camera for scanning purpose. It directly book parking slot.

4. MODULES IN APPLICATION

- Find exact location
- Get information about free space
- Book Parking slot

5. REQUIREMENT GATHERING

The developer will be responsible for controlling the system and user can find parking slot according to his need and book the slot before entering the slot.

The developer will be executive of upgrade the app features as well as the requirement of users, and the developer will also be executive for maintaining the app through finding the bug.

5.1 Business Problem

The main objective if this app is to save time and make it easier to locate the free space in a parking slot without any external help of a third person. It shows the real time location of the free space and also tells the route map to the location not only tells about the free space but also tells the map

5.2 Solution Approach

Everyone knows how mobile applications have become an inevitable part of our lives. We spend most of our time on mobile applications. This is because the world has turned out to be digital and mobile application are the only source to do day by day activities. This is the why number mobile application development is increasing day by day. FindNPak app helps one of the measure problems in driving in urban areas is finding a empty parking slot.

5.3 Proposed System

It allows pre-booking and the system allows users to give individual parking preferences. The system checks if any parking slot is free and finds the best available parking slot according to user requirement.

5.4 Proposed process of The App



Fig.1 Proposed System

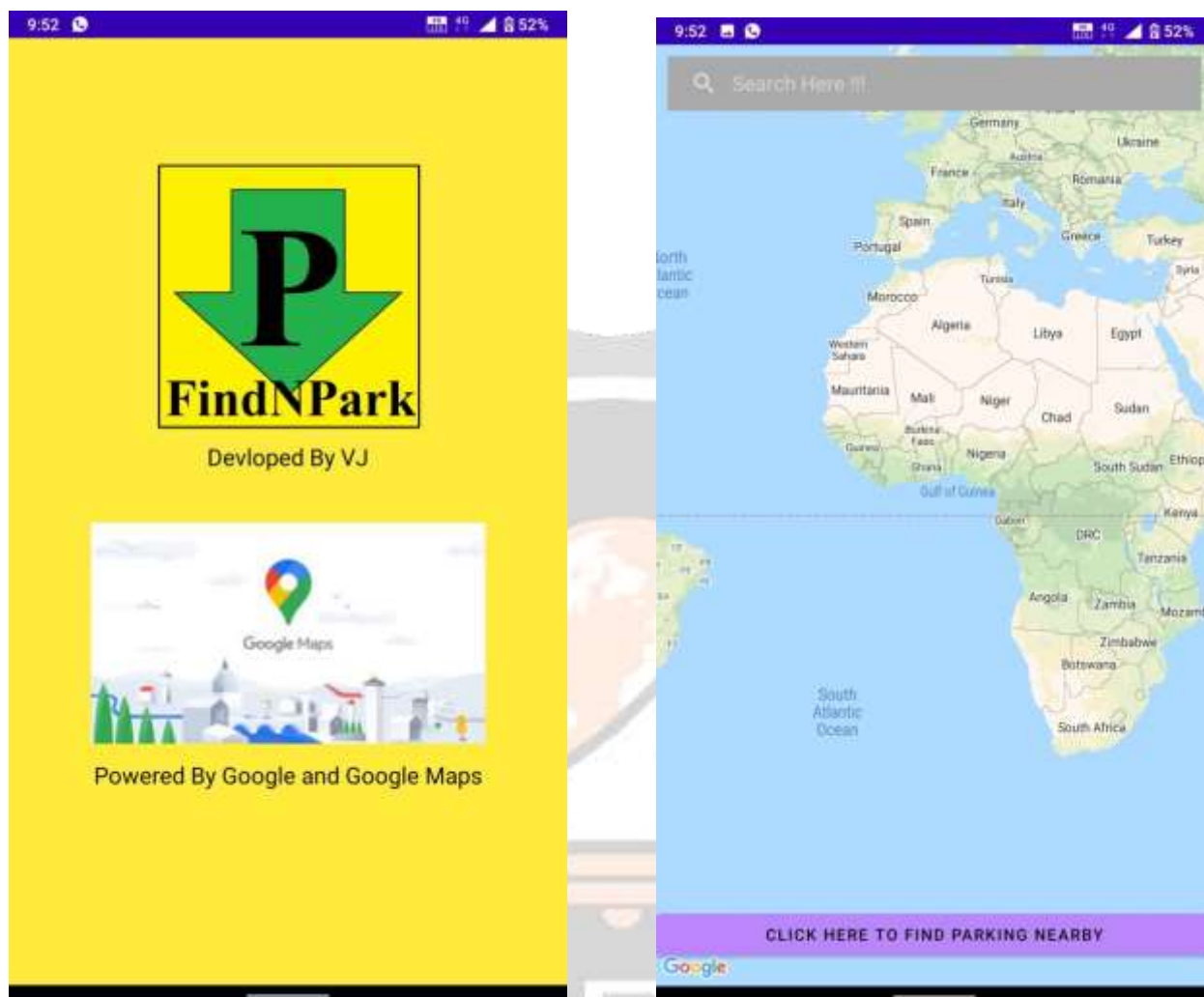
5.6 Technology Survey

Android is an open source application, Linux-based software stack which is created for a wide area of device and from factor. The below diagram shows the major components of the Android platform



Fig.2 Android Architecture

5.7 Demo App Screenshot



CONCLUSION

In the past five years, the usage of smart phone has been increasing rapidly most of people are using android mobile device which in turn enhance the scope of developing android application, android application is an open source platform and this app only for android mobile devices.

The application is used to select a parking slot even before entering the lot for parking vehicle. This app save your time as well as fuel you don't need to driving around the parking area it's just waste of your time and fuel.

This application is compatible with several version of android ranging 5.0lollipop to recent android version.

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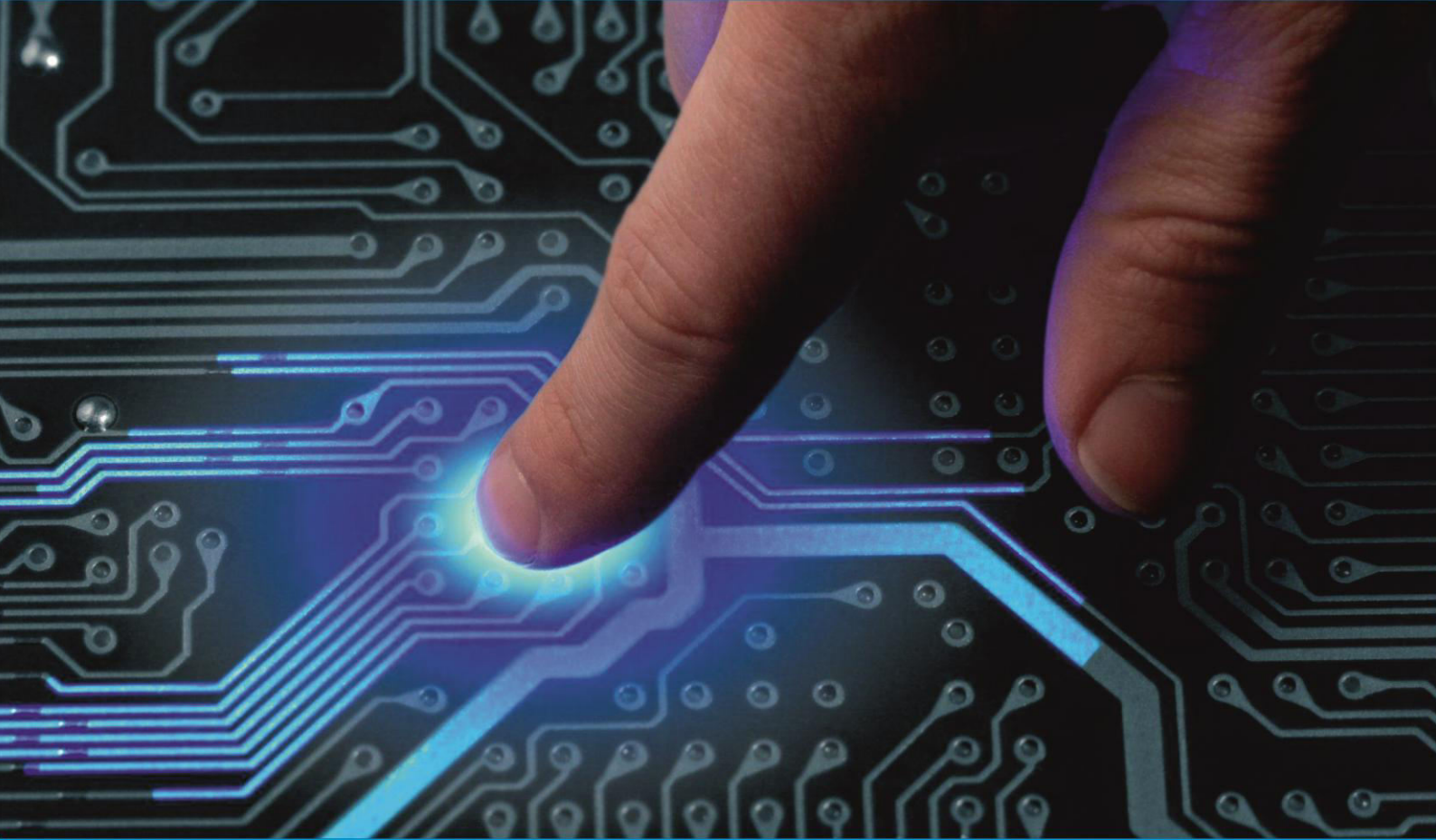
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IOT Based Patient Health Monitoring System

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ABSTRACT: With tons of new healthcare technology start-ups, IoT is rapidly revolutionizing the healthcare industry. In this project, we have designed the IoT Based Patient Health Monitoring System using Arduino. This IoT device read the pulse rate and measure the surrounding temperature. It continuously monitors the pulse rate and surrounding temperature and updates them to an IoT platform with the help of lcd display.

The Arduino Sketch running over the device implements the various functionalities of the project like reading sensor data, converting them into strings, passing them to the IoT platform, and displaying measured pulse rate and temperature on character LCD.

KEYWORDS: Arduino, Pulse Sensor, Temperature Sensor, LCD Display.

I. INTRODUCTION

The main concept of the project is to collect the data of patient with the help of pulse sensor and temperature sensor with the help of iot. The Arduino board which collect the data of patient health like temperature and the heart beat of the patient with the help of the temperature sensor and the pulse rate sensor and the collected data of the patient health will be the display on the LCD display board. The temperature sensor and the pulse sensor which sends the data to the Arduino board and that data will send to the LCD display board. These IoT based health monitoring system which help the patient to check the status of the health of the patient immediately. If the temperature and the pulse rate is high or low of the patient then patient need to be hospitalized immediately. Today some of the take too much stress and these stress affect on the health and you don't know about your health but this IoT devices help to check your health status day-to-day.

II. LITERATURE REVIEW

1. This project is a proposed design to check the status of the health of the patient in day-to-day in daily life. The IoT based health monitoring system is used to check the temperature and pulse rate of the patient.
2. The Arduino board which collects the data of the patient with the help of the temperature sensor and the pulse sensor and this data Arduino will send to the LCD display board.
3. This device is much cheaper than the other health monitoring system available in the market.

III. DESIGN

3.1 Architectural model of Patient Health Monitoring System

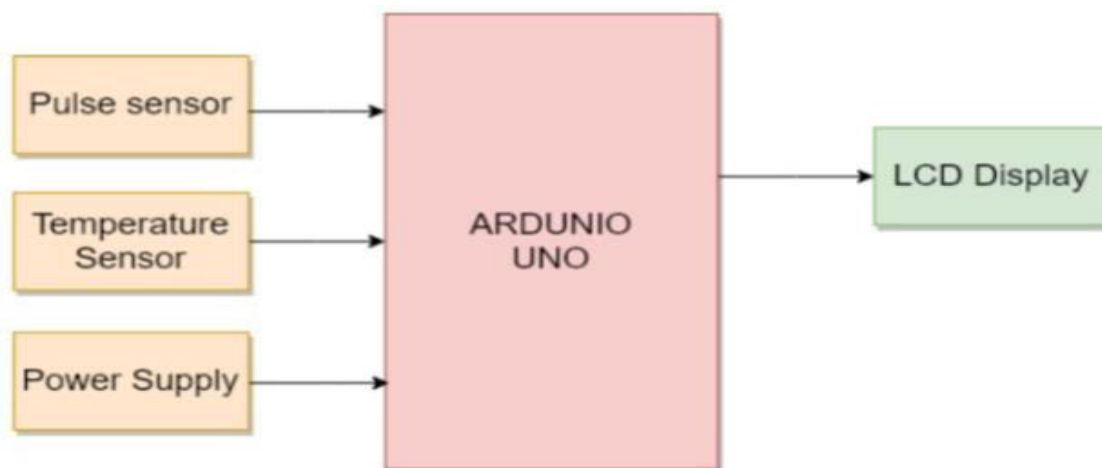


Fig-1: Architectural model for Patient Health Monitoring System

Sender/Receiver side: The arduino which collect the data of the patient and send to the LCD display Board.

Internal working side: Arduino UNO supplies power to all devices either by taking power from the battery and the pulse sensor and the temperature sensor send the data of the patient to the arduino uno board .these data which sends to the display board with the help of the arduino uno board. The temperature sensor is responsible for the sending the data of the patient to the arduino .the pulse sensor which is also responsible for the sending the data of heart beat of the patient to the arduino. The power supply is managed by the arduino.The LCD display which collect the data of the patient like temperature and the pulse rate through the arduino uno board.

3.2 Circuit Diagram of Patient Health Monitoring System

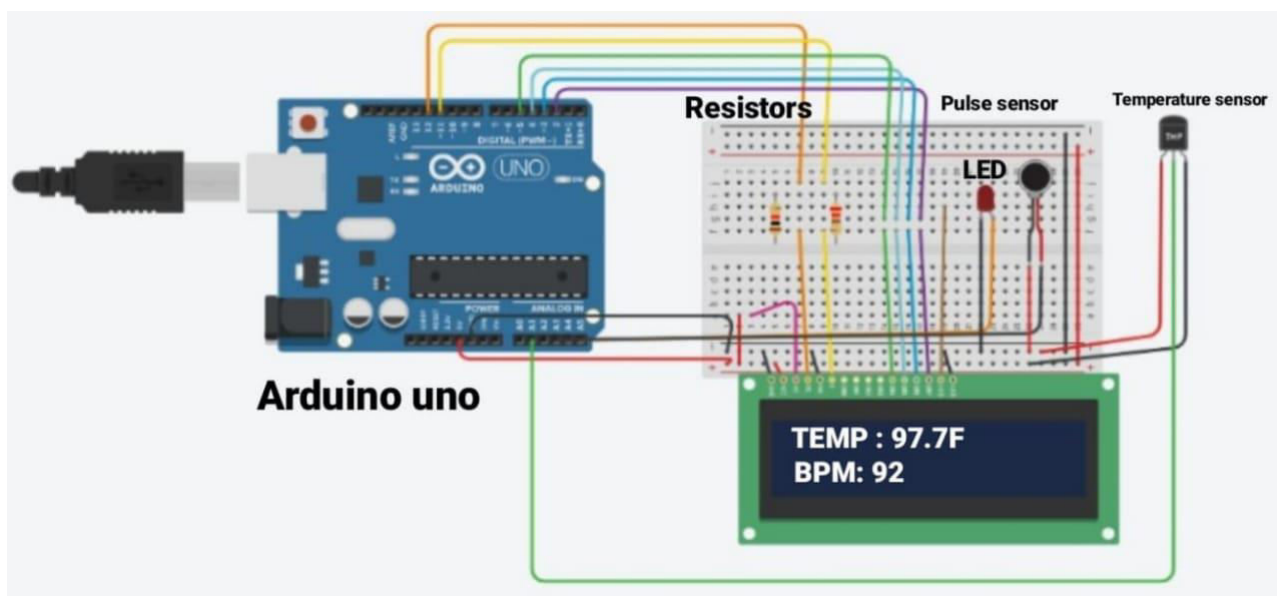


Fig-2: Circuit Diagram for IOT Based Health Monitoring System



The circuit contains Arduino UNO Board, temperature sensor, pulse sensor and the LCD display. In this circuit we use 1k and 2k resistor to control the voltage of power supply for the Arduino Uno board. Pin 1: Ground: Connected to the ground of the circuit. Pin 2: Tx/GPIO – 1: Connected to Rx pin of programmer/usb to upload program. Pin 3: GPIO – 2: General purpose Input/output pin. Pin 4: CH_EN: Chip Enable/Active high. Pin 5: Flash/GPIO – 0: General purpose Input/output pin. Pin 6: Reset: Resets the module. Pin 7: RX/GPIO – 3: General purpose Input/output pin. Pin 8: Vcc: Connect to +3.3V only

3.3 IOT Based Patient Health Monitoring System Requirements

3.3.1 Hardware Requirements:

- Arduino UNO
- LCD Display
- Pulse Sensor
- Temperature Sensor
- Resistors (1K, 2K)
- LED (5mm LED any Color)
- Jumper Wires

3.3.2 Software Requirements:

- Windows OS
- Arduino IDE Software

IV. WORKING

- According to the diagram shown in Fig-1, the project module consists of Arduino, Pulse Sensor and LM35 Temperature Sensors measure BPM & Environmental Temperature respectively. The Arduino processes the code and displays it to 16*2 LCD Display. The data of patient with the help of pulse sensor and temperature sensor with the help of IoT. The Arduino board which collects the data of patient health like temperature and the heart beat of the patient with the help of the temperature sensor and the pulse rate sensor and the collected data of the patient health will be displayed on the LCD display board. The temperature sensor and the pulse sensor which send the data to the Arduino board and that data will send to the LCD display board. This IoT-based health monitoring system which helps the patient to check the status of the health of the patient immediately.

4.1 Steps to connection of circuit

1. Connect Pulse Sensor output pin to A0 of Arduino and other two pins to VCC & GND.
2. Connect LM35 Temperature Sensor output pin to A1 of Arduino and other two pins to VCC & GND.
3. Connect the LED to Digital Pin 7 of Arduino via a 220-ohm resistor.
4. Connect Pin 1, 3, 5, 16 of LCD to GND.
5. Connect Pin 2, 15 of LCD to VCC.
6. Connect Pin 4, 6, 11, 12, 13, 14 of LCD to Digital Pin 12, 11, 5, 4, 3, 2 of Arduino.

Advantages of Patient Health Monitoring System.

- a) Remote monitoring: Real-time remote monitoring via connected IoT devices and smart alerts can diagnose illnesses, treat.
- b) Prevention: Smart sensors analyse health conditions, lifestyle choices and the environment.
- c) Reduction of healthcare costs: IoT reduces costly visits to doctors and hospital admissions and makes testing.

Disadvantages of Patient Health Monitoring System.

- a) It requires interoperability tests to be conducted before launching the IoT system for use. This will incur costs on the IoT device manufacturers and network service providers.

- b) It will take some time for IoT system to become completely stable as there are new and upcoming standards being integrated in the IoT system. Common IoT architecture will help in this regard.

V. RESULTS AND CONCLUSION

- Proposed system can be used to monitor the patient's temperature and heart beat rate continuously, effectively and remotely.
- The doctor can observe patient's health remotely from anywhere across the world and depending upon measures can give consultation and patient needs not to go for O.P.D.(Out Patient Department) in hospital.
- Thresholds have been set for both temperature and heart beat rate. If any one or both of the values cross the threshold then notification is given on the smart phone by the BLYNK app that we used.
- Also proposed system is cost effective as components used are affordable. It's compact in size, light weight and easy for carrying along with patient anywhere.
- The proposed system is a systematic and acceptable for effective assistance to the heart patients.

VI. FUTURE WORK

The future scope for this project is sensing and displaying other parameters of a patient like ECG, blood pressure, glucose level. Also GPS can be used to enhance this project. The GPS can find the position of patient and this technology can help the doctor to take preventive actions

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AUTOMATIC DUSTBIN USING ARDUINO NANO

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ABSTRACT

The main objective of the project is to make an Automatic/ contactless dustbin that will help keeping our environment hygienic and also germ-free. We are inspired by Swachh Bharat Mission which was initiated by our prime minister Narendra Modi. Nowadays technologies are getting smarter day-by-day so, to clean the environment we are designing a smart dustbin by using Arduino. This Automatic dustbin system is made on a microcontroller-based system having ultrasonic sensors on the dustbin. If dustbin is not looked after properly then that will cause an ghoulish environment and can cause air pollution in that area that affect everyone's health living in that area. In this proposed technique we have designed a automatic dustbin using Arduino Nano, along with an ultrasonic sensor (HC-SR04), servo motor. After the connections are completed, now Automatic Dustbin will work properly. Dustbin lid will be open when someone comes near at some range of ultrasonic sensor then wait for 10 seconds to put the garbage and close it. This is a low cost project so that everyone can take benefit of this and this will help in forming a clean and germ-free society.

Keywords: Arduino Nano, Automatic Dustbin, Contactless Dustbin.

I. INTRODUCTION

The rate increasing population in our country has increased rapidly and also, we have an increase in garbage which have increased environmental issue. The dustbin is a container that collects garbage or stores items that recyclable or non-recyclable, decompose and non-decompose. They are usually used in homes, office, etc., but in case they are full no one is there to clean it and the trash is spilled out. The pollution level is also conducive due to the dustbin surroundings. Air pollution due to a dustbin can produce bacteria and viruses which can produce life harmful diseases for humans. Therefore, we have made a Automatic dustbin using Arduino Nano, which will sense the item when it will be near to the sensor then the dustbin lid will open using the motor. This project will bring a replacement and smart way of cleanliness. It is an excellent gadget to form your home clean, practically all offspring of home consistently make it grimy and spread litter to an excellent extent by electronics, wrappers, and various other things. Since the smart dustbin is additionally exciting and children make fun with it so it will help to maintain cleanliness in the home. It will be applied to various types of waste. Dustbin will open its lid when someone/object is in range of 10cm to 20cm then it will wait for a 10 seconds then it will close automatically. Here lid will close when you don't want to use and it will only open when required.

II. METHODOLOGY

Automatic/contactless dustbin is an project based on Internet Of Things. We will be using Arduino IDE for uploading the code, for detecting the object we will be using ultrasonic sensor(HC-SR04) . It will bring severe changes in term of cleanliness with the help of technology. Everything is getting smart with technology for the advancement of human being. So this will help in maintaining the environment clean with the help of technology. It is a sensor based dustbin so it is easy to access/use for any age group.

Our other aim is to make this cost effective so that number of people can get the benefit from this contactless dustbin. And this should be usable to anyone and helpful for them.

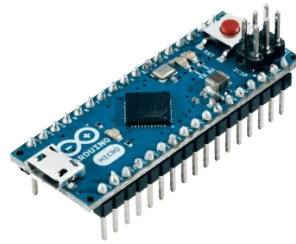
Given below is the hardware required to complete this project

2.1 Required Software

1. ARDUINO IDE

1.2 Required Hardware:

1. ARDUINO NANO



2. ULTRASONIC SENSOR



3. SERVO MOTOR



4. 9V BATTERY

5. DUSTBIN

6. JUMPER WIRES

III. WORKING AND CIRCUIT CONNECTIONS

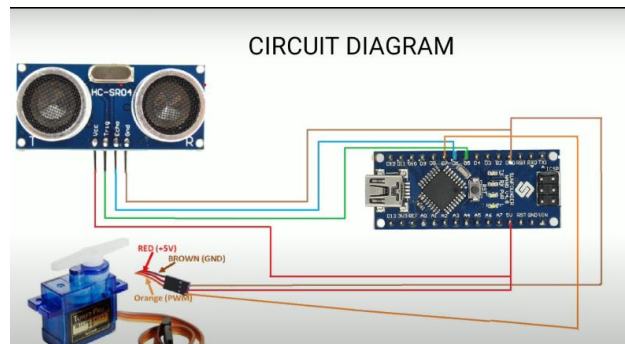


Figure 1. Circuit Diagram

After connecting all components to the Arduino nano first upload the code by connecting the USB cable to the Arduino nano and a pc . First compile the code then upload it using Arduino IDE.

When system is powered ON, Arduino keeps checking for any things that come near the sensor at give range using the ultrasonic sensor.

When Ultrasonic sensor(HC-SR04) detect any object Arduino determines if it has to give command to servo motor to open the lid or not. If the threshold value is less than that of given during coding then lid will open or else it will not open.

Lid will open for 10 seconds which is given in the code and then it will automatically close.



Figure 2. Actual Project

IV. CONCLUSION

Here we are getting to make evolution changes toward cleanliness. The project is equipped with smart devices like ultrasonic sensor, Arduino etc. The lid of the dustbin will automatically open when an object comes near the sensor and after 10 seconds, it'll close the lid. It will help the society to form clean and hygienic environment, we will try to make this affordable to several as many possible so that everyone can use it. Believe this may bring something changes in term of cleanliness also technology. So our next work are going to be adding another sensor which can sense whether our dustbin is full or not. And there'll be a display are going to be added in order that the user can notify the dustbin is full or not.

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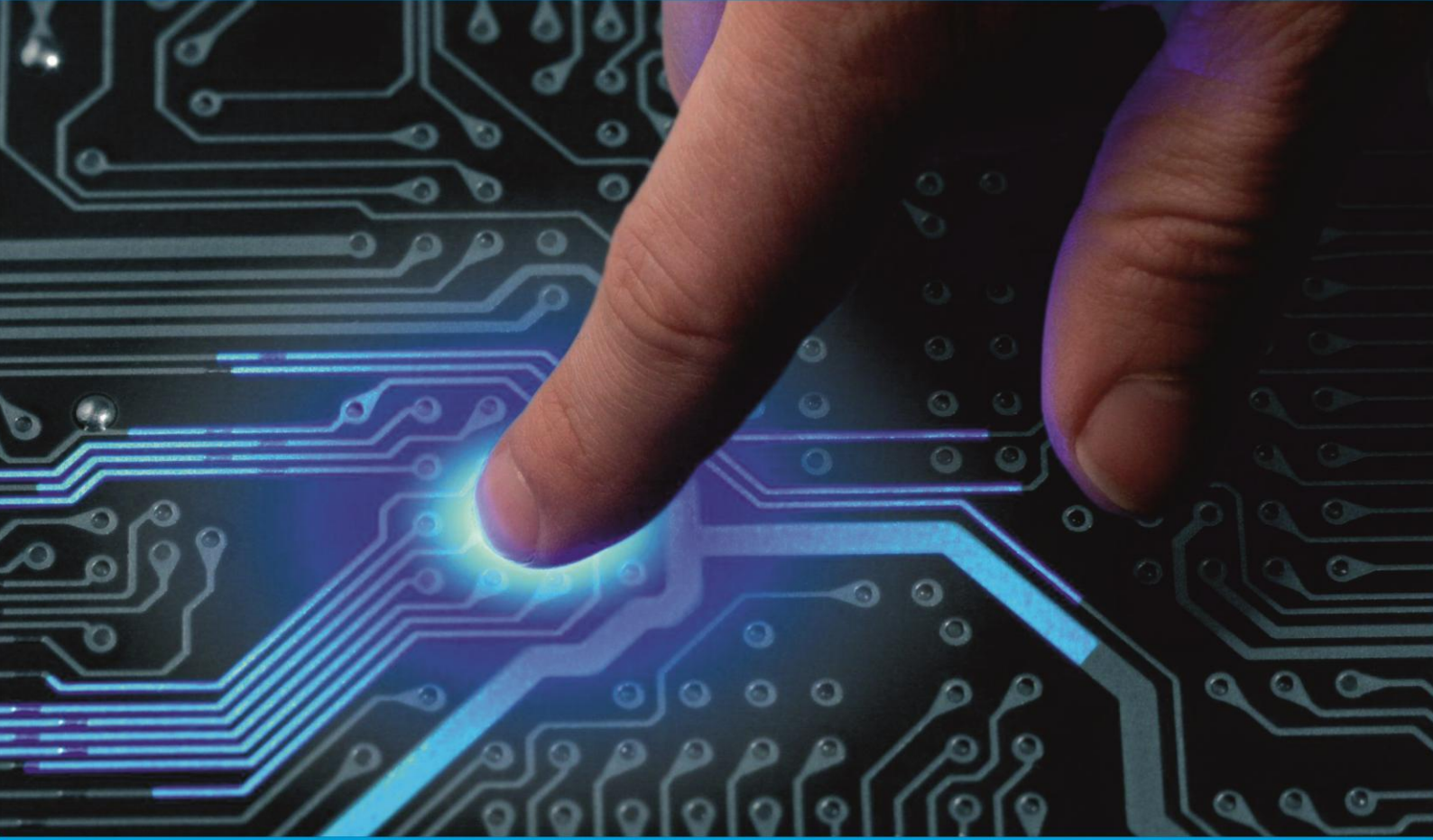
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A Survey on Automatic Agriculture's System using Soil Moisture

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ABSTRACT: This Project is proposed on precision agriculture machine over the Internet of Things (IOT). Through reading the contemporary development of precision agriculture in out of doors global and thinking about its benefits and shortcomings, we pick out an ecology farm for example to behavior a brand new precision agriculture control machine (PAMS). Designing a non-public Internet of Things (IOT) enabled platform for the studies in precision agriculture and ecological monitoring domains. As water substances grow to be scarce because of climatically trade, there's an pressing need to irrigate more efficaciously in order to optimize water use. In this context, farmers' use of a choice-guide device is unavoidable. Indeed, the real-time supervision of microclimatic conditions are the handiest way to realize the water desires of a tradition. Wireless sensor networks are playing an important function with the advent of the Internet of factors in the community of the farmers. It could be judicious to make supervision viable thru Sensors.

I. INTRODUCTION

Nowadays, agriculture wishes equipment and generation to improve the efficiency and pleasant of manufacturing and reduce the environmental impact on the crop. The wireless sensor network in agriculture can also carry out the essential contribution to precision agriculture. The precision agriculture is described because the method of applying the proper amount of enter (water, fertilizer, pesticides and so forth.) at the right location and at the proper time to decorate production and enhance first-class, even as defensive the surroundings. A wireless sensor network is a collection of nodes organized into a cooperative network. Each node includes processing capability. It includes one or extra microcontrollers, CPUs or DSP chips, may also incorporate a couple of kinds of memory (software, data and flash reminiscences), have a RF transceiver (normally with a unmarried omni-directional antenna), have a strength source (e.G., batteries and solar cells), and accommodate diverse sensors and actuators. The nodes communicate wirelessly and frequently self-arrange after being deployed in an advert hoc fashion.

II. LITERATURE SURVEY

It is discovered that farmer endure massive monetary loss due to wrong prediction of weather and incorrect irrigation method to crops. With the evolution of IoT generation in agriculture now it is possible to use them for automatic environment tracking and controlling the parameter of area for precision agriculture application. One of the essential troubles present today is the much less expertise of the soil content & kinds, less know-how of the type of fertilizers to be added, the irrigation quantity and pattern depending at the soil porosity and its water retention capacity. In the present day Indian state of affairs analysis of soil to boom crop yields is not getting used to a massive quantity broadly speaking due to the price worried and the inaccessibility of labs providing such checking out facilities. Moreover due to large length of land the process of sending soil samples to a lab could now not represent the entire land.

III. MODULE IDENTIFICATION

Modules:

1. Hardware Module
2. Converter: This is used to convert hardware communicate into Java layout. Then we insert this into the mysql database.
- three. Web Interface: This module is used for the graphical view to check water devour. We will show Barchart of everyday water consumption.



IV. MODULE DESCRIPTION

Smart irrigation system is an effective and green manner of watering fields. It monitors weather, soil conditions, evaporation and plant water use and automatically adjusts watering time table. Hence drawing close clever irrigation machine has turn out to be a top difficulty to give farmer a smart tool which might help them in yielding quality plants three billion populations. India occupies 2nd rank in rice export and as rice crop require large amount of water for irrigation cause, therefore clever irrigation has tremendous importance in India. In clever irrigation challenge we use unique sorts of sensor to make a farmer updated approximately the field. Sensors used are - soil moisture sensor, water drift sensor and temperature sensor(ds18b20) like a sensor that may calculate the amount of water used in the subject, a soil moisture sensor that can calculate the moisture profile of the field if you want to prevent crops from water logging issues and a temperature sensing sensor so that you can still test the temperature of the crops because plants are temperature touchy too and if the smart system conscious the farmer earlier than then farmer can use sprinklers a good way to cool down temperature of the crops it might save each crop and farmer. Our method is to make this device on hand from even a ways distance in order that farmer has the information and control on the field 24x7 for the duration of a year. The entire setup is controlled by means of an arduino.

Features:

- ♣ Introduce an emerging technology like IoT into conventional methods of agriculture.
- ♣ To keep water and decrease human intervention within the agriculture discipline.
- ♣ Enhance digital literacy into farmers.
- ♣ Continuously monitoring the status of moisture degree in soil and provide sign for taking important motion

V. CONCLUSION

Our gadget facilitates to create automation in agriculture subject. The soil Moisture Sensor that's applied in farm-discipline Sense the moisture stage of soil. According to the moisture stage the System Decision Support System (DSS) allows that the Watering i.E. Motor can start irrigation. According to the irrigation time the gadget develops a graph which suggests the overall usage of water day-sensible; then it'll helps to control and maintains the statistics of complete water utilization of that particular farm it could generate the complete yr water usage of that farm

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WORDPRESS BASED ONLINE SALON BOOKING SYSTEM

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ABSTRACT

Swapnali Beauty Parlor is a web-based salon management programme that includes appointment scheduling. It creates an online community for clients, salons, and stylists, allowing users to explore salons and stylists and schedule or cancel appointments. Users may also leave and read reviews on salons and specific stylists. Salons can define the stylists that work there as well as the services they provide. Salons may also arrange appointments for their customers, as well as see and print schedules in a variety of formats. In the restaurant business, OpenTable.com fills a similar demand, but nothing exactly like this existed to connect clients and beauty shops online. Swapnalibeautyparlor.com solves this need in an on-demand, user-friendly, and effective approach for users and salon management. Wordpress will be used in my project to provide powerful database capabilities to the UI. SalonBook will combine WebCalendar as a backend database for appointments as well as a front-end scheduling tool for appointment scheduling. WebCalendar is a PHP-based calendaring application that may be used as a standalone application or incorporated into other programmes. As the first platform for the Beta version, this project will target the major web browsers. The ultimate output will be a fully functional web application that can handle all of the use cases given. Appointment scheduling, schedule viewing and printing, adding stylists and services to a salon account, adding schedules to a stylist account, accumulating points in a client account, posting and reading reviews for specific salons and/or services, and establishing temporary salon promos that users can browse and filter are some of the key use cases.

Keywords: Salon Booking. Appointment Scheduling, Website, Booking. Shopping.

I. INTRODUCTION

Being a salon customer nowadays is inconvenient. You have to remember that you need to schedule an appointment, then pray that you remembered within business hours, then scurry to find the phone number and take time out of your busy day to call. And forget about obtaining user ratings of local salons and stylists; locating such on the internet is a pain that most people avoid. This is the daily reality of innumerable salongoers, even as we enter the twenty-first century. There is a clear, expressed need for a "one-stop-shop" web portal that connects clients to salons, delivering all the information customers want in one accessible, on-demand location. Surprisingly, many salons still use paper and pencil systems to schedule appointments and manage customers today. These systems are ineffective in exchanging and synchronising information, and they are prone to expensive human mistake. Swapnali Beauty Parlor promises to eliminate the need for paper-pencil systems by providing salons with an easy-to-use interface. Swapnali Beauty Parlor will be more than just an online scheduling tool; it will also be a salon management tool, allowing salons to manage stylists and services, promote sales to customers, and track customer satisfaction. MySQL and PHP are used in my project to provide powerful database capabilities to the UI. I used PHPMyAdmin, a web-based MySQL interface, to create the data tables. I largely utilised Wordpress for front-end development to layout the site and build a basic, clean interface. I utilised Wordpress to make the styling of the application easier. However, Wordpress's capabilities are severely restricted, and the breadth of my project rapidly surpassed Wordpress's. Nonetheless, it was a really useful tool in the beginning. For appointment scheduling, I'm planning to integrate Google Calendar, a PHP-driven calendaring programme, with my Swapnali beauty salon SalonBook programme. After careful consideration, I opted to use Google Calendars for a variety of reasons. To begin, Google Calendar is installed locally and is powered by MySQL. This implies that all of the code for Google Calendar is located in a subfolder of my project. This allows me a lot of control and flexibility when I integrate the application into my software. It also makes use of MySQL data tables, which reside directly next to the SalonBook data tables (Swapnali beauty parlor). As a result, it is a very clean integration and a very strong tool. Google Calendars, on the other hand, would imply that functions would be outsourced to Google. Any modifications to the Google APIs in the future would cause severe issues with my app. Viewing and modifying Google Calendars also necessitates user login. This means that visitors of my website would require Google accounts, or I would need to be the "owner" of all

calendars. Because neither of these solutions provided the tidy, compact solution that Google Calendar did, they were not deployed.

II. METHODOLOGY

Here we design system which help to take salon appointment online which saves customer waiting time this website also contain product which owner can sell online. MySQL and PHP are used in my project to provide powerful database capabilities to the UI. I used PHPMyAdmin, a web-based MySQL interface, to create the data tables. To decorate the site and create a basic, clean interface, I largely used HTML for front-end development. I used Adobe Dreamweaver to make designing the programme easier. However, Dreamweaver's capabilities are severely limited, and the breadth of my project rapidly surpassed Dreamweaver's. Nonetheless, it was a really useful tool in the beginning.. We planning to incorporate Google Calendar, a PHP-driven calendaring programme, with my SalonBook programme for appointment scheduling. To design a website we use wordpress And Xampp server. Those information is as follows:

A. Xampp

XAMPP is a free and open-source cross-platform web server solution stack package built by Apache Friends that includes the Apache HTTP Server, the MariaDB database, and interpreters for PHP and Perl scripts. Because most genuine web server installations employ the same components as XAMPP, it is straightforward to convert from a local test server to a live server. Because of XAMPP's simplicity of deployment, a developer may quickly and easily instal a WAMP or LAMP stack on an operating system, with the added benefit that common add-in programmes like as WordPress and Joomla! may also be deployed with comparable simplicity using Bitnami. The figure depicts our Xampp Control Panel.

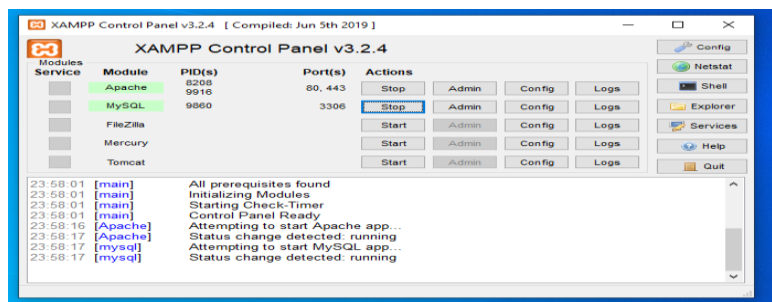


Figure 1: Xampp Control panel.

B. Wordpress

WordPress (WP, WordPress.org) is a free and open-source content management system (CMS) developed in PHP and used in conjunction with a MySQL or MariaDB database. A plugin architecture and a template system, known as Themes in WordPress, are among the features. WordPress began as a blog-publishing system but has now expanded to accommodate other sorts of web content such as more traditional mailing lists and forums, media galleries, membership sites, learning management systems (LMS), and online commerce. As of May 2021, WordPress was utilised by 41.4 percent of the top ten million websites. WordPress is one of the most widely used content management system options. WordPress has also been utilised in a variety of other application domains, including ubiquitous display systems (PDS).

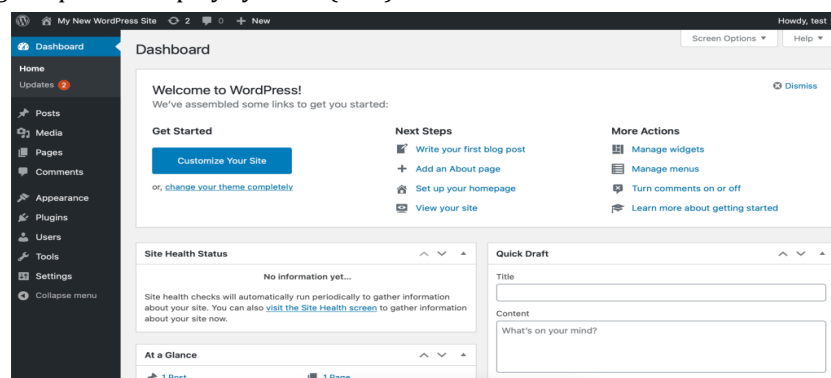


Figure 2: Dashboard of wordpress

III. ANALYSIS

Memory, thread execution, code execution, code safety checking, compilation, and other system functions are all managed by the common language runtime. These characteristics are included into the Spa salon managed code, which operates on the beauty centre common language runtime. In terms of security, managed components are given varied degrees of confidence based on a variety of variables, including their origin. This implies that a managed component may or may not be able to execute file-access activities, registry-access activities, or other sensitive services, even if it is utilised in the same active application as the beauty center. The runtime also ensures code robustness by implementing the common type system, which is a stringent type and code-verification architecture. All managed code must be self-describing, according to the CTS. The different Microsoft and third-party language compilers produce managed code that is compliant with the Spa salon CTS. This means that managed code can consume other managed types and instances while adhering to tight type integrity and type safety. Furthermore, the beauty parlour runtime's controlled environment reduces many common software difficulties.

IV. RESULTS AND DISCUSSION

While the beauty salon runtime is intended for future beauty salon applications, it also supports applications from today and yesterday. The interoperability of managed and unmanaged code allows developers to continue using required COM components and DLLs. The runtime is intended to improve performance. Despite the fact that the beauty shop common language runtime offers many standard runtime services, managed code is never interpreted. Just-in-time (JIT) compilation allows all managed code to run in the native machine language of the beauty parlour system on which it is running. Meanwhile, the memory manager removes fragmented memory's skin care, beauty treatments, and hair salon options and boosts memory locality-of-reference to improve efficiency even more. The following are some screenshots from our website:

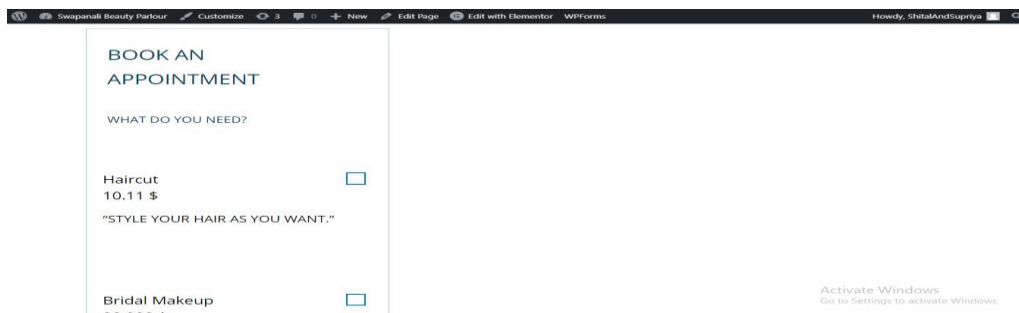


Figure 3: Book an Appointment

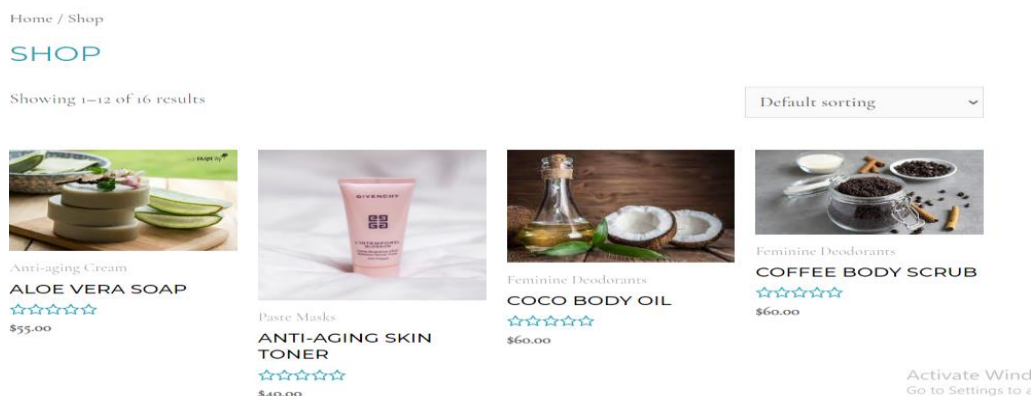


Figure 4: Online cosmetic shopping

V. CONCLUSION

This website offers a computerised version of the salon management system that will benefit both the consumer and the salon's employees and manager. It takes the entire process online, allowing customers to book appointments and beauty goods, as well as employees and managers to generate appointments and book beauty goods.

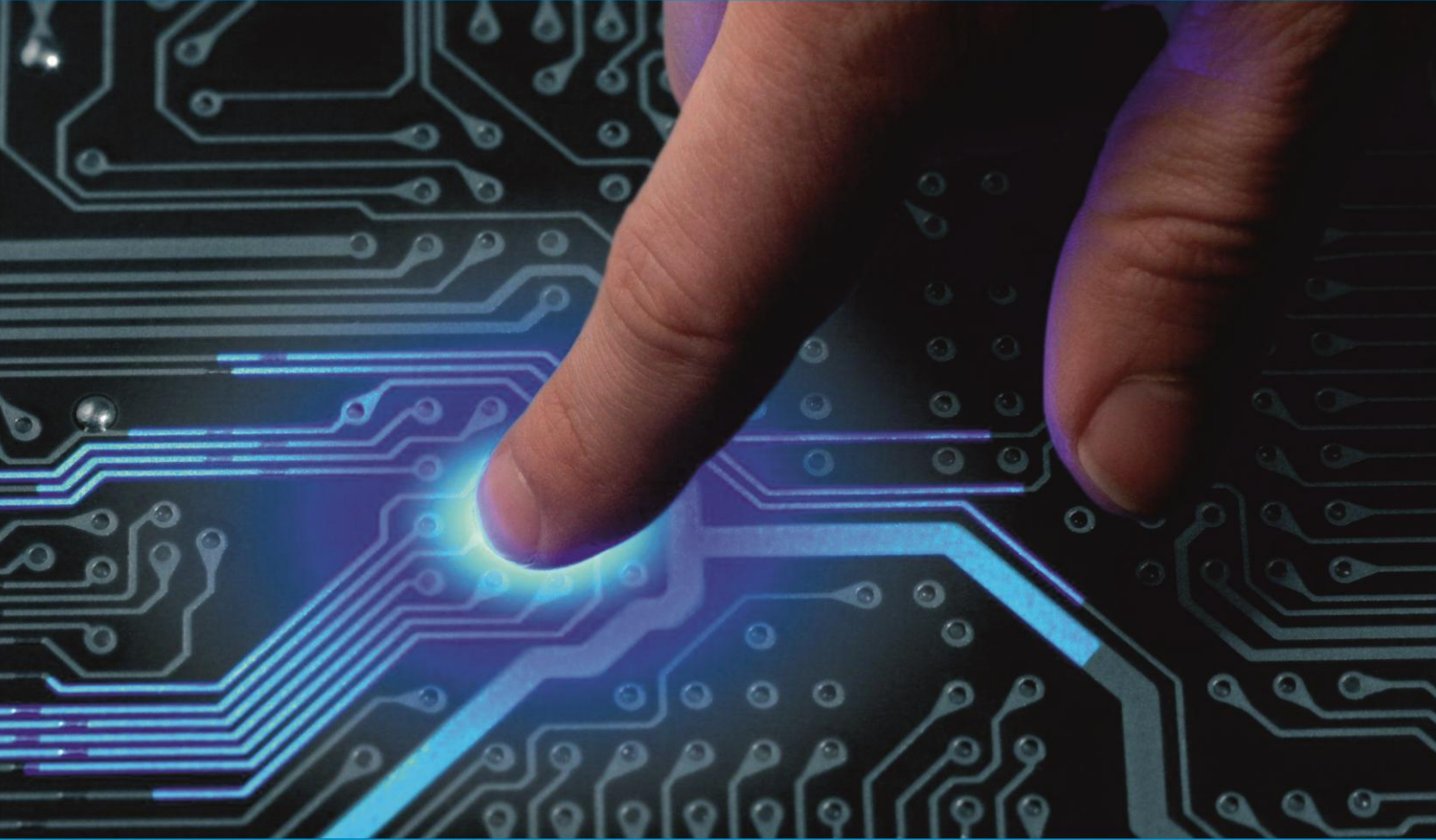
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Face Mask Detection System Using CNN

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ABSTRACT: This day's face mask is necessary to wear because of Covid-19 situation. By which it may be possible wearing mask can become normal to our daily life style. So as per the situation Face Mask Detection System will help the society. So, for the Face Mask Detection System we are using Machine Learning packages like Open CV, Tensor Flow, Keras and Scikit-Learn. This Face Mask Detection System face from the image captured via webcam and identifies the person wearing mask or not. It also detects the face with mask with motion. This software also captures images and save it to file directory and it also give alert sound (Beep) if the person is not wearing mask.

KEYWORDS: Open CV, Keras, TensorFlow and Scikit-Learn.

I. INTRODUCTION

The main concept of the project system is to detect the location of the face in the frame and then check that whether it has mask or not. Face detection deals with distinguishing a group of entities or Face. There are numerous applications, such as autonomous driving, education. This system's accuracy up to 96.76% respectively on two different datasets. It can also scan multiple faces at a time which is lot of helpful to detect unmasked person in crowded area most probably like hospital, airport, mall, etc. The basic packages we are using Machine Learning packages such as Scikit-Learn, Open CV, TensorFlow, Keras.

II. LITERATURE REVIEW

1. Humans have not that much ability to stand/sit on one place and see other person are wearing mask or not at that point this face detection system can work and recognise the faces of person. In We are also using Open CV, Keras, TensorFlow in this system. Also, we are using neural Network to detect face in the Video Stream and mob net CNN architecture model in our system.
2. This system can work in public places like Airport, Railway station, Bus Station, Super Market, Malls or traffic areas to keep eyes on people who are not wearing mask to decrease spread of virus and disease.
3. Face mask detection system consist of dual stage architecture (CNN) which is capable to detect those faces are masked or not masked with webcam, Camaras. For this system Datasets are collected some of from internet, some are scraped from websites on internet.
4. Recognition of face mask in this process system will recognize whether the face have mask or not. The techniques of deep learning are going to applied to construct the classifier which will collect the images of a person's wearing a face mask and other one with not wearing mask.
5. If the face detected with no mask, then system will alert by beep sound and also takes snapshots of face without mask and save it to the file directory.

III. DESIGN

1.1 Architectural model Face Mask Detection System

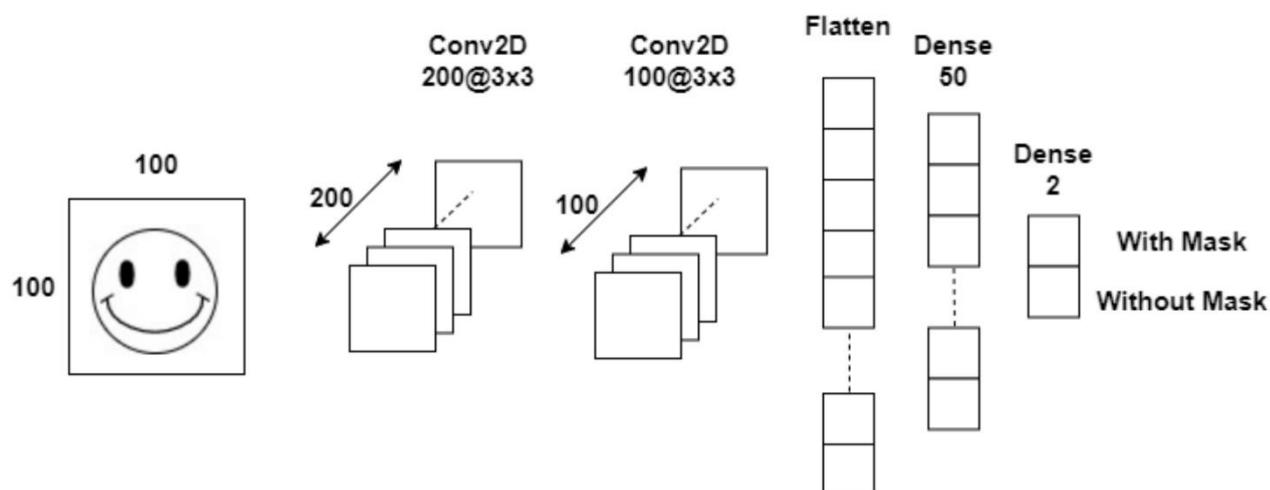


Fig-1: Architectural model for CNN, training, Testing

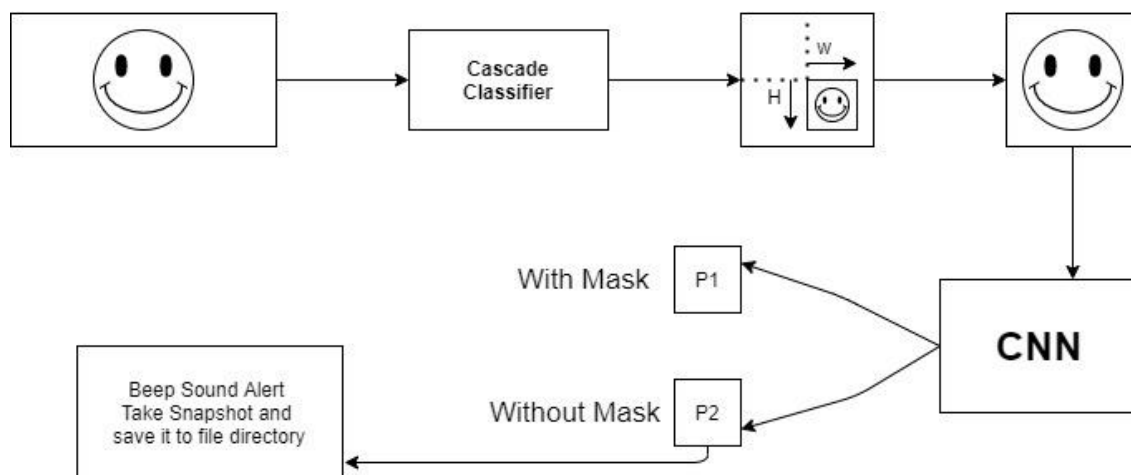


Fig-2: Architectural model for Face Mask Detection System

1.1 Methodology

Requirements for implementing Face mask Detection System by using python programming language and Deep learning, Computer vision, Python libraries, Machine learning. And the architecture is of Mobile net. We are also using CNN algorithm in our face mask detection system.

IV. WORKING

We will extract the data that we collected Dataset with mask and without mask with the help of Mobile Net v2 then we will train our model with using Open CV, Keras, and many python libraries. Then the goes through various layers such as Conv2D, MaxPooling2D, Dense, Dropout in the last layer we use a function named as 'SoftMax' to the output vector that gives the probability of the two classes. And after we will detect that the preprocessing image or live videos if the person is wearing mask, then in the frame the on face a rectangle will occur in green color with written on it "mask- 'Accuracy as per Model'" and if it is not wearing mask then another rectangle on it with color red and written on it "no mask-".and it will also make alert using beep sound and take snapshots of face in frame save it to file directory if it is not wearing mask.

4.1 Benefits

1. It is difficult for human to check that person is wearing mask or not every time.At that time this system can help in detecting and work easy for society.
2. This system make alert by beep sound if it is not wearing mask.
3. It saves image of face if person is not wearing mask

V. RESULTS AND CONCLUSION

With this system we can detect it the person's face to check whether the face have mask or not. And then if the person is not wearing mask. Then that person can't enter that area until he wears mask. Or the admin can take actions as per their rules or protocols. By this system we can prevent the spread of virus in society.

VI. FUTURE WORK

The future scope for this project is we can make automatic door system using thiswhich will open dooronly if person is wearing mask else it will remain closed until the person wear mask and this system can be implemented in Supermarket, ATM, Hospitals, Clinics, etc.

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AUTOMATED TIMETABLE GENERATOR SYSTEM

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ABSTRACT

Professional colleges have different courses of courses, and each has its structure of syllabus that contains diverse subjects. In these colleges, faculty are teaching different subjects in different semesters, and also within the same semester, faculty are handling two different subjects. The major challenge is that the Timetable is required to schedule according to the faculty provided time slots where timetables are prepared, so that faculty timings do not overlap. The Timetable does not overlap with their other Report: IRJMETST Farzana Report was generated on Saturday, May 29, 2021, 07:52 PM Page 4 of 11 schedules and these timetables are efficiently utilized by faculty. In this work, we develop the timetable application, which can automatically generate timetables according to faculty available time slots. This system benefits the faculty need not worry about time clashes; a human does not need to perform permutation and combination. They can concentrate on other activities rather than wasting time by generating Time-Table. This system gives an efficient timetable generated according to professional college requirements.

Keywords: subject, Timetable, faculty, schedule, time.

I. INTRODUCTION

The schedule allows all appropriate people to be in the right location, at the right time and doing their jobs. The schedule shows precisely what is to be done at a specific moment. It, thus, directs the attention of both the pupil and the teacher to one thing at a time. Existing system: Each task is carried out manually in the existing system, and processing is a tedious job. The organization cannot achieve its need in time, and the results too may not be accurate. Due to all the manual maintenance, many difficulties and drawbacks exist in this system. Drawbacks of the Existing System: Increased transaction leads to the increased source document, and hence maintenance becomes difficult.

II. METHODOLOGY

To develop software that helps to generate Timetable for an Institution automatically. By looking at the existing system · If any student or staff entry is wrongly made, maintenance becomes very difficult. During analysis of this problem, we can remark that an automatic creation of timetables has two aspects. The rest problem is in the complexity of the solution and searching algorithm for the solution. This is a combinatorial problem with a large number of variables. An only a small per cent of them are feasible timetables, and some of them can be considered as good ones. The problem is partially solvable using various heuristic and optimization methods, integer linear programming, taboo search, genetic algorithms, etc. A much less explored problem is in dining the requirements of the Timetable. This question is connected to the automatic timetabling problem. However, it is also relevant to the employment of software that verifies constraints or Changed Words Structural Changes Longest Unchanged Words Sometimes it is enough to enter a matrix with the names of teachers and classes in the matrix header, led with the weekly number of hours that the teacher teaches in the particular class.

2.1 PROJECT STATEMENT

Normally timetable generation is done manually. As we know, all institutions\organizations have their Timetable, managing and maintaining these will not be difficult. Considering workload with this scheduling will make it more complex. Generally, while generating a timetable, consideration should be given to the maximum and least workload that a college is exposed to. Timetable generation gets more complicated in certain instances. Also, it is a time-consuming process.

2.3 WHAT IS TO BE DEVELOPED?

Automatic Timetable is a Java-based application used to produce schedules automatically. It would allow you to track all of your periods while also being advantageous for professors, who will receive their schedule as a notification on their phone. In addition, it'll track the instructor's arrival and departure times to make sure that the teacher doesn't arrive or leave late. That new system will be capable of generating it as well as saving time. Faculty need not concern themselves with menstruation issues and maximum workload.4By using this software, user can apply for leave required date, reason, and substitute faculty. When selecting a faculty as a

substitute allows viewing the Timetable of that faculty to ensure that the faculty is free at that particular period. Substitutes can be approved or reject the request. The principal is also capable of looking at the request that professors submitted and the replacement response. In the creative process, the principal can approved\reject the request. It is comprehensive Manual timetable creation makes sense since we can comprehend how it is done. Adjusting the Timetable manually when any of the faculty is missing is the biggest issue of the Automatic Timetable Generator. Institutions and organizations all have their schedules, so it will not be difficult to manage and keep. Because of the increased workload, using these scheduling methods will make it more difficult. Because Timetable Generation considers the maximum and lowest workload in colleges, timetabling courses should be used. Timetable Generation will get increasingly involved in certain situations. Also, it takes a lot of time...

2.4 Existing and Proposed System:

Normally timetable generation is done manually. As we know, all Institutions or organizations have their Timetable, managing and maintaining these will not be difficult when dealing with the additional workload. This scheduling strategy will be more difficult. When the amount of work is considered, Timetable creation should accommodate both the maximum and minimal workload. Those cases, timetable generation, will become more complex. Also, it is a time-consuming process. Automatic Timetable manager is a Java-based software used to generate timetables automatically. It will help you to manage all the periods automatically. That new system will be capable of generating it as well as saving time. Faculty need not concern themselves with the finer points of their menstrual cycle and maximal workload. Stumbling blocks of higher education institutions

Current System.

III. MODELING AND ANALYSIS

3.1 Hardware/Software Requirements

Hardware:-

Computer System

8 GB RAM

32-bit Operating System

I7 processor

Software:-

1) Java

3.2 Module

3.2.1 Opening Module Page

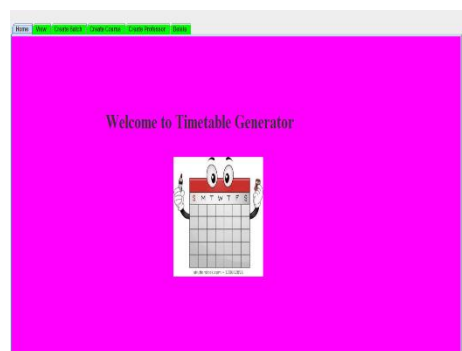


Fig 1.1

After opening the system, it welcomes the user with a timetable symbol, and the contents are Welcome to Timetable Generator.

3.2.2 User Module for Putting the Data of Batches


Fig 1.2

In this module, we can create several batches as per our university require

3.2.3 User Module For Create Course


Fig 1.3

In this module, we can put the data regarding courses, rest put the name of the course the select credits and then submit.

3.2.4 User module to create professor names


Fig 1.4

3.2.5 User module to delete data

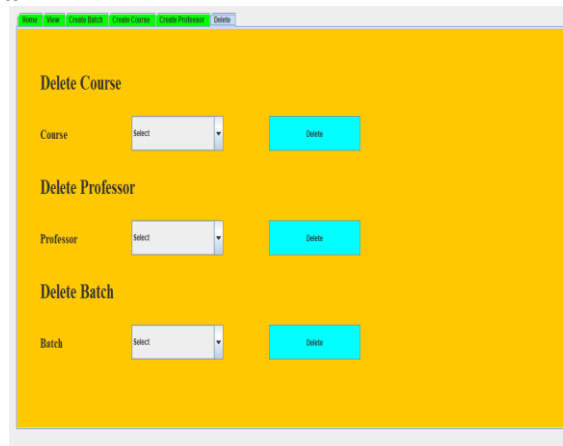


Fig 1.5

In this module, the user can delete data of course details, professor details, batch details.

IV. RESULTS AND DISCUSSION

4.1 User module to view Timetable

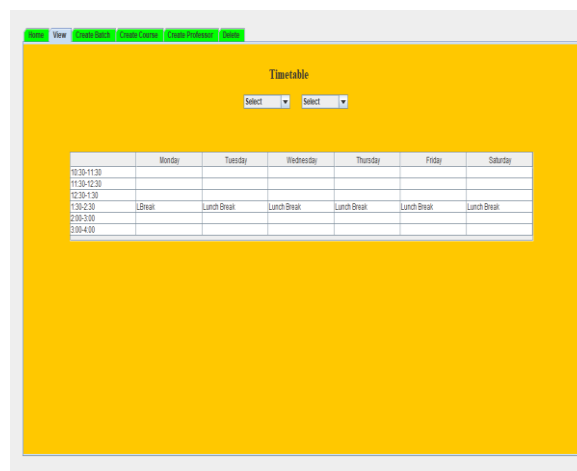


Fig 1.6

This module represents that we will view our Timetable through this module after ling all required data in the system.

V. CONCLUSION

Our approach of developing an a successful 9automated schedule system is in place. Solving colleges "lecture-course timetabling problem. This system is provided with necessary details of faculty and subjects by making use of the available data. It generates the lecture-course Timetable with minimum time when compared to the manual generation of Timetable and involves in satisfying all the constraints –

- No overlapping of time slots for any subject.
- No repetition of time slots per faculty.

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Android Based Pulse Monitoring System for Critical Patients

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ABSTRACT: *In today's modern world cardiovascular disease is the most lethal one. This disease attacks a person so instantly that it hardly gets any time to get treated with. So diagnosing patients correctly on timely basis is the most challenging task for the medical fraternity. A wrong diagnosis by the hospital leads to earn a bad name and losing reputation. At the same time treatment of the said disease is quite high and not affordable by most of the patients particularly in India. The purpose of this project is to develop a cost-effective treatment using data mining technologies for facilitating data base decision support system. Almost all the hospitals use some hospital management system to manage healthcare in patients. Unfortunately, most of the systems rarely use the huge clinical data where vital information is hidden. As these systems create huge amount of data in varied forms but this data is seldom visited and remain untapped. So, in this direction lots of efforts are required to make intelligent decisions. The diagnosis of this disease using different features or symptoms is a complex activity. In this project we will be using naïve bayes data mining technologies an attempt is made to assist in the diagnosis of the disease in question.*

Keywords: Android Arduino Uno, Pulse Sensor

INTRODUCTION

Health is the most important thing in a person's life. Most of the diagnosis or cure of a patient becomes unsuccessful when things run out of time. Particularly with heart diseases, time is as important factor as anything else. The application provides early detection or results to the patients so that they can consult the doctor as early as possible. The patient has to fill the details such as age, name, chest pain type, blood pressure, cholesterol levels etc and get the results and consult accordingly with the doctor.

OBJECTIVES

General Objective Layout and acquisition of a project "Android based pulse monitoring system for critical patient".

Specific Objective Layout and acquisition a project The Heart Disease Prediction application is an end user support and consultation project. Here, we propose an application that allows users to get instant guidance on their heart disease through an intelligent system. The application is fed with various details and the heart disease associated with those details. The application allows user to share their heart related issues. It then processes user specific details to check for various illnesses that could be associated with it. Here we use some intelligent data mining techniques to guess the most accurate illness that could be associated with patient's details. Based on result, the can contact doctor accordingly for further treatment.

IMPLEMENTATION

1. Iteratively discover frequent item sets with cardinality from 1 to k (k-item set).

2. Use the frequent item sets produce association rules. Join Step: C_k is generated by joining L_{k-1} with itself Prune Step: Any (k-1)-item set that is not frequent cannot be a subset of a frequent item set

Initialize: K = 1, C₁ = all the 1- item sets; read the database to count the support of C₁ to

Determine L₁. L₁ := {frequent 1- item sets};

K = 2;

//represents the pass number//

While (L_{k-1} ≠ ∅) do

Begin

C_k = gen_candidate_itemsets with the given

L_{k-1} Prune (C_k)

for all candidates in C_k do

Count the number of transactions of at least k length that are common in each item

CkL

k: = All Candidates in Ck with minimum support

K: = k + 1;

End

PROBLEM DEFINITION

The healthcare industry collects huge amounts of healthcare data which, unfortunately, are not “mined” to discover hidden information for effective decision making. Discovery of hidden patterns and relationships often goes unexploited. Advanced data mining techniques can help remedy this situation. This research has developed a prototype Intelligent Heart Disease Prediction System (IHDPs) using data mining techniques, namely, Decision Trees, Naïve Bayes and Neural Network. Results show that each technique has its unique strength in realizing the objectives of the defined mining goals. IHDPs can answer complex “what if” queries which traditional decision support systems cannot. Using medical profiles such as age, sex, blood pressure and blood sugar it can predict the likelihood of patients getting a heart disease. It enables significant knowledge, e.g. patterns, relationships between medical factors related to heart disease, to be established. IHDPs is -based, user-friendly, scalable, reliable and expandable. It is implemented on the .NET platform. In classification test data are used to estimate the accuracy of the classification rules. If the accuracy is acceptable the the rules can be applied to the new data tuples. For a fraud detection application, this would include complete records of both fraudulent fraudulent and valid activities determindon a record-by-record basis Clustering can be said as identification of similar classes of objects. By using clustering techniques, we can further identify dense and sparse regions in object space and can discover overall distribution pattern and correlations among data attributes. To overcome this problem using Fuzzy C Means Clustering algorithm. For finding the risk of heart attack of a patient using the profiles collected from the patients. With the proper adaptation of FCM classifies, the method can thus evolve an optimum number of clusters and finds the abnormal and normal cases efficiently. Initially pre-processing of the data isdone toremove all the

duplicate records and add missing data. In the classification stage, a FCM classifier is used to classify the data as heart disease present or not. e.g. patterns, relationships amid medical factors connected with heart disease. It facilitated The establishment of vital knowledge,

METHODOLOGY

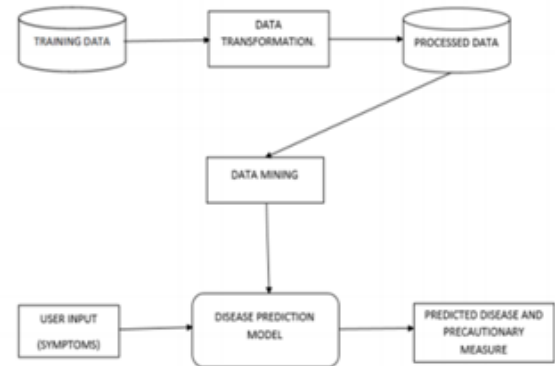


Fig.1.Blockdiagramofdesignsystem

This proposed method consists of a system forth general disease prediction system predicts chance of presence of a disease present in a patient on the basis of their symptoms. It will also recommend necessary precautionary measures required to treat the predicted disease. The system will initially be fed data from different sources i.e. patients, the data will then be pre-processed before further process is carried out; this is done so as to get clean data from the raw initial data, as the raw data would be noisy, or flawed. This data will be processed using Data mining algorithms, the system; will be trained so as to predict the disease based on the input data given by the user

EXISTING SYSTEM

Very few systems use the available clinical data for prediction purposes and even if they do, they are restricted by the large number of association rules that apply. Diagnosis of the condition solely depends upon the Doctors’ intuition and patient’s records. Detection is not possible at an earlier stage. In the existing system, practical use of various collected data is time consuming. There are only few decision support systems available in medical industry whose functionalities are very limited. As mentioned earlier, medical decisions are made with doctor’s intuition and not from the rich data from the medical database. Wrong treatment due to misdiagnosis

causes serious threat in medical field. In order to solve these issues data mining solution was with help of medical databases was introduced.

CONCLUSION

The overall objective of our work is to predict more accurately the presence of heart disease. In this topic two more input attributes obesity and smoking are used to get more accurate results. Data mining classification techniques were applied namely Naive Bayes. This technique will help us to achieve 97% accuracy as per algorithm. Fig2. show design of project

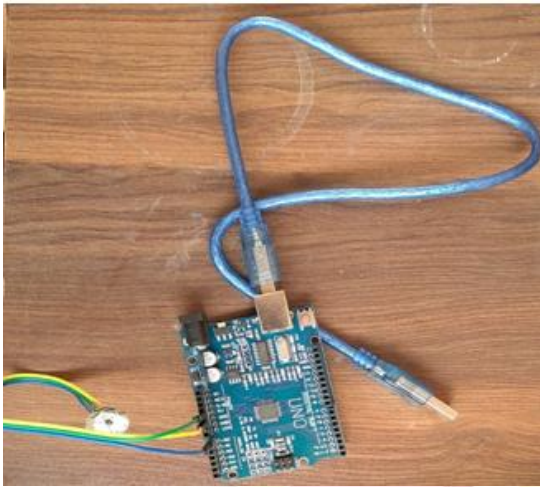


Fig.2 Final Model of Project

FUTURE SCOPE

1. As a future work, the researcher has planned to perform additional experiments with more dataset and algorithms to improve the classification accuracy and to build a model that can predict specific heart disease types.
 2. Further investigations should be performed with different parameter settings to enhance and expand the capabilities of the prediction models.
 3. In addition, the Neural Network and Naïve Bayes classification algorithms should be tested thoroughly. Missing values, noisy data, inconsistencies, and outliers presented a challenge in the data mining process. Therefore, statistical and machine learning approaches should be applied to control the quality of the data.
- Android app will be created. Banking module can be also linked like Pay tm so that patient can pay money.

BACKGROUND

It might have happened so many times that you or someone yours need doctors help immediately, but they are not available due to some reason. The Heart Disease Prediction application is an end user support and consultation project. Here, we propose an application that allows users to get instant guidance on their heart disease through an intelligent system. The application is fed with various details and the heart disease associated with those details. The application allows user to share their heart related issues. It then processes user specific details to check for various illnesses that could be associated with it. Here we use some intelligent data mining techniques to guess the most accurate illness that could be associated with patient's details. Based on result, the can contact doctor accordingly for further treatment. The system allows user to view doctor's details too. The system can be used for free heart disease consulting.

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RETAIL MANAGEMENT SYSTEM

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II. ADVANTAGES

Abstract – *In our project, on Retail Management System we have tried to show how the data or information in shopping is managed. This has been achieved by diving the project into various modules. Customer is provided with different services like online payment, cash payment and editing entries or can be advance payment.*

The management and online shopping in mails is a complicated task especially if it is done manually. If the customer wants to cancel booking. Enquiry about any customer or employee can also be made. Our project also includes the module for employee information. It will generate report for customer and bill for customer is generated when the customer will check out from the mail. By add in many more modules this type of project can have scope in various shopping.

After going through the existing system, problem was identified and the scope of development was finalized.

Introduction

Management refers to the process of bringing people together on a common platform and make them work as a single unit to achieve the goals and objectives of an organization. Management is required in all aspects of life and forms an integral part of all businesses.

The various processes which help the customers to procure the desired merchandise from the retail stores for their end use refer to retail management. Retail management includes all the steps required to bring the customers into the store and full fill their buying needs.

Retail management makes shopping a pleasurable experience and ensures the customers leave the store with a smile. In simpler words, retail management helps customers shop without any difficulty.

Purchasing of new hardware and software is not involved hence very cheap. Involvement of staff using the system during improvements enables the staff to familiarize with the system operations and functionality. Improvements also help the organization to understand the current system operations so that when later there is a need for the system to be computerized, problems involved will be truly identified.

iii. Disadvantages

Upgrading the existing system does not make the system more effective since the problems with the system will remain a challenge. More time is needed in locating a record hence this makes the system in efficient Upgrading the existing system does not make the system more effective and efficient since the problems with the system will remain a challenge.

iv. GUI Application



Fig.1 The Main window

Fig 2. The POS link Form

Fig 5 The Employees Form

v. Conclusion

Shop needs to maintain the record of order and reserve before hand customer should be able to know the availability of the production a particular time. They should be able to reserve the available order according to their need in advance so as to make their order comfortable.

It is therefore very important to build new and modern flexible dynamic compatible reusable system including database to help manipulate different processes and operations that are carried out stores.

ACKNOWLEDGMENT

Perseverance, Inspiration & Motivation have always played a key role in the success of any venture.

At this level of understanding it is difficult to understand the wide spectrum of knowledge without proper guidance and advice, Hence we take this to express our sincere gratitude to our respected Project Guide Mrs. Trupti Kherde who as a guide evolved an interest in us to work and select an entirely new idea for project work. She have been keenly co-operative and helpful to us in sorting out all the difficulties.

We would also like to thank our Principal Mrs. Geeta Joshi, for their continuous advice and support.

Fig 3. The Porchases Form

Fig 4 The Stock Management Form

My deep sense of gratitude to Marathwada Mitra Mandal's Polytechnic for their timely advice and encouragement in our project development.

I would also thank my Institution and my faculty members without whom this project would have been a distant reality.

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SMART IRRIGATION SYSTEM USING IOT

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ABSTRACT

The smart irrigation system is a fusion of the newest technology of sprayers with outlets that improve coverage of irrigation controllers that are diluting and keep a check on moisture-related conditions on your property and spontaneously adjust watering to optimal levels. As water supply is becoming scarce. In today's world, there is a high priority to acquiring smart ways of irrigation. The project depicts how irrigation can be handled smartly using IoT. This project aims less the consumption of time and avoiding problems like sustained vigilance.

Keywords: Irrigation, IOT, Thinkspeak, Moisture Sensor.

I. INTRODUCTION

A challenge for farmers is to sustain land health. Most of the farmers use vast portions of land for farming and it becomes challenging to reach and track each corner of large lands. Sometimes there is a possibility of uneven water sprays. This concludes in the poor quality crops which further leads to financial losses. In this scenario, the Smart Irrigation System operating on the newest IOT technology is supportive and accompanies ease of farming.

II. LITERATURE REVIEW

Review: 1

Ashwini B.V. has been studied on "Smart irrigation system using IoT for surveillance of crop-field"(2018)

In this study, Android app was used for the tracking of the field. This system was found feasible cost effective for the optimization of the water resources. Hence the irrigation system helps farmers by making their work smart with any human intervention.

Review: 2

J. Jegathesh Amalraj, S. Banumathi, J. Jereena John conducted an experiment on "Smart irrigation system for agriculture using IoT"(2019)

In this study, three classic irrigation methods channel irrigation, sprinkler irrigation and drip irrigation were used. Researchers conclude that the water usage is minimized when we use an automated irrigation system that relies on the soil moisture as a parameter implemented.

Review: 3

M. Safdar Munir, Imran Sarwar Bajwa, Amna Ashra, Waheed Anwar, Rubina Rashid conducted an experiment on "Intelligent and smart irrigation system using Edge computing and IoT"(2021).

In this study, edge computing technology was used with soil moisture, Humidity and temperature sensor for tunnel farming. The sensor data is processed using the trained models of machine learning.

III. REQUIREMENT ANALYSIS

Material which are used for designing Smart Irrigation System is presented in this section.

a) ESP8266 NodeMCU Module (cp2102)

The NodeMCU cp2102 Wifi module is an seamless microcontroller that is uncomplicated to use to create projects with WiFi and IoT (Internet of Things) applications. The board is built on the newest ESP8266 WiFi Module chip with the ESP-12E. This WiFi development board is embeded with all the necessary components for the ESP8266 (ESP-12E) to program and upload code. It has a built-in USB to serial chip upload codes, 3.3V regulator and logic level converter circuit so you can abruptly upload codes and connect your circuits. This board holds the ESP-12E chip with a 4MB flash memory limit that can accomodate your long project codes.



Figure1: ESP8266 NodeMCU.

b) Soil Moisture Sensor

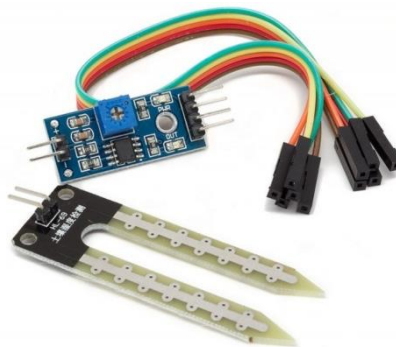


Figure2: Soil Moisture Sensor.

The soil moisture sensor is one kind of sensor used to detect the content of water within the soil. As the linear dimension of soil moisture needs eliminating, drying, as well as sample weighting. These sensors measure the volumetric water content indirectly with the help of different rules of soil like dielectric constant, electrical resistance, otherwise interaction with neutrons, and replacement of the moisture content.

c) DHT11 (Temperature and humidity sensor)

The DHT11 is a basic, extreme inexpensive digital temperature and humidity sensor. It uses a capacitive humidity sensor and a thermistor to quantify the surrounding air, and gives out a digital signal on the data pin (no analog input pins needed). Its pretty simple to use, but requires careful timing to grasp data. You can receive new data from it once every 2 seconds, so when using the library from Adafruit, sensor readings can be up to 2 seconds old comes with a 4.7K or 10K resistor, which you will want to use as a catch from the data pin to VCC.



Figure3: DHT11 Sensor

IV. WORKING

The IoT-based Smart Irrigation System works on the ESP8266 NodeMCU module which handles the communication of the data and sending it to the server. The Soil Moisture Sensor detects the moisture in the soil and sends the data. The DHT11 sensor detects the humidity and the temperature and sends this data to the thinkspeak server using the NodeMCU and the thinkspeak API. This data will not only automatically irrigate the land based on the moisture level in the soil, but also send the Data to the server to keep track of the land

condition. The System will consist of a water pump which will be used to sprinkle water on the land depending upon the land environmental condition such as Moisture, Temperature, and Humidity.



Figure4: Output Data

V. CONCLUSION

The Project 'Smart Irrigation System' is used for the optimization of water in the agricultural field without the intervention of farmer by using a soil moisture sensor that senses the moisture content of the Soil using a Microcontroller that turns ON/OFF the pump automatically according to the need of water for irrigation and hence helpful in saving water.

ACKNOWLEDGEMENTS

We take this opportunity to thank all the members connected with this project for their useful administration, help, and timely support which backed us to complete the project in a distinct amount of time. We would like to convey regards to our Guide Mrs. Trupti Kherde for her support, motivation, guidance, and helpful suggestions all over the project work. Lastly, our sincere credit goes to our family for their key support since we begin our education and all the group members.

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Medicine Reuse System

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Abstract- Today in this present area where technological advances are at its vertex, there is not even a single sector which remains untouched by technology. Technology has not merely established our lives simpler, but also offers a high level of safety and security wherever required. Technological devices are available which provides refuge for all the mankind. People are very concern about their health, But there are some people who cannot afford to take medicines. And such people are more likely to get major rather serious. Serious disease are dangerous and can become uncontrollable if timely medicines are not taken. Our health should be our first priority. Medicine donation is an active activity which is done by NGOs, but there are very few donors are available. Because of today's situation donors cannot donate medicines to NGO. This paper basically deals with the donors who can donate the medicines, and transforming this simple application into most advanced donation system in the future. Some of the condition for the donor they can donate only they medicines which are not expired. Some people die simply because they do not receive timely medication. Therefore, developing medicine reuse system is very essential. Hence, this paper presents a medicine reuse system to donate medicines to the NGO.

Keywords- Medicine Donate, Reuse, Healthcare, NGO etc.

I. INTRODUCTION

Many people today are confronted with proper disposal of medications to create a safer environment for our seniors (avoiding possible medication-related problems or mix-ups). It also provides a safer situation with our youth who might live in the home, helping to minimize the opportunity for them to seek, find and take medications not intended for them.

The project entitled "Medicine reuse system", will be a great help in donation of medicines by donor. The purpose of this system is to donate medicines by many donors for poor people who cannot afford expensive medicines.



Fig 1. Application Logo.

Apart from physically donation, donor donate medicines using this system, user can login and tap to donate option and fill information about medicines i.e. name, expiry date and location etc. And NGO can approve that medicines, if

there is no any issue about medicine. Descriptively we used database to maintain donor details. This proposed project will donor donate medicines online. The donor person will informed to the NGO that he has unused medicines and wants to donate them through this system.

II. OBJECTIVES

Nowdays due to busy schedule people do not have time so they cannot donate event though they have stocks of unused medicines. And today's situation we can't meet each other. Due to this donor cannot reach medicines directly to the NGO. This system provide online platform to donate medicines. This medicine reuse system project aims to donate medicines which are not used. The unused medicine can be donated for further utilization by a needy person. This drug donation system helps the user to donate unused medicines to NGO. In this medicine donation system, there are three entities namely, Admin, NGO and Member.

User will login and donate medicines. Admin can maintain record of donated medicines and inform to NGO. The main objective of this manual is to provide a set of medicine donation guidelines that will guide recipients and donors through the donation process. The main intention of this project is to develop quality of medicine donation. There are so many Foundation for medicine donation, but there are too rare application for donation of medicines. Using this application user can donate unused(not expired) medicine to NGO from anywhere and anytime. Presently available foundation for medicine donation are uday

foundation, rural health care foundation, udaan welfare foundation etc. But this are foundations work physically. Due to today's covid-19 situations foundations can't reach to donor. In this situation this application is very helpful, donor can donate medicines from home by filling information of medicine.

III. PROPOSED SYSTEM

Medicine reuse system is an online medicine donation android based application. User can register and login to application. There are different modules in application i.e. Donate, profile, about us and log out. In donate module user can donate medicines by filling information.

In profile module user can see their registered information. In about us module user will see information of that NGO where they donate medicines. In log out user will exit from application. User is the main part of this application. After registration and donation NGO will collect medicines from them. In this system firebase database is used and java is used for connectivity between database and android application.

IV. PROBLEM DEFINITION

Imagine a scenario, a patient has a major disease and he is being treated at the hospital, but for some reason he dies suddenly. In such case the medicines taken for his treatment will not be any of use. These medicines can be donated through this system and it can reach those who need it. Even pharmacy stores do not take back medicines once given. In this case, medicines can be donated by using this application. It's not that medicine donation don't happen Donors donate medicine, and NGO collect donated medicines. But NGOs do not manage properly donated medicines. E.g. There are some donors want to donate medicines. And they donated to NGOs.

Different types of medicines are donated in it. And is difficult for NGO to separate those medicines properly. NGO cannot properly maintain medicine record i.e. expiry date, quantity etc. Using this application user donate medicine by filling information i.e. medicine name, expiry date, quantity and accordingly NGO have record of how much medicine someone donated and what is its expiry date. It will be easy to NGOs to maintain record of medicines using this application. Aim of this application is more and more donors will donate medicines and reach out to those who cant afford expensive medicines.

V. METHODOLOGY

This medicine reuse project is to prepare a portal for the collection of unused medicine for further utilization by a needy person. The application must be like user can donate the unused medicine to NGO. That NGO can help needy people. The user can donate the medicine. Many

poor people who do not afford to buy their own medicines, with help of this application people can get the treatment and medicines to cure the respective diseases, the unused medicine will be utilized. which will very effective and helpful for great contribution in health service on today's situation i.e. covid-19. This application will reduce medicine waste, It will also be reused.

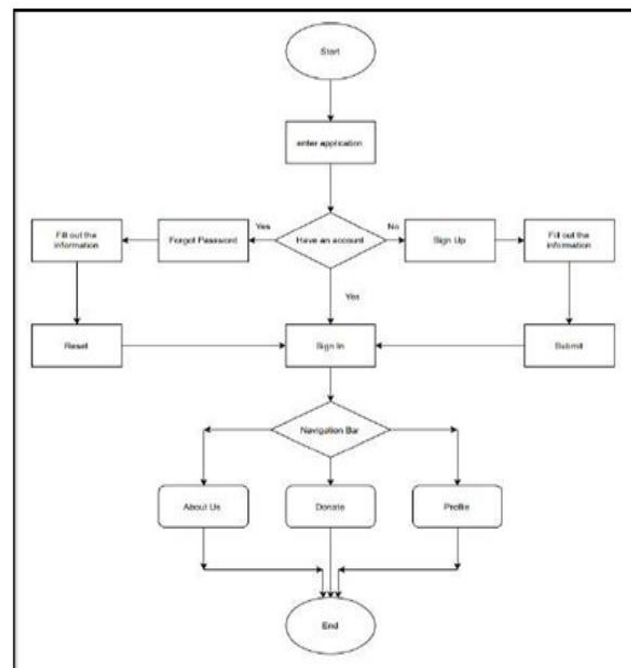


Fig 2. Application Flowchart.

VI. FUTURE PROSPECTS

For this system, this Application can be developed which can provide Donate the medicine and can order the medicine. Both options are available on an application.

Using the future application user can order new medicines or donated medicines also (Donated medicines for low cost). More and more people will donate medicines to NGO, for those people who don't have expensive medicines. People will donate medicines voluntarily. Maximum NGOs will deliver medicines to people using our app. Communication between NGOs and donors will continue to grow.

VII. CONCLUSION

Technology is very advanced now a days. No matter how advanced technology is, everyone is conscious of their health. But not everyone is conscious about medicines. In most of the case useful medicines are wasted. No one thinks that by donating unused (Not Expired) medicines we can help to that people who can't afford expensive medicines. Such people take medicines but are not expensive. This paper will provide the brief information of development of application,

A screenshot of a mobile application interface titled 'PharmCare'. At the top, there is a hamburger menu icon and the title 'PharmCare'. Below the title is a colorful illustration showing two people standing next to a large red box labeled 'DONATE', with various medical symbols and coins floating around. Underneath the illustration are three input fields: 'Medicine Name', 'Expiry Date', and 'Number of Tablet'. At the bottom of the form is a large red button labeled 'DONATE'.

Fig 3. Donate Activity.

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Gate pass management system using Android (App)

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ABSTRACT

Gate pass management system is a software mobile application. It manages entry and exit of the student and teacher also new person who visit at the college. Gate pass management is an efficient system to keep track of each person entry and exit. Gate pass Management system is available for use and it is easy to use and manage. This system is defined as a Gate pass security system. It's main aim to secure college from outside visitors, the department. Gate pass management system help the organization as well as a visitor to manage the Gate passes. Frequently visitors have data entry in top level to make them easily entry and exit. Using gate pass management system we can easily enter the entry and exit of a student, teacher and unknown visitor's.

First using this system, admin can add the students and teachers with their number or a unique id and then guard can daily enter the entry and exit of a people. Many advantage of using this system is all the entry and exit record of a person is saved and we can easily access it. This system is user friendly. The Project 'Gate-pass Management System' is to record the details and various activities of the user. It simplifies the task and reduces the paperwork. In this project, we are reducing the paperwork which is done by giving the paper gate pass. We are providing the electronic version of the paper gate pass. We provide appropriate training to the security guard to handle gate pass application. Admin is monitoring all the user and system. Training has been provided timely basis and they got trained as the Gate-pass System is new and rolled out to their area of responsibility. The system is very user-friendly and it is anticipated that functions of the system are easily accessed by administrators, Faculties, students

Keyword : - Gate pass management system, college Gate Pass, Gate Point, Manage Visitor's.

1. Introduction

Gate Pass management system is software based mobile application. The main goal of the system is to reduce paper work which is daily done by security guard at a college level, to store daily entry and exit record of each person who visited to college and we can access this record at any time. Currently most companies are using the named method in keeping track all the incoming and outgoing visitor records in each of the department but at a college level such a system still not be used.

1.1 Need for the new system

The system helps to prevent the entry of any unauthorized or unwanted person in the premises of college. The flexible architecture of gate pass management System allows Admin in the college to directly access the data they need. This system enhances the security and productivity of the premises. Today every organization uses the notebook for entry and exit of student, staff and new person. But it has a possibility of missing a notebook. It does not store this data permanently. No such system available in any college. Security guard uses a notebook for entry and exit. No authentication is done by security guard which mean many miss happenings.

1.2 Problem statement

This system is not used till in any college but this type of system is used in companies and also society. Now a day's guard uses a notebook for entry and exit it is not proper way to maintain the all record of student and teachers so this system is very useful for guard.

There is no control over the student and teacher arrival. Anyone willing to enter can enter in the college. It may be possible some unknown person may enter and park their vehicle in college parking area and police start asking a question to guard and they are helpless. There is no way of knowing who and when and by who was invited. Regarding in register does not mean that information is true. There is no authentication process. The computer becomes important equipment to the organization to store the data. It also can be used to access and process any data needed easily and less in time. Therefore, it is hope that Gate pass Management System application system able to solve the problem.

2. Future Prospects

Gate pass management system is use in a future for security reason. With this, management of visitors and activities at the gate of an organization or institution is absolutely easy. The system has a wide array of interesting features like:

- You can register gate guards as the admin who will be managing different gates.
- Management of visitors, individual visitors and group visitors.
- You can keep track of the entry and exit times of all visitors including staff.
- You can register staff members also into the system.
- You can register student into the system.
- You can register new guard into the system.
- Capture vehicle details.
- Capture luggage details.

System is to record the details and various activities of the user. It simplifies the task and reduces the paperwork. In this project, we are reducing the paperwork which is done by giving the paper gate pass. We are providing the electronic version of the

3. Requirement Analysis

- The user should have the appropriate version of the windows.
- The system should have up to 2 GB ram minimum requirement for the application.
- The application (android studio) should be installed on the system.
- Internet connectivity is must for this purpose.
- CPU with a speed of 1.3 GHz is a good choice for normal usage.
- 2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE plus 1.5 GB for Android SDK and emulator system image).

4. Software requirements specification

1. Android studio
2. Firebase Database

5. Viability of the system

The transaction reports of the system can be retrieved as and when required. Thus, there is no delay in the availability of any information, whatever needed, can be captured very quickly and easily. Gate pass management system is able to record the all the data of entry and exit time of the student and staff, Also any new person who are visited to the college. This system is able to update , delete the record of student, staff and guard. We used unique identity for all the persons. For student unique id we used their roll number and for staff we used their id number.

Gate pass management system keeps a check on visitors at the entry and exit points. Unlike a manual system, Gate Pass Software are time-efficient; it provides approval only after checking all the records in the database. The records are accurately maintained by the management system. We have seen various industries/institutes where there is a compulsion of taking a gate pass to enter the premises as well as while leaving the premises before time.

The gate pass is generally either a written chit of paper or a receipt sheet. This sheet remains of no use once out of the premises and there is wastage of paper. Our system proposes to give the “Paper Saving Idea” for the same. It consists of a design where the visitor can enter the required details viz. visitor id, name, contact, reason to enter/leave, and where he/she will enter this on a touch screen enabled kiosk system where this information will be further redirected to the higher authority in the organization.

6. Project Management

Project management is the practice of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time. The primary challenge of project management is to achieve all of the project goals within the given constraints. This information is usually described in project documentation, created at the beginning of the development process. The primary constraints are scope, time, quality and budget. The secondary and more ambitious challenge is to optimize the allocation of necessary inputs and apply them to meet pre- defined objectives.

7. Output

- **Login page:-**

Using this page user can enter into the system by using username and password. For entering into the system username and password both are must. user can try up to only five attempts.



- **Add record of new student into the database**

Admin can add new guard, teacher and student into the database



- **Update data in database**

User can update record of student, teacher and guard onto the database and also able to see updated record into the app.

180330
 previous
 password

Update Student Record

180342
 nishant
 pmpri
 computer
 870000000
 nishant@gmail.com

UPDATE

- **View record**

Using this page user can see the all record of the students, teachers and guard and also update it.

180330
 previous
 password
 computer
 870000000
 nishant@gmail.com

180342
 nishant
 pmpri
 computer
 870000000
 nishant@gmail.com

8. CONCLUSIONS

The Gate Pass Management System is a software based application which main aim to protect a college from outside visitors. It stores the entry and exit student and teachers data in the database and admin can access this data anytime . The database has all records and safety major of records. Finally we successfully created the application for our college to protect the college from the outside visitors.

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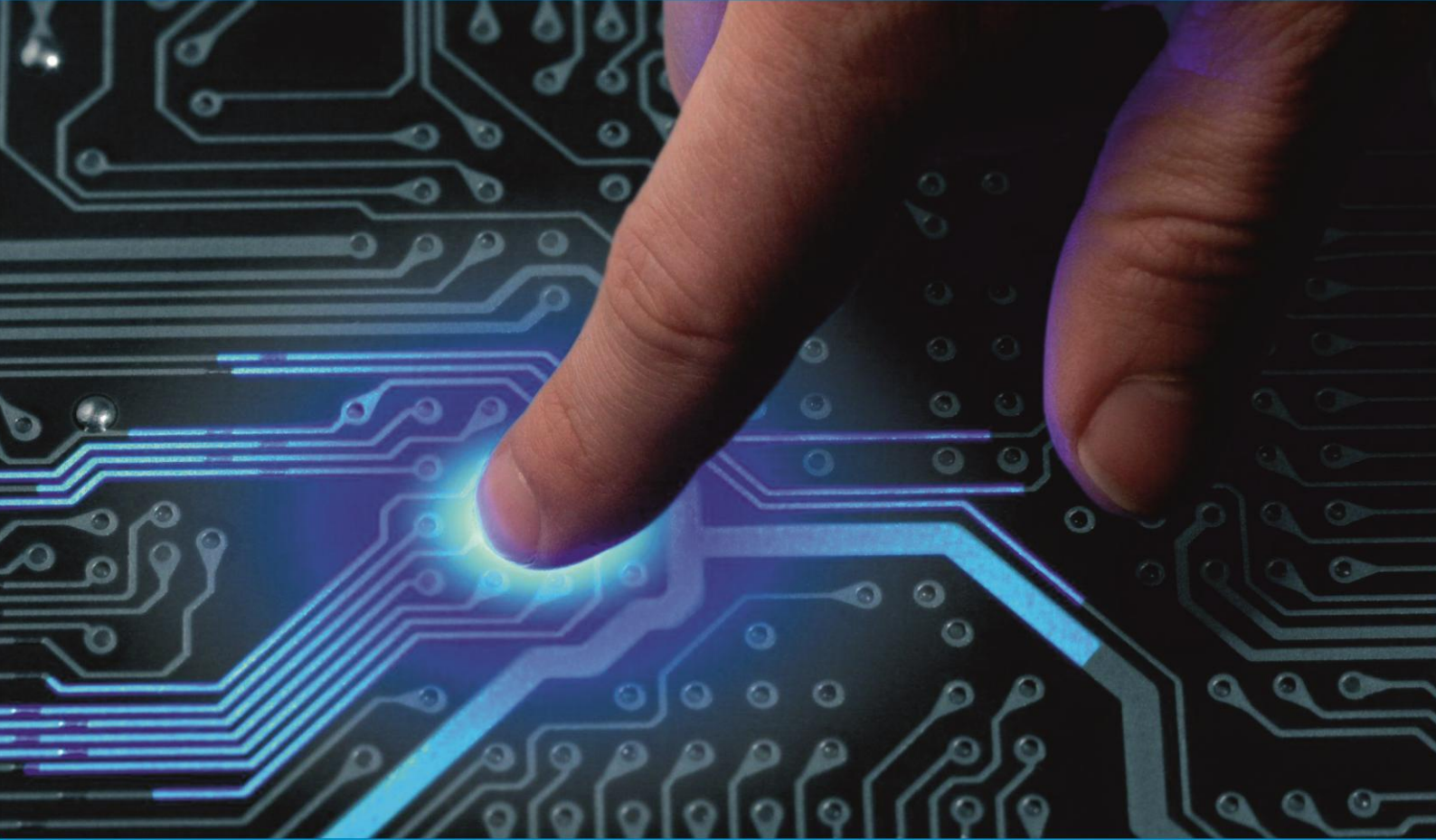
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Pet Feeder System Using RFID & Arduino

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ABSTRACT: Keeping pets takes many commitments. This includes keeping them company, showing your concerns, and of after all, feeding them on time and within the correct way. However, not everyone seems to be a pet expert taking care of your pet's diet are hard and time consuming. One amongst the highest health concerns of pets are overeating and obesity. Especially at younger age, they're usually satisfied with however much is given to them. Many adult pets are fed unscientifically that later may cause short lifespan. Another problem of feeding pets is that owners may not always be home regularly.

KEYWORDS: Continuous servo Motor, Arduino UNO, RTC, RFID Tag.

I. INTRODUCTION

Nowadays most people are fascinated to own pets at their home. But these pets should to be taken care properly. Their feeding on time is a vital task as they become a part of our family. But in our busy schedule we fail to pay/listen attention to our pet thus it doesn't get proper food on time. This paper addresses the above issue by introducing an Automatic Pet Feeding System to make sure feeding pet on frequent of your time. Automatic Pet Feeding System consists food storage, servo motor, dispenser/Container, bowl, etc. It also features Arduino to automatically control the operations like pouring food. Another problem of feeding pets is that owners may not always be home regularly. Being busy in your personal plans knowing that they still have a starving pet at house to be taken care of is usually a priority that bothers pet owners. The concern that we wish to deal with is the fact that there hasn't been many product in the market without delay that's ready to dispense different foods for various varieties of pets like dog, cat, mouse etc. However, pets themselves won't necessarily recognize the potential health problems of eating the incorrect food. Now everyday Animals won't get proper food or food on time especially roadside animals, these techniques are will be very helpful for those animals. Not just for roadside animals it's also useful for those animals which are at Home/reception, Animal Health Care Centre or stores/Pet Shop. You can provide then food on proper time. Even, if no one is there to give them food Physically, then also you can provide them food by using this system you can also play, the voice recording of aowner ,so that animals/pet can't feel alone. Not only for cats, dogs, rabbits this method is also useful for all sort of animals.

1. Nee of the system

- EASILY USABLE:

It makes lives easy because you can set a fixed time for food in advance and later you need not to worry for the same.

- QUICK AND STRAIGHTFORWARD SETUP:

Built-in digital clock and LCD display takes the guess see of setting meals. Fabricated from BPA-free plastic.

- CONTROL PORTIONS AND Forestall OVEREATING:

Each tray slot holds up to 1 cup of dry or semi-moist dog or cat food; feed multiple smaller pre-portioned meals throughout the day for pets who have a habit of eating too quickly, or one larger meal once on a daily basis.

- EASY CLEANING:

Removable tray/ metal plate is dishwasher safe for convenient cleaning.

2. Detailed Problem Definition

The objective of this project is to create a pet feeder which serves automatically because it detects the presence of the pet. This project is proposed such it provides an efficient, easy and a pocket friendly method to create an pet feeder. Different sensors are used for the automated pet feeder in order that it works efficiently.

3. Viability of the System

Thus, we've got designed a pet feeder system using Arduino and sensor, which is handy, portable, cost-effective and highly effective as well additionally. Such systems are hugely in demand for feeding purposes, and thus the given system are often proved useful and effective in sight of the above features.

4. Future Prospects

In this system, there'll be a WiFi module & Voice recognized module because in such case the Pet/Animals are alone at home, animal shelter/ reception, the owner can provide them food by using WiFi module & can even play the recorded voice of owner that the pet/animal can't feel alone. During this system, we can set the Timer, because in some cases the owner is busy or out of the house he/she can set the timer & the system will drop the food on proper time & will play the recorded voice. The owner can may ON/OFF this timer using their Android Smart Phone. This technique will be most useful in Animals Hospital, Animal Health Care Shelter & In Pet Shop/ center.

II. LITERATURE REVIEW

Animal feed distribution systems are a really6 common item and are used greatly both on a domestic scale same as on a bigger scale in commercial applications. Animal feed distribution systems are available in many various forms with alternative ways to manage how the feed actually gets distributed. Whether it's a manual system, an automatic feeder system on a timer, or a sensor-based system; there are many various ways to accomplish the identical end outcome, we have various routes to do it but we can choose which one works most effectively. The sensor we will used in making of any model makes the whole difference because it totally depends on that, how much human interaction the model will need.

Many users are trying to find for a system that's not only capable of running on its own, but also one that's visually appealing. In today's college culture, many young adults are trying to find for a brand new experience, and one amongst these experiences is bringing a pet of some sort home. Pet might be of any categories i.e cat, dog, rabbit, or some other animals. The main concern remains the same that what if the owner is away and pets does not get food on time and did not get in proper amount and not in proper way. This is often sad reality that leads to malnourishment and eventually abandonment of those animals.

III. DESIGN

1.1 Block Diagram of Pet Feeder System Using RFID & Arduino Uno

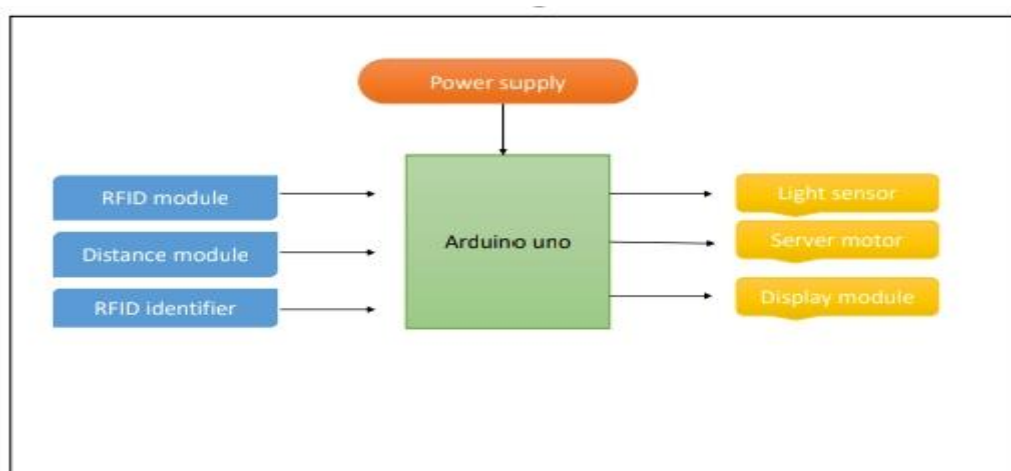


Fig-1:Block Diagram

1.2 Circuit Diagram of Pet Feeder System Using RFID & Arduino Uno

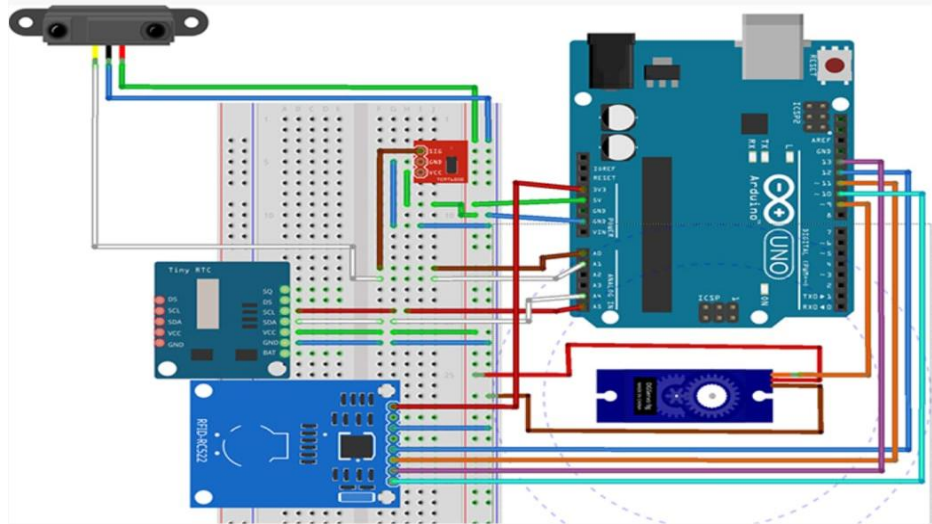


Fig-2: Circuit Diagram

1.3 Pet Feeder System Using RFID & Arduino Uno Requirements

1.3.1 Hardware Requirements:

- Servo motor.
- Resistor (1k ohm) (3).
- Arduino uno.
- Jumper wires (30 f-m wires).
- Breadboard. WiFi Module.
- Light sensor (module temt 6000).
- Led (green & red).
- Resistors.
- USB port.
- RFID tag module.
- RFID tag reader & identifier.
- Distance sensor.
- Real time display module.
- Power source (power bank / battery).
- Food container.
- Bowl

▪ Arduino UNO:-

The Arduino UNO is that the best board to get started with electronics and coding. If this can be your first experience tinkering with the platform, the UNO is that the most robust board you'll start fiddling with. The UNO is that the most used and documented board of the whole Arduino family.



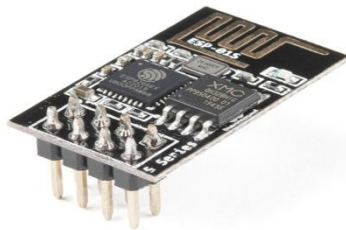
- Servo motor

A servo motor is a rotatory mechanism that enables precise control of angular or linear position, velocity, and acceleration. It consists of different type of attached with it to provide for area of working and it also an appropriate motor coupled to a sensor for position feedback.



- WiFi Module

ESP8266 1MB Flash. The ESP8266 WiFi Module is a micro controller with integrated TCP/IP protocol stack that may give any microcontroller access to your WiFi network that that encode in our code. The ESP8266 is capable of either hosting a function/ code or offloading all Wi-Fi networking functions from another application.



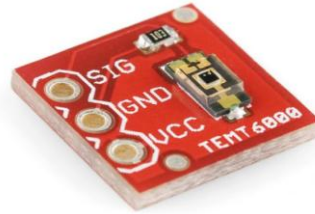
- Time display module

The DS3231 is a low-cost, extremely accurate I2C real-time clock (RTC) with an integrated temperature-compensated crystal oscillator (TCXO) and crystal. ... Two programmable time-of-day alarms and a programmable square-wave output are provided. Address and data are transferred serially through an I2C bidirectional bus.



- Light sensor (module tempt 6000)

This sensor is used to determine the intensity of light, it constantly checks the it and if any object is present in between the path it catches that.



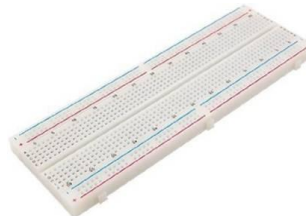
- **RFID Module**

It comes with Rfid tag reader and identifier, it uses passive wireless technology that allows for tracking or matching of an item or individual.



- **Bread Board**

A bread board may be a rectangular plastic board with a bunch of little holes in it. These holes allow you to simply insert electronic parts to example (meaning to make associated check associate early version of) an electronic circuit, like this one with battery, switch, resistor, associated an LED (light-emitting diode).



- **Connecting wires**

Connecting wires permits associate degree electrical current to travel from one purpose on a circuit to a different as a result of electricity desires a medium through that it will move. Most of the connecting wires are created from copper and iron.



- **Register**

A Register could be an assortment of flip flops. A flip flop is employed to store single bit digital information. For storing high number of bits, the storage capability is magnified by grouping quite one flip flop.



- LED

To turn on associate LED, the Arduino has to send a HIGH signal to at least one of its pins. To show off the diode, it has to send a low signal to the pin. You'll create the LED flash by dynamical the length of the HIGH and LOW states.

1.3.2

Software Requirements:

- Blynk Application

IV. WORKING

When the pet came in front of the machine it will detect by the Light Sensor. When the sensor detect the pet it will give the command to the Arduino Uno board will pass the command to Rfid tag. The Rfid tag will pass the command to RTC module. The RTC module will pass the command to Arduino and then Distance module checks condition with code Arduino to servo motor And its will dropped the food in a bowl and it will play the recorded voice. In case the pet owner is away from home they can set a fixed time using RTC Module as it commands servo motor to rotate and dispatch food from the container.

V. RESULTS

Automatic pet feeder works effectively and fulfills the objective of feeding pets in absence of their master/owners. This model can be given power using house hold power supply and it works on principle of RFID Tag.

In this system, when pets come in front of light sensor or near RFID, the pass signals to the arduino boards to its moves accordingly through servo motor and food is dispatched into the bowl.

On later part distance sensor is used to check the empty state of the container in which pet's food is stored. RTC Module is used in the model to increase its usability as the owner at set fixed time as well as the frequency for the food. Through this working module, owner can take care for their pets for effectively.

VI. CONCLUSION

Through this Pet Feeder using RFID tag and Arduino UNO is used to ensure proper timely feeding of pets in absence of their owners. This system provides assurance to owners as they don't have to worry about feeding them at regular intervals. This model is assembled using an RFID Tag which is used to check the presence of any pet nearby, a light sensor to assure the presence, a distance sensor to verify food availability into the container, RTC Module to set a fixed time/ routine, and a Servo motor to dispatch food from the container to bowl. Using this paper, we have designed a model and functions which can be used efficiently through the Arduino Uno board.

For Future Scope, We can use this model in various places such as animal shelters, pet shops, vet clinics, poultry farms, etc. A default sector can be attached to this system so it can notify an authorized person whenever any components are not working properly.

VII. ACKNOWLEDGEMENT

We are thankful to our college and faculties who have given us chance in converting our learning into practical implementations. With immense pleasure, we present the review paper on "Pet Feeder using RFID tag and Arduino Uno" as part of the curriculum of the diploma (Computer). We express sincere and profound thanks to the Head of Department Mr. V. S. Solanke, who is ready to help with the most diverse problems that we have encountered along the way. This would not have been feasible without the encouragement and guidance of our Project Co-ordinate.



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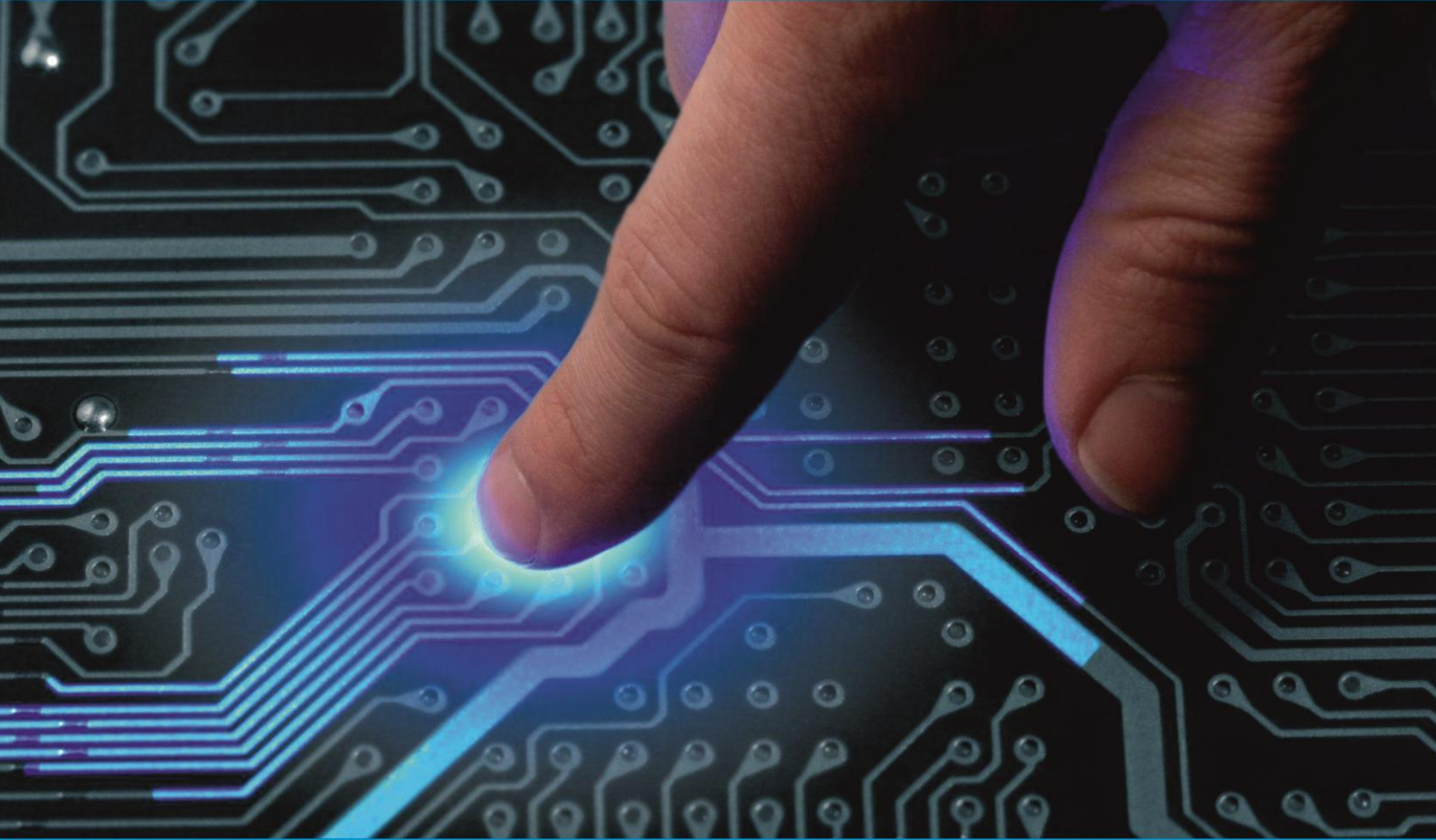
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IoT Based Fire detection and Controlling System

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ABSTRACT: Fire management is one of the main issue that the developed or developing cities are facing. Fire accidental cases are increasing because of bad fire management by those peoples who don't know how to handle it and some of them are known but they can't afford the devices. Sometimes Peoples are out of town that they don't even get aware of the situation of their homes. That's the reason why we developed this device which constantly checks whether fire is detected or not even if someone is out of town they will get a notification via the Blynk application if fire is detected. This project Fire Detection and controlling system using IOT is a system which will co-operate to keep the Citizens aware of their homes situation. This system has a flame sensor which gives an digital signal to the ESP8266 which creates an notification and sends to the user .By this user can get early info of the detected fire and can take immediate action.

KEYWORDS: Fire detection, ESP8266, Flame sensor, Blynk, IOT.

I. INTRODUCTION

The objective of this project is to inform the user about any fire detection. It collects data from flame sensor in the form of digital signal and alerts the user through Blynk Application. The flame sensor sends data to the ESP8266 wi-fi module and it converts that signal into 0 or 1 and runs if else condition by which output is displayed on screen and even user is notified with a notification. This project is IOT Based and its complete solution for all those problems which users complaints about.

II. LITERATURE REVIEW

1. This project is based on IoT as it uses a NodeMCU wi-fi module which gets signal into digital format from flame sensor and triggers the relay.
2. Then it starts the fan then fan helps to extinguish the fire. Also the user gets notified by an App called Blynk. So user can take immediate action on it.
3. This project is best for home fire detection and it is even more cheaper than other products.

III. DESIGN

Resources required-

1. Node MCU ESP8266 12-E Development Board: - The Development board equips the ESP-12E module containing Esp8266 chip having a Tensilica Xtensa 32-bit LX106 RISC microprocessor which operates at 80 to 160 MHz adjustable clock frequency and supports RTOS.

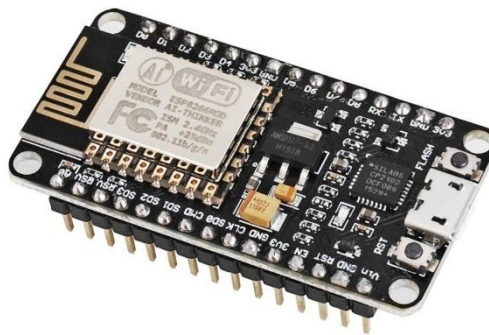


Fig.1.Node MCU ESP8266

2. A Relay Module: - It works on the principle of an electromagnetic attraction. When the circuit of the relay senses the fault current, it energises the electromagnetic field which produces the temporary magnetic flux. This magnetic field moves the relay armature for opening or closing the connection.



Fig.2. Relay Module

3. Infrared Flame Sensor: - A Flame Sensor module or Fire Sensor module is a small size electronics device that can detect a fire source or any other bright light sources. This sensor basically detects IR (Infrared) light wavelength between 760 nm – 1100 nm that's emitted from the hearth flame or light.

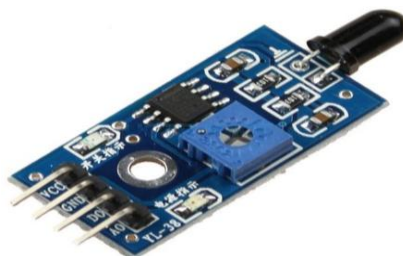


Fig.3.Flame sensor

4. Breadboard: - Breadboards are designed to work with through-hole electronic components. These components have long metal leads that are designed to be inserted through holes during a computer circuit board (PCB) that are plated with a skinny copper coating, which allows the components' results in be soldered to the board.

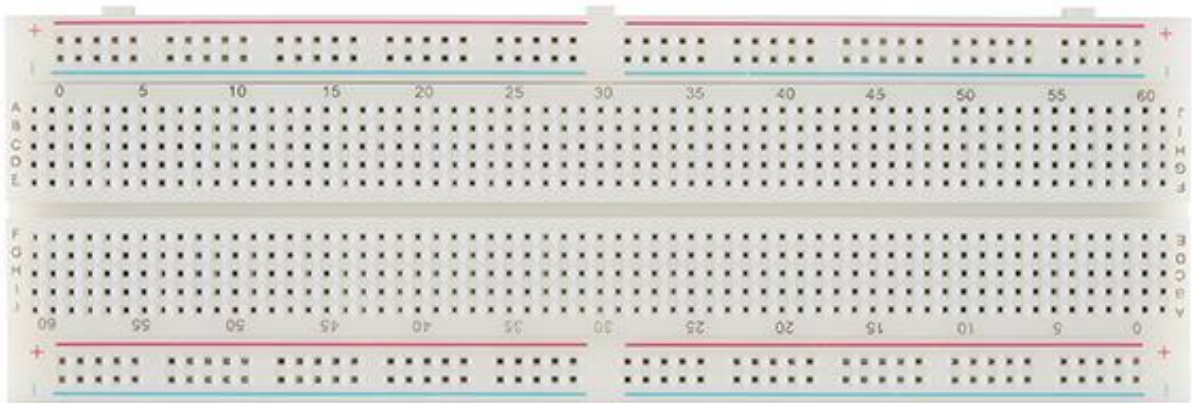


Fig.4.BreadBoard

IV. WORKING

This circuit diagram includes a flame sensor, Node MCU model, a relay module and a 12v DC fan with some jumper wires and Led light.

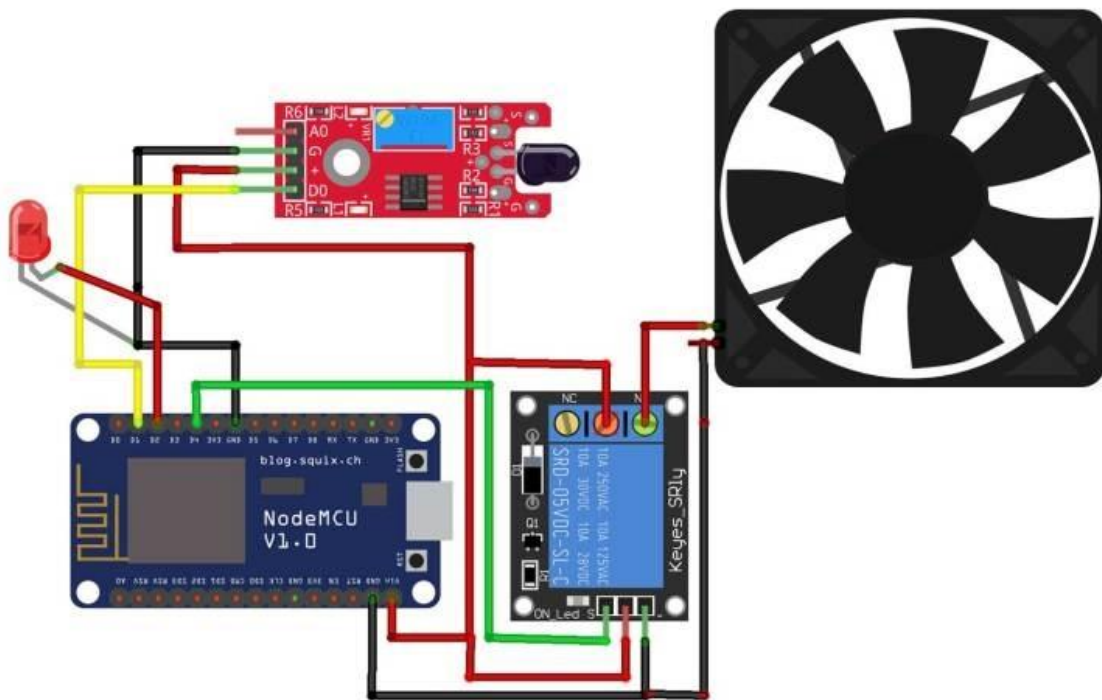


Fig.5.Circuit Diagram

- Firstly connect the Vcc pin to the positive side on the breadboard.
- Then connect GND (ground) Pin to the negative side of the breadboard.
- To establish connection with the flame sensor Connect Vcc and GND pind of flame sensor to Vcc and GND pins on the breadboard.

- Next Connect the D0 pin(signal pin of the flame sensor) to the D1 pin of NodeMCU (ESP8266) to get the signal in digital format.
- After that connect the Negative terminal of LED to GND Pin of NodeMCU and Positive Terminal of LED to D2 pin of NodeMCU.
- Connect the pins of single channel relay GND and Vcc to the GND and Vcc pins on breadboard then connect the Input Pin of single channel relay to the D4 Pin of NodeMCU.
- Then connect the 12v DC fan's Vcc pin to normally open (NO) Pin of single channel relay and connect the positive pin of the 12V adaptor to the common pin of the relay.
- At last connect the Negative pin of the 12v DC fan to the Negative pin of 12v adapter.

After all the connections are done compile and upload the code in the ESP8266 module which is designed for the purpose of collecting the data from flame sensor and implementing it in the code. After successful upload check the project is working or not by testing it.

V. RESULT

At the end the system is working fine after testing it. It successfully works as expected. The flame sensor sends digital signal 1(indicates fire detected) to ESP8266 wi-fi module after detecting any fire near it and then ESP executes the code. After the execution of the code relay gets clipped and it turns on our 12v dc fan that helps to extinguish the fire. Also it send the notification to the user via Blynk application that "Alert fire detected" after the fire gets extinguish the flame sensor again sends a digital signal 0(indicates fire not detected) to the ESP module and then again relay gets clipped and fan stops. Also it sends a notification to the user that "Fire extinguished stay calm" and that's how our IOT based fire detection and controlling system works.

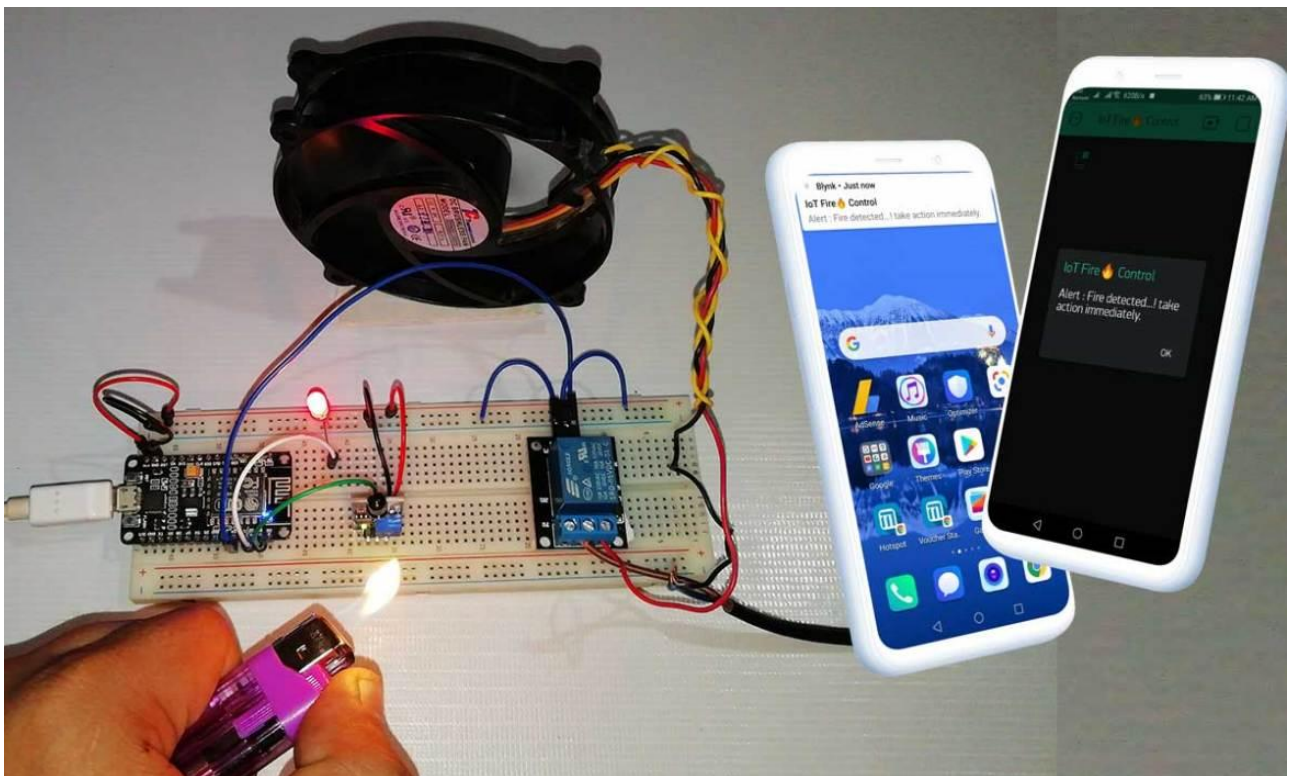


Fig.6.Working of Project



VI. CONCLUSION AND FUTURE WORK

This project task is the execution of fire detection and controlling system using IOT (sensor, wi-fi module). This system satisfies the fire control and detects it when senses the fire nearby. Hoping that this IOT based fire detection and controlling system could help society to overcome the situation of bad fire management and could be the best device to reduce fire accidents hence it's a good project.

- Fire spreads faster and can do Serious damage that's why some more precaution is needed and cannot be depended on a fan.
- In our Project system sends a message on user's mobile to alert user but it can be improved further by sending that message directly to the Fire department.

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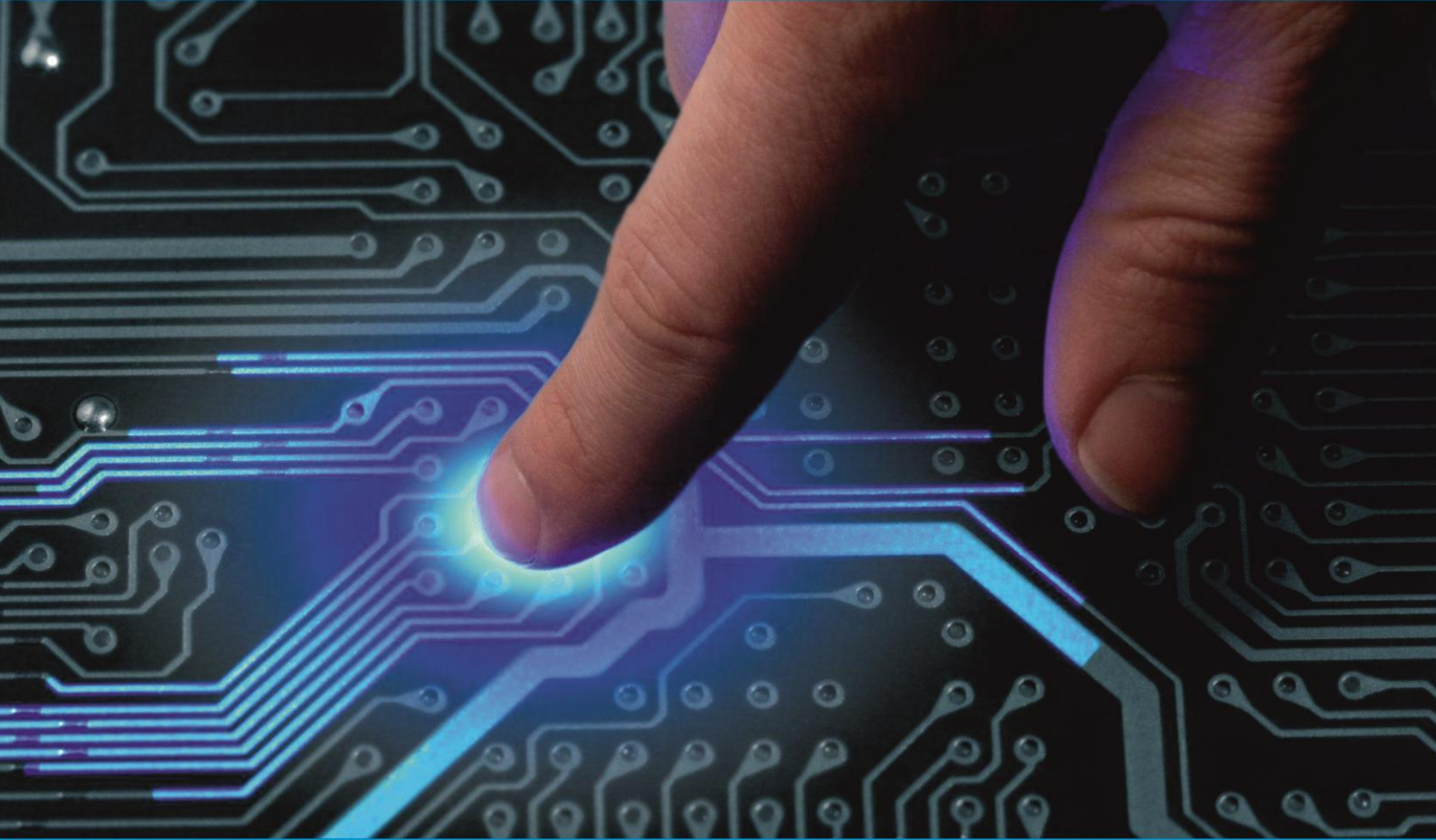
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Fire Fighting Robot/Car using Arduino

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ABSTRACT: Now days most of the accidents happen due to fire in buildings and many of people can lose their lives. Fire fighters are at constant risk of being burned, becoming trapped, inhaling smoke, and so many more things that could be avoided by using the IOT. Under this project we have make a fire fighting robot using the Arduino. This robot can find the fireplace within the homes, building. Then this robot is going to the direction of the fireplace and sprinkles the water through the servo motor towards the fireplace. This fire fighting robot is incredibly helpful for firefighting departments to save lots of the human's lives. The goal is to make an autonomous robot/car that can navigate around a duplicate house to go looking for sources of fire and extinguish them.

KEYWORDS: Arduino UNO, Servo Motor, Flame Sensor, Motor Driver, IDE.

I. INTRODUCTION

The main brain of this project is the Arduino, however but in-order to sense fireplace we tend to use the Fire **sensor module** (flame sensor). Once the fire burns it emits a little quantity of Infrared light, then this light going to be received by the IR receiver on the fire sensor module. Then we tend to use an Op-Amp to visualize the modification in voltage across the IR Receiver, so that if a fire is detected the output pin (DO) will give 0V (LOW) and if the is no fire the output pin are going to be 5V (HIGH).

So, we tend to place 3 sensors in 3 directions of the robot to sense or find on that direction the fireplace is burning. Using this sensor we will find the direction of the fireplace we will use the DC motors to move close to the fireplace by driving our motors through the **L293D module**. Once close to a fireplace have to put it out using water. Using a small container we will carry water, a 5V pump is additionally placed within the container and therefore the whole container is placed on high of a **servo motor** and manage the direction during which the water has got to be sprayed.

The robot is in a position to find a tone like a sort of fireplace alarm, avoid obstacles, and maneuver on completely different flooring. The firefighting robot has a water tanker to pump water and spray it on fire; it's controlled through wireless communication.

II. LITERATURE SURVEY

This project is developing for the fighters so as that we'll deflate lose of human lives. Detecting fireplace and extinguishing it is a dangerous job that puts period of a firefighter in risk.

There are many fireplace accidents that fireplace fighter had to lose their lives among the duty annually throughout the earth. The analysis and development within the field of AI has given rise to Artificial intelligence. Robots are enforced in various areas like Industries, Producing, and Medicines etc. Hence, Artificial intelligence will be wont to assist firefighters to perform this task of fire fighting and therefore cut back the chance of their lives. Firefighter robot could be designed for use in such extreme conditions. It can be operated and controlled by remote user and has the flexibility to extinguish fire after locating the source of fire.

III. SYSTEM COMPONENTS

a) Fire sensor

A flame notice or could be a detector designed to detect and reply to the presence of a flame or fire, permitting flame detection. A flame notice or usually respond quicker and a lot of accurately than a smoke or heat detector because of the mechanisms it uses to detect the flame.



Fig 1. Fire sensor

b) Bread Board

A bread board may be a rectangular plastic board with a bunch of little holes in it. These holes allow you to simply insert electronic parts to example (meaning to make associated check associate early version of) an electronic circuit, like this one with battery, switch, resistor, associated an LED (light-emitting diode).

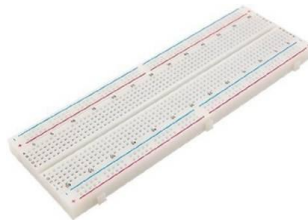


Fig 2. Bread Board

c) Motor Driver

A motor driver could be little Current Amplifier whose operate is to require a low-current management signal then flip it into a higher-current signal that may driver a motor. The L293D could be a typical Motor Driver which might drive a pair of DC motors at the same time.



Fig 3. Motor Driver

d) Connecting wires

Connecting wires permits associate degree electrical current to travel from one purpose on a circuit to a different as a result of electricity desires a medium through that it will move. Mainly the connecting wires are created from copper.



Fig 4. Connecting wires

e) Chassis

Chassis is that the main support structure of the vehicle that is additionally referred to as 'Frame'. It takes all the stresses of the vehicle in each static and dynamic condition. During a vehicle, it's analogous to the skeleton in living organisms.



Fig 5. Chassis

f) DC motor

DC motors are appropriate for several applications — as well as conveyors, turntables et al. that adjustable speed, and they conjointly work well in dynamic braking and reversing applications that are common in several industrial machines.



Fig 6. DC Motor

g) Register

A Register could be an assortment of flip-flops. A flip-flop is employed to store single bit digital information. For storing high number of bits, the storage capability is magnified by grouping quite one flip-flop.



Fig 7. Register

h) LED

To turn on associate LED, the Arduino has to send a HIGH signal to at least one of its pins. To show off the diode, it has to send a low signal to the pin. You'll create the LED flash by dynamical the length of the HIGH and LOW states.

i) Servo motor

A Servo Motor could be a little device that has output shaft. This shaft will be positioned to specific angular positions by causing the servo a coded signal. As long because the coded signal exists on the input line, the servo can maintain the spatial relation of the shaft.



Fig 8. Servo Motor

j) Submersible pump

A submersible pump may be a device that includes a hermetically sealed motor close-coupled to the pump body. The full assembly is submerged within the fluid to be pumped.



Fig 9. Submersible pump

IV. WORKING

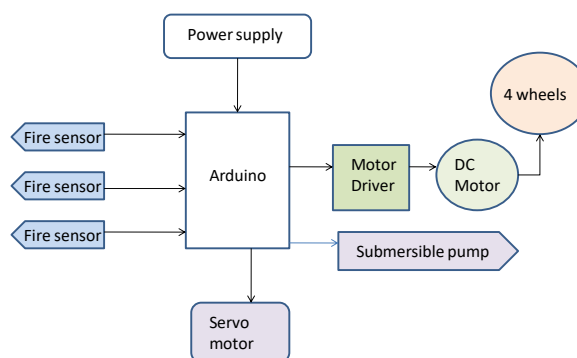


Fig 1. Block Diagram

The Car continuously monitors the variation of the encircling area using the sensor. Whenever the temperature exceeds the limit value and the flame and smoke detected it identifies that there is the presence of fire. In this situation, the robot will reach the point and start sprinkling the water it works on a function called as en route distancing/ routing method.

The microcontroller recognizes the digital output at the input pins of the motor driver IC to regulate the motion of the robot. For the car movement, 12V geared DC motors are attached to the wheels. These geared DC motors are available

with a big selection of RPM and Torque, which permits a robot/car to move based on the control signal it receives from the motor driver IC. The robot motion is principally controlled by the rear wheels. Since its automatic, it turns left and moves forward to succeed in an appropriate spot if the fire is sensed by the left sensor. It changes towards the right and moves forward to achieve an appropriate spot if a fire is sensed by the proper sensor.

V. RESULTS

The car when detects a fire moves on its own. Arduino will control the motor through the motor driver Module. To rotate in either right or left direction, one motor will remain off and another one will move, thus leading to rotation of the body. If Arduino flame sensor will detect the fireplace then the car will move forward to the fire slowly. Here, the algorithm is written such it makes a slow approach of the robot towards the fire. As soon because it detects a fire, the car must stop at a specific limit and should not run over the fire.

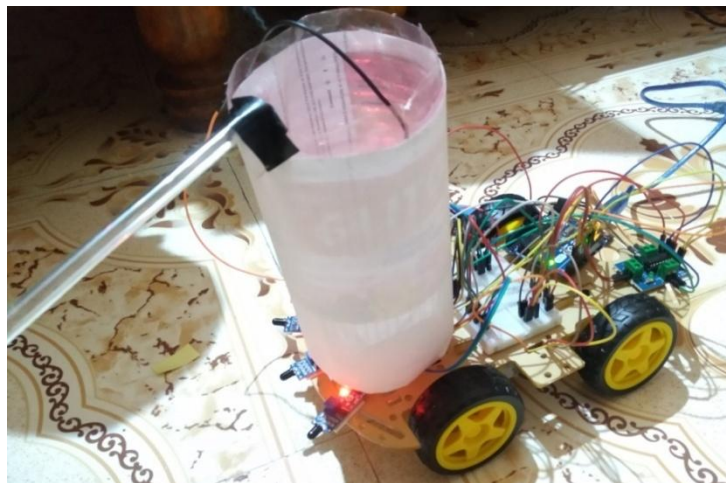


Fig 1. OUTPUT

VI. CONCLUSION

The simulation results The fire fighting car is built up used various sensors and components such as car chassis i.e used as the base of this model, DC motors which help wheels to rotate, submersible pump to be used to extinguish the fire. Flame Sensor is used to detect any presence of fire and to know the direction we have used three fire sensors in different directions. This model will reduce human efforts as well as the damage caused during an accident. An accuracy of a fire sensor increase in dark and small regional areas. Throughout the project, we have learned various things such as the installation of IDE, Connections, code compilation. For future scopes, we can increase the amount of water weight the car can bear so it will increase the usability of the model. This car can be controlled through voice recognition to pass commands. A SMS module can be added to it to send notifications, messages to officials.

VII. ACKNOWLEDGEMENT

With immense pleasure, we present the review paper on "Fire Fighting Robot/Car" as part of the curriculum of the Diploma (Computer). We express sincere and profound thanks to Head of Department Mr. V. S. Solanke, who is ready to help with the most diverse problems that we have encountered along the way. This would not have been feasible without encouragement and guidance of our Project Co-ordinate, Mrs. Geeta Joshi.

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ATM Management System

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Abstract

The ATM System is the project which is used to access their bank Accounts in Order to make cash withdrawals. Whenever the user need to make Cash Withdraws, they can enter their PIN number (personal identification Number) And it will display the amount to be withdrawn in the form of 100's 500's and 1000's. Once their withdrawn was successful, the amount will be Debited in Their account. The ATM will communicate each transaction to the database and Obtain Verification that it was allowed by the database. In the case of a cash Withdrawal, a second message will be sent after the transaction has been Physically completed (cash dispensed or envelope accepted).

Keywords: customer, transaction, verification, withdrawal, envelope

Introduction

Introduction to the ATM system: Automated Teller Machine enables the clients Of a bank to have Access to their account without going to the bank. This is Achieved only by Development the application using online concepts. When the Product Is implemented, the user who uses this product Will be able to see all The information and services provided by the ATM, When he enters the Necessary option and arguments. The product alsoprovides services like request For cheques, deposit Cash and other advanced requirement of the user. The Data is stored in the Database and is retrieved whenever necessary.

Methodology

The program is designed in such a way that the user has to card And pin Number. Once verified, he is provided a menu and he/she had to Enter the Option provided in the menu. For example, when the user wants To view the listOf payment history than he/she had to enter the option for Payment history Provided in the main menu. When the option is entered Alone with the Respective argument, then the payment history is displayed On the screen. Now a days every one very busy in their work. So they feel that the Job must be Easier so the system is used to reduce their work which is done In the ATM System.

Testing

Testing: Testing is the one of step in the software process that could be viewed as destructive rather than constructive. 1. White box testing: White box tests focus on the program control structure, internal program logic is exercised using this techniques. 2.Blackbox Testing: Black box testing is software requirements are exercised and derive sets of inputs conditions that will fully exercise all functional requirements for a program this testing is also called "behavioral testing".3. Level Of Testing: The details of software functionality & test conditions are satisfied fully on behavioral based so that choose for black box testing.

Advantages

- Minimizes Transactions Cost
- Charges Fees.
- Limitation on Cash Withdrawal
- Possibility of Frauds.

Disadvantages

- Personal touch of customers-employee relation is missing.
- Due to leakage of PIN, fraud can take place easily.
- Initial cost of hardware, software, and installation site is very high.
- Limitation of withdrawal of money.

Conclusion

Based studies on the ATM we hereby conclude that ATM is the easiest Way of depositing and withdrawing money. Transaction is possible any time, That's why in India some people call ATM as "all time money". If ATM machines Are connected to internet then its possible to do transaction from any where, 24 Hours a days and 365 days a year. With the security of ATM improving it has Now become a safe mode of transaction. Hence it can be concluded that ATM is Safe, fast, reliable, convenient, excisable and any time money machine. We hereby create an application to work on android devices that Locates the nearest ATM or the list of ATM centers over specified distance. The Application developed would be of great use for all the banking users to find Their nearest ATM's in the sense that they can reduce their work of searching For the ATM'S nearby. This application gains importance in the sense that it is Not specific to a particular ATM instead it locates and lists out all the ATM's Within the given limit of radius.

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Air Pollution Monitoring System Using Arduino Uno

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ABSTRACT: The level of pollution is increasing rapidly thanks to factors like industries, urbanization, increasing population, vehicle use which may affect human health. IoT Based Air Pollution Monitoring System is employed to watch the Air Quality over an online server using the Internet. It'll triggers an alarm when the air quality goes down beyond a particular level, which means when there are sufficient amount of harmful gases present within the air like CO₂, smoke, alcohol, benzene, NH₃ and NO_x. It'll shows the air quality in PPM on the LCD and likewise as well as on the webpage so that air pollution are often monitored very easily. The system uses MQ135 and MQ2 sensors for monitoring Air Quality as it detects the most harmful gases and might measure their amount accurately.

KEYWORDS: Air Pollution, Quality, MQ135 Sensor, IOT, Arduino Uno.

I. INTRODUCTION

In order to observe during this project, we are visiting to make an IOT Based Air Pollution Monitoring within which we are going to monitor the Air Quality over an online/webserver using the internet and can activate an alarm when the air quality goes down beyond a particular level, means when there's sufficient amount of harmful gases are present within the air like smoke particles, CO, benzene and NH₃. It'll show the air elements in PPM on the LCD and yet as on the webpage in order that we are able to monitor it very easily. During this IOT project, you will be able to monitor the pollution level from anywhere using your computer or mobile. Air pollution and harmful gases is that the biggest problem of each and every nation, whether it's developed or developing. Health problems have been growing at a faster rate especially in urban areas of developing countries where industrialization and the growing

number of vehicles results to the release of lot of gaseous pollutants. . IOT Based Air Pollution Monitoring System monitors the Air quality over an internet/web server using the Internet and can trigger an alarm when the air quality goes down beyond a particular strength/threshold level, means when there are sufficient amount of harmful gases present within the air like CO, benzene, NH₃, LPG and NO_x. It will show the air quality in PPM on the LCD and similarly as on the webpage in order that it can monitor it very easily. LPG sensor is added during this system which is employed mostly in houses. The system will show temperature and humidity. The system may be installed anywhere but mostly in industries and houses where gases are mostly to be found and shows an alert message when the system crosses the threshold limit. It is important to supervise air quality and keep it in restraint for a superior future and healthy living for all. Thanks, due to resilience and low-cost Internet of things (IoT) is getting popular day by day. With the Industrialization and with the rise within the vehicles on road the atmospheric conditions have considerably affected. In order to observe during in this project, we are visiting to make an IOT Based Air Pollution Monitoring System within which we'll monitor the Air Quality over the internet using the internet and can activate an alarm when the air quality goes down beyond a particular level, means when there is sufficient amount of harmful gases are present within the air like CO, smoke particles, alcohol, benzene, and NH₃, sulphides. It will show the air elements in PPM on the LCD and as well as on the webpage so that we can monitor it very easily. During this IOT project, you will monitor the pollution level from anywhere using your computer or mobile.



ADVANTAGES:

- Sensors are easily available.
- Simple, compact, easy to handle.
- Sensors have a long life and fewer cost.
- quality of air will be checked indoors as well as outdoor.

1.1 Need for the New System

This project provides a mixture/combination of processes of sensing several gas levels within the air and also the ambient temperature and humidity, thus sensing the quality of the air.

- The presence of the gases and therefore the temperature is displayed a LCD display panel, which continuously shows the real-time output values of the gas sensors, temperature, and humidity sensor.
- To live/measure and display temperature and humidity level of the environment.
- To mix advanced detection technologies to provide an air quality sensing system with advanced capabilities to produce low-cost comprehensive monitoring.
- To display the sensed data in user-friendly format in LCD display module.

1.2 Detailed Problem Definition

Air pollution affects our daily activities and quality of life because of air quality. People must know the extent to which their activities affect air quality. This project proposes an air pollution monitoring system. This model is developed using Arduino Microcontroller. An air pollution monitoring system was designed to watch and analyse air quality in real-time. Within monitoring of air pollution, several researchers worldwide have developed models to watch many of the pollution gases like Sulphur Dioxide (SO₂), Carbon Monoxide (CO), Carbon Dioxide(CO₂), Nitrogen Oxide (NO), Etc.

1.3 Viability of the System

As development of country is increasing its leading to more % of air pollution because of

industrialization, chemical factoring, increased smoke from vehicles, dangerous gases from A.C and home appliances leads to more release of harmful gases and it effects human health.

1.4 Presently Available Systems for the identical.

1. A WIFI-enabled indoor air quality monitoring and system.
2. A low-power real-time air quality monitoring system using LPWAN supported LoRa.
4. A wise sensor system for air quality monitoring and big data collection.

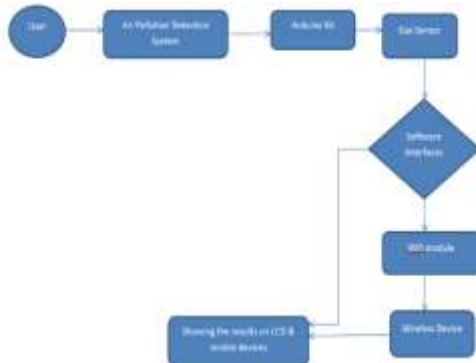
II. LITERATURE SURVEY

The level of pollution has increased with time by a lot of things just like the increase in population, increased vehicle use, industrialization, and urbanization which ends in harmful effects on human wellbeing by directly affecting the health of the population exposed thereto. So as to watch during this project, we are visiting to make an Air Pollution Monitoring System based on Arduino during which we will monitor the Air Quality over a web server using the internet and will activate an alarm when the air quality goes down beyond a specific level, means when there's sufficient amount of harmful gases are present in the air like CO₂, smoke, alcohol, and NH₃. It will show the air elements in PPM on the LCD and as well as on the webpage so that we can monitor it very easily. In this model, we can monitor the pollution level from anywhere using your computer or mobile through WIFI mode. It's necessary to supervise air quality and keep it under control for a superior future and healthy living for all. Due to resilience and low-cost Internet of things (IoT) is getting popular day by day. With Industrialization and with the rise in vehicles on the road the atmospheric conditions have considerably affected.

III. MODELING AND ANALYSIS

List Of Hardware Components

Arduino Uno.
Resistor.
Mq-2 sensor.
Mq-135 sensor.
16*2 LCD Display.
20 pins to connect with LCD.
Jumper Wires. (30 male-female)
Buzzer
Power cable/USB cable.
Potentiometer.
Breadboard.
Wifi module ESP8266.



various devices and circuits. It is meant to display 16 letters into 2 rows.



• Arduino UNO:-

The Arduino UNO is the best board to get started with electronics and coding. If this is your first experience working with the platform. The UNO is the most used and documented board of the whole Arduino family which also include Nano, Micro, Mega and Robotics boards.



Wifi Module

The ESP8266 WiFi Module is a micro controller with integrated TCP/IP protocol stack that can give any microcontroller access to your WiFi network. The ESP8266 is capable of either hosting an application or offloading all WiFi networking functions from another application processor.



MQ135 air quality sensor:-

Air quality sensor for detecting a wide range of gases, including Co, NH₃, NO_x, benzene, smoke particles and CO₂. Ideal for use in office or factory. MQ135 gas sensor has high sensitivity to Ammonia, Sulfide and Benzene steam, also sensitive to smoke and other harmful gases that release into the atmosphere.



MQ2 Sensor :

Gas Sensor (MQ2) detects combustible gasses and smoke. The Gas Sensor (MQ2) module is also useful for gas leakage detection (in home and industry). It can detect combustible gas and smoke. The output voltage from the Gas sensor increases when the concentration of gas.



Liquid Crystal Display:-

An LCD (Liquid Crystal Display) screen is an electronic display module and has a wide range of applications. A 16x2 LCD display is very basic module and is very commonly used in

IV. WORKING

Firstly, we will connect the MQ135 sensor with the Arduino. Connect the VCC and therefore the ground pin of the sensor to the 5V and ground of the Arduino and then the Analog pin of the sensor to the A0 of the Arduino Uno/Microcontroller. Connect a buzzer to pin 13 of the digital side of Arduino which can start to beep when the condition becomes true. The sensor will detect the Pollution present in the air. When the Pollution will detect it will check by the Arduino uno. The it will display the Range of Air Pollution Available in the Air. Then it will display the range on the LCD(16*2).

V. CONCLUSION

In this paper we have tried to solve the air pollution problems the system to monitor the air of environment using Arduinio microcontroller, IOT Technology is proposed to improve quality of air. With the use of IOT technology enhances the process of monitoring various aspects the environment of such as air quality monitoring issue proposed in this paper.

Future Prospects

- Use more sensors so that they can be used to know % of each gas present in the atmosphere.
- Design a website and you can upload data of these sensors over the internet.

VI. ACKNOWLEDGEMENTS

We take this opportunity to thank all the individuals connected with this project for their useful direction help and timely support which helped us to complete the project in specify amount of time. We would like to express great gratitude to our Head Of Department Mr.V.S.Solanke and our project guide Mrs.Arati Deshmukh for their all important support , motivation , guidance and helpful suggestion all over the project work. Lastly but not least our sincere credit goes to our family for their key support since we begin our education and also to our group person.

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WORDPRESS BASED ONLINE SALON BOOKING SYSTEM

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ABSTRACT

Swapnali Beauty Parlor is a web-based salon management programme that includes appointment scheduling. It creates an online community for clients, salons, and stylists, allowing users to explore salons and stylists and schedule or cancel appointments. Users may also leave and read reviews on salons and specific stylists. Salons can define the stylists that work there as well as the services they provide. Salons may also arrange appointments for their customers, as well as see and print schedules in a variety of formats. In the restaurant business, OpenTable.com fills a similar demand, but nothing exactly like this existed to connect clients and beauty shops online. Swapnalibeautyparlor.com solves this need in an on-demand, user-friendly, and effective approach for users and salon management. Wordpress will be used in my project to provide powerful database capabilities to the UI. SalonBook will combine WebCalendar as a backend database for appointments as well as a front-end scheduling tool for appointment scheduling. WebCalendar is a PHP-based calendaring application that may be used as a standalone application or incorporated into other programmes. As the first platform for the Beta version, this project will target the major web browsers. The ultimate output will be a fully functional web application that can handle all of the use cases given. Appointment scheduling, schedule viewing and printing, adding stylists and services to a salon account, adding schedules to a stylist account, accumulating points in a client account, posting and reading reviews for specific salons and/or services, and establishing temporary salon promos that users can browse and filter are some of the key use cases.

Keywords: Salon Booking. Appointment Scheduling, Website, Booking. Shopping.

I. INTRODUCTION

Being a salon customer nowadays is inconvenient. You have to remember that you need to schedule an appointment, then pray that you remembered within business hours, then scurry to find the phone number and take time out of your busy day to call. And forget about obtaining user ratings of local salons and stylists; locating such on the internet is a pain that most people avoid. This is the daily reality of innumerable salongoers, even as we enter the twenty-first century. There is a clear, expressed need for a "one-stop-shop" web portal that connects clients to salons, delivering all the information customers want in one accessible, on-demand location. Surprisingly, many salons still use paper and pencil systems to schedule appointments and manage customers today. These systems are ineffective in exchanging and synchronising information, and they are prone to expensive human mistake. Swapnali Beauty Parlor promises to eliminate the need for paper-pencil systems by providing salons with an easy-to-use interface. Swapnali Beauty Parlor will be more than just an online scheduling tool; it will also be a salon management tool, allowing salons to manage stylists and services, promote sales to customers, and track customer satisfaction. MySQL and PHP are used in my project to provide powerful database capabilities to the UI. I used PHPMyAdmin, a web-based MySQL interface, to create the data tables. I largely utilised Wordpress for front-end development to layout the site and build a basic, clean interface. I utilised Wordpress to make the styling of the application easier. However, Wordpress's capabilities are severely restricted, and the breadth of my project rapidly surpassed Wordpress's. Nonetheless, it was a really useful tool in the beginning. For appointment scheduling, I'm planning to integrate Google Calendar, a PHP-driven calendaring programme, with my Swapnali beauty salon SalonBook programme. After careful consideration, I opted to use Google Calendars for a variety of reasons. To begin, Google Calendar is installed locally and is powered by MySQL. This implies that all of the code for Google Calendar is located in a subfolder of my project. This allows me a lot of control and flexibility when I integrate the application into my software. It also makes use of MySQL data tables, which reside directly next to the SalonBook data tables (Swapnali beauty parlor). As a result, it is a very clean integration and a very strong tool. Google Calendars, on the other hand, would imply that functions would be outsourced to Google. Any modifications to the Google APIs in the future would cause severe issues with my app. Viewing and modifying Google Calendars also necessitates user login. This means that visitors of my website would require Google accounts, or I would need to be the "owner" of all

calendars. Because neither of these solutions provided the tidy, compact solution that Google Calendar did, they were not deployed.

II. METHODOLOGY

Here we design system which help to take salon appointment online which saves customer waiting time this website also contain product which owner can sell online. MySQL and PHP are used in my project to provide powerful database capabilities to the UI. I used PHPMyAdmin, a web-based MySQL interface, to create the data tables. To decorate the site and create a basic, clean interface, I largely used HTML for front-end development. I used Adobe Dreamweaver to make designing the programme easier. However, Dreamweaver's capabilities are severely limited, and the breadth of my project rapidly surpassed Dreamweaver's. Nonetheless, it was a really useful tool in the beginning.. We planning to incorporate Google Calendar, a PHP-driven calendaring programme, with my SalonBook programme for appointment scheduling. To design a website we use wordpress And Xampp server. Those information is as follows:

A. Xampp

XAMPP is a free and open-source cross-platform web server solution stack package built by Apache Friends that includes the Apache HTTP Server, the MariaDB database, and interpreters for PHP and Perl scripts. Because most genuine web server installations employ the same components as XAMPP, it is straightforward to convert from a local test server to a live server. Because of XAMPP's simplicity of deployment, a developer may quickly and easily instal a WAMP or LAMP stack on an operating system, with the added benefit that common add-in programmes like as WordPress and Joomla! may also be deployed with comparable simplicity using Bitnami. The figure depicts our Xampp Control Panel.

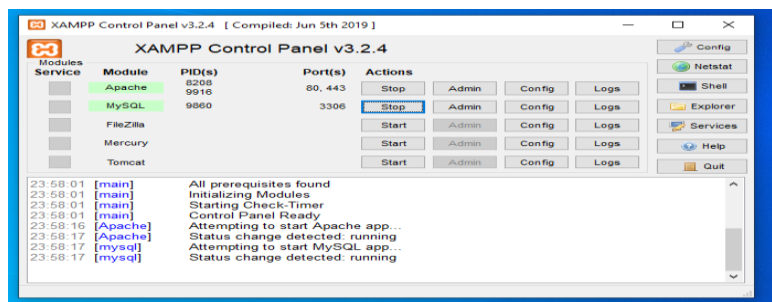


Figure 1: Xampp Control panel.

B. Wordpress

WordPress (WP, WordPress.org) is a free and open-source content management system (CMS) developed in PHP and used in conjunction with a MySQL or MariaDB database. A plugin architecture and a template system, known as Themes in WordPress, are among the features. WordPress began as a blog-publishing system but has now expanded to accommodate other sorts of web content such as more traditional mailing lists and forums, media galleries, membership sites, learning management systems (LMS), and online commerce. As of May 2021, WordPress was utilised by 41.4 percent of the top ten million websites. WordPress is one of the most widely used content management system options. WordPress has also been utilised in a variety of other application domains, including ubiquitous display systems (PDS).

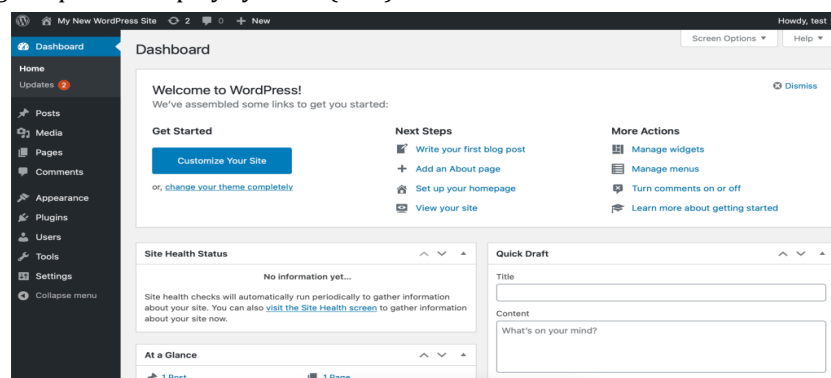


Figure 2: Dashboard of wordpress

III. ANALYSIS

Memory, thread execution, code execution, code safety checking, compilation, and other system functions are all managed by the common language runtime. These characteristics are included into the Spa salon managed code, which operates on the beauty centre common language runtime. In terms of security, managed components are given varied degrees of confidence based on a variety of variables, including their origin. This implies that a managed component may or may not be able to execute file-access activities, registry-access activities, or other sensitive services, even if it is utilised in the same active application as the beauty center. The runtime also ensures code robustness by implementing the common type system, which is a stringent type and code-verification architecture. All managed code must be self-describing, according to the CTS. The different Microsoft and third-party language compilers produce managed code that is compliant with the Spa salon CTS. This means that managed code can consume other managed types and instances while adhering to tight type integrity and type safety. Furthermore, the beauty parlour runtime's controlled environment reduces many common software difficulties.

IV. RESULTS AND DISCUSSION

While the beauty salon runtime is intended for future beauty salon applications, it also supports applications from today and yesterday. The interoperability of managed and unmanaged code allows developers to continue using required COM components and DLLs. The runtime is intended to improve performance. Despite the fact that the beauty shop common language runtime offers many standard runtime services, managed code is never interpreted. Just-in-time (JIT) compilation allows all managed code to run in the native machine language of the beauty parlour system on which it is running. Meanwhile, the memory manager removes fragmented memory's skin care, beauty treatments, and hair salon options and boosts memory locality-of-reference to improve efficiency even more. The following are some screenshots from our website:

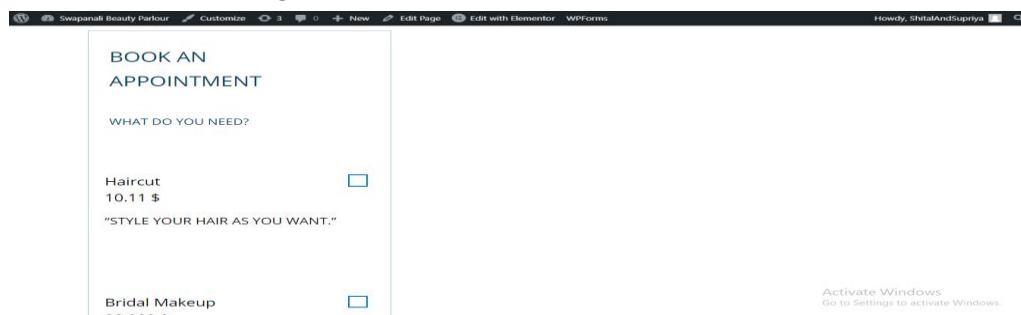


Figure 3: Book an Appointment

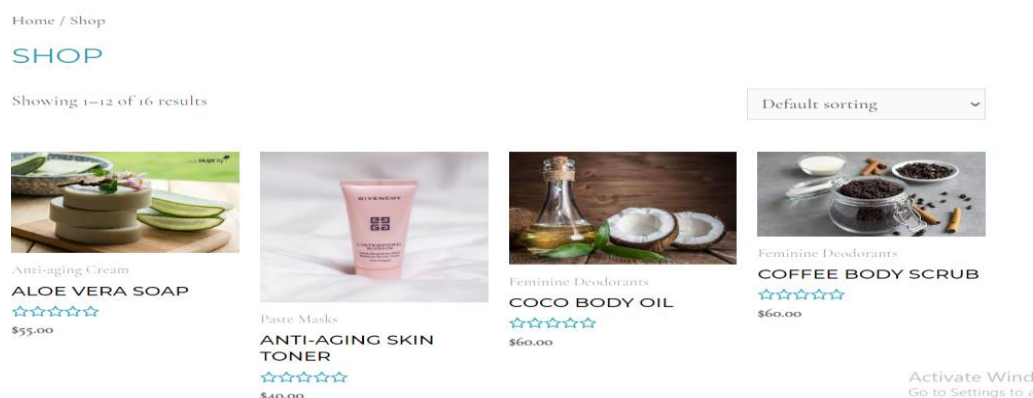


Figure 4: Online cosmetic shopping

V. CONCLUSION

This website offers a computerised version of the salon management system that will benefit both the consumer and the salon's employees and manager. It takes the entire process online, allowing customers to book appointments and beauty goods, as well as employees and managers to generate appointments and book beauty goods.

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Student's Attendance Management System

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Abstract- Fingerprint verification is one of the most reliable personal identification methods is biometrics. With the rapid development of fingerprint verification, a number of its applications system etc. In this paper, a fingerprint Attendance management system is designed and implemented. This system based biometrics and serial port communication technique solve the problem of attendance and trouble of maintaining the register. It can make the user's attendance more easily and effectively.

Keywords – fingerprint verification; biometrics attendance management

I. INTRODUCTION

This project uses a biometric concept to facilitate the attendance system in educational institutes. It uses the most reliable way of uniquely identifying students through fingerprint reading. Such type of application is very useful in school as well as in college for daily attendance. Through this application we can keep a systematic track of student's attendance. This project enables the easy way of maintaining class attendance with fewer efforts. It can be later implemented for the teaching staff. Attendance calculation system of an students class.

The currently available fingerprint technology attendance system has several drawbacks. An (attendance system monitoring system (AMS)) based on fingerprint detection also & using smart phone. Students who at outside the database & get stored according to the students who press on fingerprint sensor.

There will not be a queue for the attendance in front of attendance machine. Friends cannot put proxy attendance. The clarity of the fingerprint image, separation of the ridge-valley pattern & the contrast. These factors are basically consistent with some subjective criteria for estimating the quality of an image itself, but also affected by matching algorithm as matching is generally dependent on features.

The project requires a fingerprint reader for finger Detection. The fingerprint of the students is compared with the one stored in database according to subject-wise or date-wise as required. A defaulter list can be generated through system. Admin has the option to take a print of the reports & defaulter list thus generated.

1. Existing System:

The Existing system is a manual entry for the students. Here the attendance will be carried out in the hand writing registers. It will be tedious job to maintain the record for the students. The human effort is more here. The retrieval of the information is not as easy as the records are maintained in the hand written registers. This application requires correct

feed on input into the respective filed. Suppose the wrong inputs are entered, the application resist to work. So the user find it difficult to use.

II. METHODOLOGY

We connect the fingerprint device to the laptop and started the system. And we have installed software like jdk 1.7.0, Mysql 5.5, eclipse endigo, fingerprint driver. This System takes attendance electronically with the help of a finger print device and the records of the attendance are stored in a database.

In this system, after registering the entry of a student by his fingerprint, the information including date, name, time, mobile no. of arrival all this information of students is stored in the database. And we know the student's absence through the database.

In the absence of the internet connection, unpublished data is stored and will be forwarded to thing speak as soon as it is connected to the internet. Since the information is stored in database, they will not be lost in case of a power outage. Attendance is marked after student identification. For student identification, a finger print identification based system is used. Block diagram of system shown in figure1.

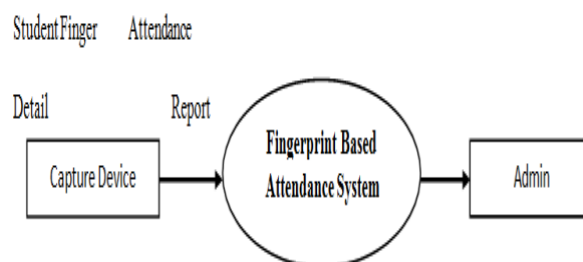


Fig 1. System Design.

III. MODELING AND ANALYSIS

We have developed a technique called Digital Persona for this project. In the school attendance report of every student

is important because students are succeed in academics when they attend school properly. It is difficult for the teacher and the class to build their knowledgeble mind and progress, if a large number of students are frequently absent.

As a result, adopting fingerprint attendance device is avoid to fake attendance in classroom. No anybody students make proxy attendance of other students. The fingerprint sensor is scanned only identification stored data in given system.

Fingerprint scanner is connected to computer/laptop there was software installed. If any student scan his finger by scanner the identification of student goes in capture device and register in software jdk 1.7.0, Mysql 5.5, fingerprint based device. As a result, the information stored in database, the data will be not lost and report is generate at admin desk.

IV. RESULT AND DISCUSSION

In this study, it is learned that the student can easily attend without any efforts. we clarified an using application of fingerprint attendance device aimed at less absence of student.

Because student can easily attend clasroom, it is critical to monitor and identify hand writing database of student attendance. And its presence is saved in the database if the student is absent on any given day, it is known to you. The result is that the student's attendance will be saved and safe in the database.

V. CONCLUSION

It can be concluded from the above discussion that a reliable, secure, fast and an efficient system has been developed replacing a manual and unreliable system. This system can be implemented in academic institutes for better results regarding the management of attendance.

This system will save time, reduce the amount of work the administration has to do and will replace the stationery material with electronic apparatus. Hence a system with expected results has been developed but there is still some room for improvement.

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Quiz App using Android Studio

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ABSTRACT

The evolution of today's mobile devices increases the number of mobile applications developed and among them the quiz applications. Android Mobile hardware and software platforms allow the running of faster and richer applications. This paper presents the main steps in the development of a quiz application for Android using Android Studio.

I. INTRODUCTION

A simple Quiz App that contains a group of curated questions and their answers and checks for the correctness of the solution given by the user. It navigates through the questions using dynamic programming.

Development of Android-based Quiz application is especially required by students and learners to organize themselves for various examinations directly through Smart-Phones and tablets in hands. The most aim of this project is to facilitate students in learning, gaining, and improving their knowledge skills. Within the meantime, our app provides them fun so the users can steel themselves against interviews, entrance tests, or the other corresponding purposes in a very fresh mood and can't get bored or frustrated because to the dullness of the applying. We designed the application to facilitate the users to be able to take short quizzes using portable devices likes smartphones and tablets .Android is software that is built basically for Mobile phones. It's supported by the Linux Kernel and other open-source software and is developed by Google. Android is very popular nowadays among students and students are now choosing Android for his or her projects. It's greatly important for a beginner to create baby Android apps to learn Android. The evolution of today's mobile devices increases the quantity of mobile applications developed and among them the quiz applications. Android Mobile hardware and software platforms allow the running of faster and richer applications. This paper presents the most steps within the development of a quiz application for Android using Android Studio. Android could be a software package and Linux based operating system for mobile devices/

This work deals with the development of an Android-based multiple-choice question examination system, namely: Quiz App. This application is developed for educational purposes, allowing the users to prepare the multiple-choice questions for different tests conducted.

Keywords: Android Studio, IDE, APP.

equipments such as tablet computers and smartphones. It's developed by Google and later the OHA (Open Handset Alliance). Java language is principally wont to write the android code while other languages are used. The goal of the android project is to form a successful real-world product that improves the mobile experience for end-users.

II. LITERATURE SURVEY

Android is rapidly getting famous, and therefore the number of its users are increasing day by day, because it's easy to access the required Android-based apps on tablets and smartphones . Therefore, we found the use of the Android App is less complicated and longer efficient to facilitate the users during this way with none difficulty. Fig 1 Applications and widgets Application Programming Interface Libraries Android runtime Android Architecture reduces the time of development and can reduce the quantity of memory that is required by the appliance. In Future we are able to include redesigned an friendlier user interface because the application targets various levels of users starting from sophisticated programmer to naive users Android is most used Mobile OS worldwide. making an android app isn't as difficult mutually think about. You simply must have minor knowledge about android structure and tiny java programming. Android is an open source and Linux-based package for mobile devices like smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies. Android offers a unified approach to application development for mobile devices which suggests developers need only develop for Android, and their applications

should be ready to run on different devices powered by Android.

The very first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 while as because the first working commercial version, Android 1.0, was released in September 2008, and later it kept on changing/updating its rules. On June 27, 2012, at the Google I/O conference, in that meeting, Google announced the subsequent Android version, 4.1. Jelly Bean is an incremental update, with the first aim of improving the program, both in terms of functionality/ activities and performance. The text file i.e source code for Android is out there under free and open source software licenses. Google publishes most of the code under the Apache License version 2.0 and therefore the rest, Linux

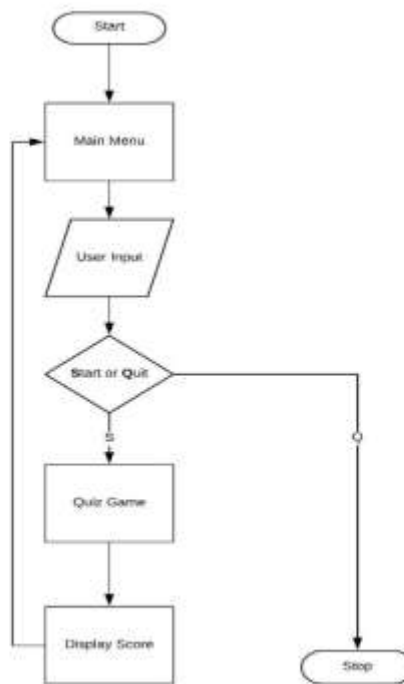
kernel changes, under the GNU General Public License version

III. PROPOSED WORK

Android could be a complete set of software for mobile devices like tablet computers, notebooks, smartphones, electronic book readers, set-top boxes etc. It contains a Linux-based Operating System, middleware and key mobile applications.

We are creating the simple example of android using the Eclipse IDE. For creating the simple example:

1. Create the new android project
2. Write the code and functions for it.
3. Run the android application
4. Covert the files into APK bundles.



Flowchart of Quiz App

3.1 Working of Application

Step 1: Creating a new project

- Click on the File option at the topmost corner in the left.
- Then click on new and open a new project and name the project.
- Now select the Empty Activity with language as Java.
- Name it Quiz App.

Step 2: Designing the UI with activity_main.xml

step 3: Working with developers.java

Step 4: Working with MainActivity.java

step 5: Working with QuestionsActivity.java

step 6: Working with ResultActivity.java

step 7: Build the project into APK file or Bundles.

step 8: Transfer the APK file into Android phone and install it and run it over.

IV. RESULT

S. No	Description	Expected Result	Actual Result	Pass/Fail
1.	On main page, name the name of student taking test.	Same name will show on test page.	Test page says hello, name of student.	Pass
2.	Main page has an activity as About , it suppose to show information about developers of App.	Display information of developers.	Shows names and mail id of developers.	Pass
3.	Questions with multiple choices	Only one option should be selected.	Single selection is allowed.	Pass
4.	If we press Quit button	Moves to main page of App.	Redirected to Main Page.	Pass
5.	If quit button is pressed, starting the test with name should resume.	Test should start from next question.	It moves to main page.	Fail
6.	After submitting option, student should move to next question.	Move to next question.	Next question appears on screen.	Pass
7.	Result should be generated at the end of 10 Questions.	Result displays on the screen with no. of correct and wrong answers.	Wrong: Correct: Total questions:	Pass

V. CONCLUSION

- Using Android studio gives us more flexibility, but it required more time.
- The Quiz App is very important in future learning systems; it can be easily adopted by educational institutions and universities in order to make the quiz more flexible and safer.
- give the system maximum benefit by demonstrating carefully each subsystem service.
- The proposed system is easy and flexible for future maintenance and development because each subsystem can be handled separately without influence on another system.
- The results are shown instantly to students. With the number of wrong as well as correct answers.

ACKNOWLEDGEMENTS

With immense pleasure, we present the review paper on "Quiz App using Android Studio" as part of the curriculum of the Diploma (Computer). We express sincere and profound thanks to Head of Department Mr. V. S. Solanke, who is ready to help with the most diverse problems that we have encountered along the way. This would not have been feasible without encouragement and guidance

of our Project Co-ordinate, Mr. Shelke R.B.

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LED Hologram Fan

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Abstract

We have assured that the image created by our project is clear and it is visible to the human eyes and which does not effect human eyes, and our project is so durable and so much cost effective which does not require so much money to create it and it is easily affordable normal person, it also can be used for bill boards advertising purpose and also it can be used in schools and colleges for educational purpose. The pervious projects where unable to create a perfect images but we used much higher rpm generating fan and it will increase the quality of the images. And by using the defused high lumens emitting led the image created will be brighter and bolder.

Key Words: LED, Arduino Nano, Capacitor, Resistor, DC Motor.

INTRODUCTION

Holographic fans are types of displays that produce a holographic-like image seemingly floating in the air, by having strips of RGB LEDs attached to the blades of the fan and a control-unit lighting up the pixels as the fan turns around, to produce the full picture. This will trick the observer's brain to see the image as a whole and perceive the displayed object floating in the air as the observer can see through the fast spinning display.

LED is a semiconductor device and this emits light when electric current is passed through it. And it is light produced that carries the particles they are also known as electron and holes combine together within the semiconductor material. When current is applied forward and applied through the P-N junction diode, the minority carrier electron is injected into the P-region and also corresponding minority carrier electron is injected into the N-region. In the P-region recombination is electron-hole.

Electron energy transitions across the energy gap are also called radiative recombination produce photons. While light is shunt energy transitions it is called non-radiative recombination and produce phonons.

Electric motor is an electric machine that converts electrical energy into mechanical power. Electric motor operates through interaction between electric power and magnetic motor in the wire winding. It interacts and generates a force using Faraday's law of induction to produce torque and it is applied to the motor's shaft. DC motor has four basic classifications that are mentioned above, it is one and only driven through direct electric current and also it is a more primitive version of electric motor, the rotating torque is produced to flow of current through the conductor inside a magnetic field.

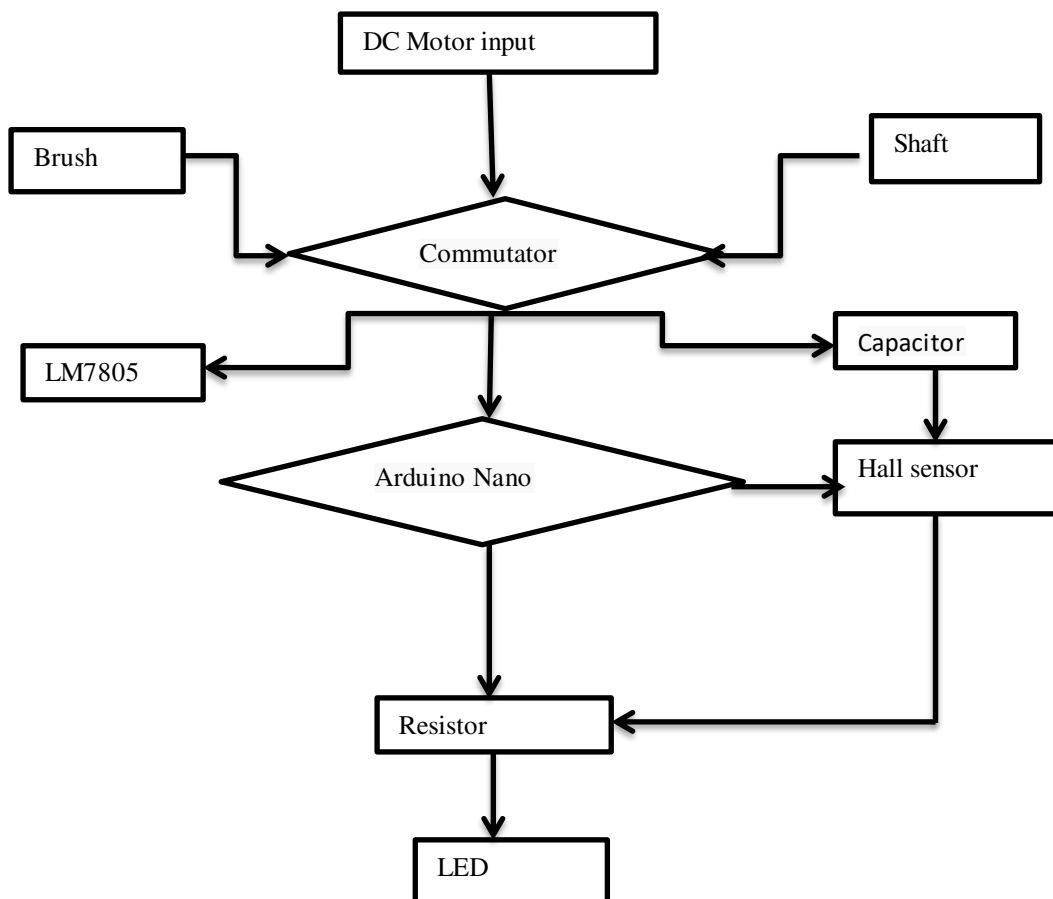
Resistor is a passive electric component that creates resistance in electric current flow. In a resistor almost all electric circuits and networks can be found. Current is proportional to voltage across the terminal ends and also we can use this resistor for many purposes, like such as some examples are voltage division, heat generation, matching, loading circuits, control gain and electric current.

METHODOLOGY

In this circuit we are going to apply DC current which also known as direct current and opposite of alter net current DC current will trigger the DC motor which is connected through brush and commutator the current will flow through commutator and brush to words. The LM7805 is an IC which required DC input to work as voltage regulator then we need two capacitor with the power of 16v 470uf 10v 100uf this capacitor is required because the distance between IC regulator and filter power supply is higher but the capacitor in this circuit is optional because this helps in transient response.

In Arduino Nano VIN is connected with IC LM7805 and GND pin is connected with hall sensor which is used to detect presence and the magnetic field in the circuit, +5,A6,A7 pins are connected to the negative terminals of the capacitors, the current is provided through the capacitor towards arduino ,and the negative terminal of capacitor is sent towards hall sensor which works as detection system of magnetic field which interrupts between this circuit, the positive terminal of hall sensor is connected with the analog pin A0 and the negative terminal is connected with GND ground pin in arduino.

Flow chart:



MODELING AND ANALYSIS

Model and Material which are used is presented in this section. Table and model should be in prescribed format.

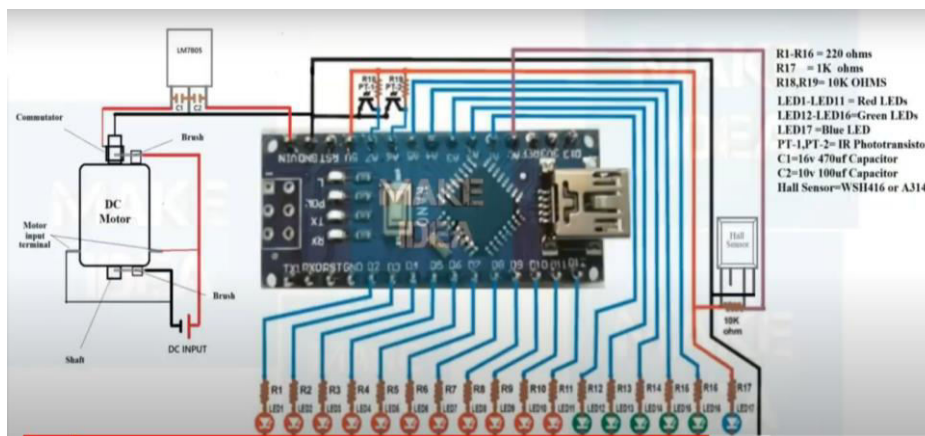


Figure 1: circuit Diagram.

Arduino Nano: Arduino Nano are flexible, small, compatible for every one and easy to understand that's why breadboard friendly microcontroller board. In this Arduino Nano 2 reset pins, 14 digital pins, 8 analog pins and 6 power pins.

In Arduino Nano A0 TO A7 pins are analog pin these are used for measure analog voltage at 0-5V and D0-D13 pins are digital pin these is used for as input or output pin from 0 to 5V. in this Arduino Nano 2 reset pins this is used for reset the program. and also have one USB port that port we are used for check the Arduino are work or not and as well as use for insert the program.

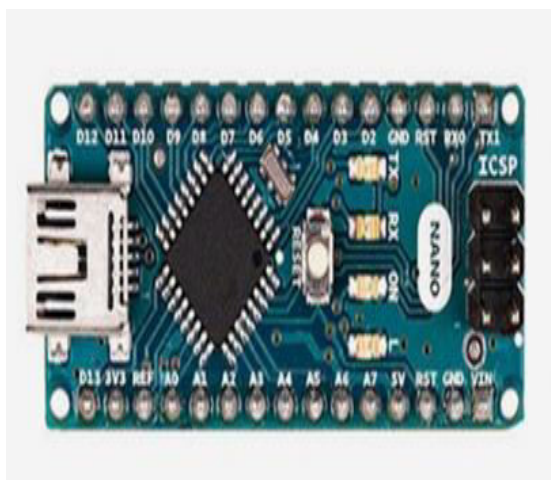


Figure 2: Arduino Nano

Capacitor: The capacitor are store the electric power in electric filed and that is also passive electric comment, and also known as capacitance. A some capacitor exists between the two electrical conductor in proximity in an circuit it was originally such known as an condenser and condenser, it is also used to store electric current that it can carry forward store current when it is required. Nonconducting dielectric are more increase the capacitor charge capacity, In dielectric commonly used material like such as plastic film, paper, air and ceramic.



Figure 3: Capacitor

RESULTS AND DISCUSSION

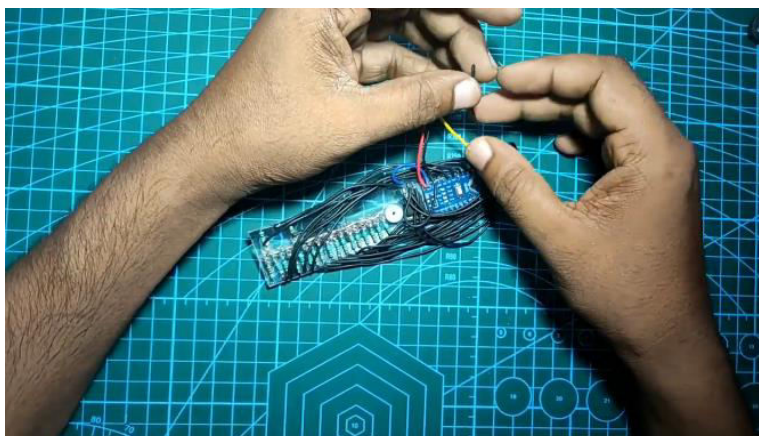


Figure:3 output

CONCLUSION

There are more advanced project then we have made but the rotations per minute speed of the fan is lower in the markets advance project which leads to the poor quality of the image which is produce by advance fan but we try to make higher rotations per minute speed of the fan in our project which is improves the quality of the image using higher quality of led lights Our project has the low cost and it is easy to use for any human being can easily operate and understand.

This project can be used as marketing strategy such as home to home marketing ,shops schools. This has so much scope in marketing field. In This project we have implemented with basic experiment and it can be improved in future we can do 3D image set in the project as well as we can also watch the movie and it will use for security purpose like we can will watch the camera recording videos and also use for advertisement such as road side digital marketing.

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Laser Tripwire security system using Arduino Uno

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ABSTRACT

Technology develops day by day within the world. Nowadays the crime gang also improves their technology to hold out their operation. So technology of security should be modern with time to shield the planet from crime. We arrange to make a security issue as our project. During this project, we've got to use a laser ray to hide an outsized area. We all know laser light goes too long distances without scattering effects. Its additional laser beam is just at the source and destination point, in any case invisible. These two properties help us to develop a contemporary security system, which may name as the "Lase Tripwire Security System using Arduino UNO." When somebody or object crossover the laser light, automatically the buzzer starts ringing. The laser ray goes through a long-distance without scattering effect and the ray is almost invisible.

Keywords: Arduino Uno, Laser diode, Sreed Grove Module, Keypad Matrix(4*4), IDE.

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I. INTRODUCTION

Security is the most important factor in day-to-day life. The need for security is the basic necessity of every individual. The sensation that we are safe and everything around us is fine is imperative for peaceful living. Be that because it may, during this unsafe world, when crime, terror, and dangers are at their pinnacle, how might one achieve that suspicion of safety? Here, a laser security system provides us with an answer and for this reason, more and more people are installing them so as to remain order safe and secure. A laser tripwire Security system may be a system used for security purposes. It's a large application in fields of security and defense ranging from the protection of a simple household material to an awfully high valued material of a corporation. They once accustomed to being very expensive solutions for security needs. Owing to cost-cutting and fast technological advancements, this type of security system is becoming more pocket-friendly. During this project, we've got designed Laser Light Security System Using Arduino with Alarm with the applying of Laser Diode Module KY-008. The project idea revolves around creating a security alarm system using a laser diode module. Whenever any object will obstruct the rays the buzzer alarm will start ringing. This project will be implemented anywhere, not only in buildings or premises but many precious things like jewelry, diamonds, precious antique items within the museum, etc many other things are also are protected using such an invisible ray. Many people

secure their homes, office, shops, warehouses, etc with the Tripwire security system of the document, cut and paste into it, and/or use markup styles. Thus, we've designed a security system using a tripwire system with Arduino and sensor, which is handy, portable, cost-effective, and highly effective yet. Such security alarm systems are hugely in demand for security purposes, and thus the given system is often proved useful and effective seeable of the above features.

II. LITERATURE SURVEY

Security could be the most important factor in daily life. Need of security is that the basic necessity of every individual. The Sensation/feeling that we are safe and everything around us is all right is imperative for peaceful living. Be that because it may, during this unsafe world, when crime, terror, and dangers are at their pinnacle, how might one achieve that suspicion of safety? Here, a laser tripwire security system provides us with a solution and for this reason, more and more people are installing them so as to remain to stay safe and secured. Different electronic security systems are often utilized at the house and other significant working spots for security and safety purposes. A laser tripwire Security system/ alarm is a device used for Safeguard/security purposes. It's a good application in fields of security and defense ranging from the security of a straightforward household material to a very high valued material of an organization. They once accustomed be very

expensive solutions for security needs. Attributable to cost-cutting and fast technological advancements, this type of security system is becoming cheaper and more affordable. When the bad guys try to sneak up in the mid night, they kick the wire and pull over, making a rattle that awakens the sleeping good guys, who win the day. A laser tripwire security system works with the identical principle and working. Instead of a string, there's a ray of light surrounding the area, and instead of a can of rocks, there's an alarm of one sort or another.

PRINCIPLE:-

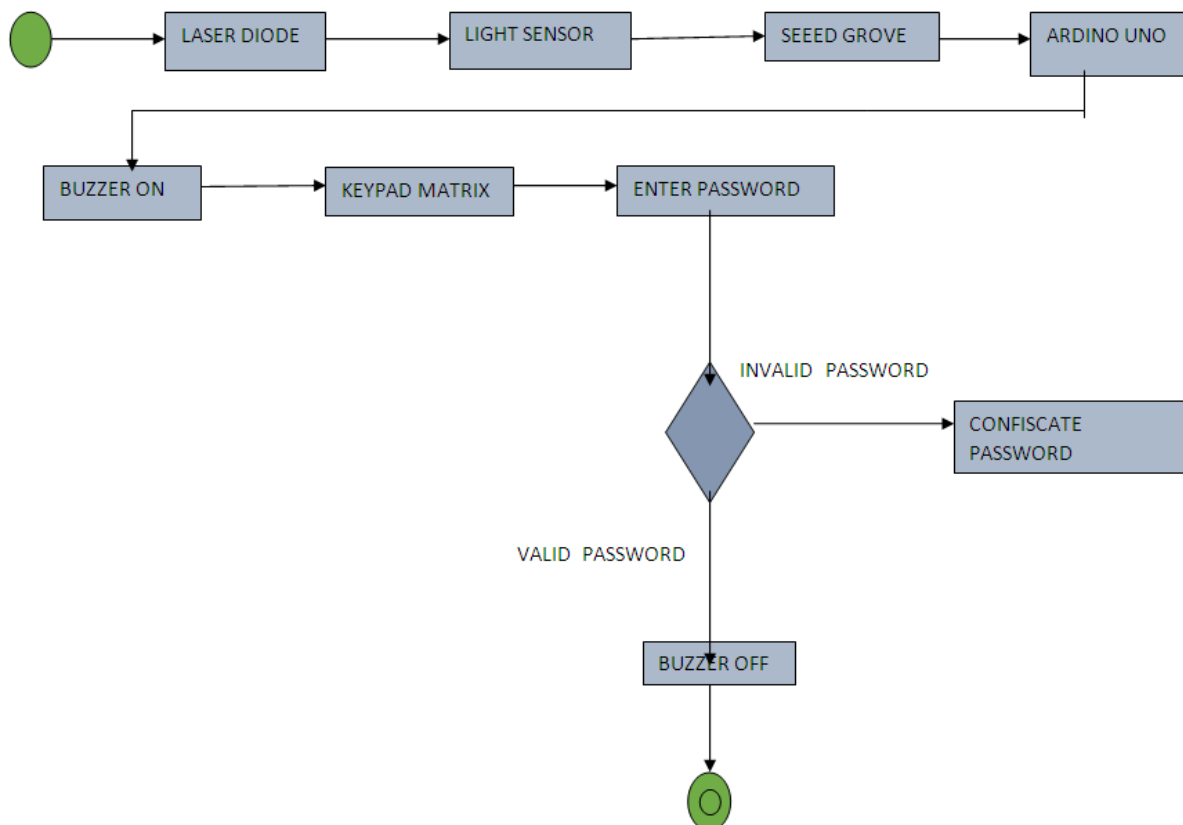
There are three essential components to a laser security system: a laser, an Arduino, and an LDR module. The laser could be a concentrated source of illumination that puts out a direct straight line, pencil beam, of light of a single color. The LDR

is sensitive to light. The LDR is connected to the Arduino UNO. When the laser beam is interrupted and can't reach the LDR, its voltage output changes, and therefore the circuit senses the change and puts out a warning signal, and then the buzzer starts alert signals.

OBJECTIVES :-

The main objective for developing this system is:

- To produce security for the house.
- To produce a user-friendly system
- To produce security for bank lockers
- To produce a cost-efficient system.
- To safeguard a valuable item.
- To safeguard the individual from terror and threat within the unsafe world.
- To form and study the functions of the laser security systems.



III. PROPOSED MODEL

In this, we present the speculation on the laser tripwire security system. During this proposed diagram incorporates several blocks like laser module, LDR, buzzer Alarm is connected to our controller. There are three main components to a laser security system: a laser, an Arduino, and a Laser diode module. The laser could be a source of light that puts out a straight line, pencil beam, of light of a

single color. The LDR is sensitive to light. The LDR is connected to the Arduino UNO. When the laser beam is interrupted and can't reach the LDR, its voltage output changes, and the circuit senses the change and puts out a warning in the code and then the buzzer starts alert signals. The project basically works on the principle of Laser light Intensity. If by any means the laser light is interrupted the alarm will start unless it is reset with the pushbutton. The laser

may be a concentrated light source that puts out a straight beam of light of a single color. The LDR is sensitive to light and puts out a voltage when the laser light hits it. When the laser beam is interrupted and can't reach LDR, its voltage output changes, and eventually the alarm will ring.

- **Arduino UNO:-**

The Arduino UNO is that the best board to get started with electronics and coding. If this can be your first experience tinkering with the platform, the UNO is that the most robust board you'll start fiddling with. The UNO is that the most used and documented board of the whole Arduino family.



- **Laser Diode Module (KY-008):**

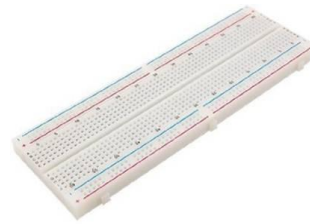
Laser Transmitter module KY-008 for Arduino emits a dot-shaped, red light of laser beam. The KY-008 Laser transmitter module consists of a 650nm red laser diode head and a resistor. Handle with caution; don't look directly into the laser head. The specification of Laser Transmitter Module KY-008 is as follows:

- Operating Voltage – 5V
- Output Power – 5mW
- Wavelength – 650nm



- **Bread Board**

A bread board may be a rectangular plastic board with a bunch of little holes in it. These holes allow you to simply insert electronic parts to example (meaning to make associated check associate early version of) an electronic circuit, like this one with battery, switch, resistor, associated an LED (light-emitting diode).



- **Connecting wires**

Connecting wires permits associate degree electrical current to travel from one purpose on a circuit to a different as a result of electricity desires a medium through that it will move. Most of the connecting wires are created from copper.



Figure4: Connecting wires

- **Register**

A Register could be an assortment of flip flops. A flip flop is employed to store single bit digital information. For storing high number of bits, the storage capability is magnified by grouping quite one flip flop



Figure7: Register

- **LED**

To turn on associate LED, the Arduino has to send a HIGH signal to at least one of its pins. To show off the diode, it has to send a low signal to the pin. You'll create the LED flash by dynamical the length of the HIGH and LOW states.

IV. CONCLUSION

Laser Security System gives us protection from any crime, theft in our standard of living thus individuals are installing them so on to remain sheltered, secure and sound. Various electronic security systems will be used at the house and other important working places for security and safety purposes. It's one among the simple opportunities and source of saving manpower contributing no wastage of electricity. The "Laser tripwire Security System"

is a very important and helpful system. Using this model/technique robbery, thefts and crime are often avoided to large extent. Avoiding thieves end up in the protection of our financial assets and thereby their system provides us protection against all. The laser beam and LDR module system is extremely sensitive with a great range of work. The model senses the light emitted by the laser falling over the LDR connected with the circuit. Whenever the beam of laser light is interrupted by any means, it triggers the alarm or siren. This highly reactive approach has low computational requirement therefore it's the similar temperament to surveillance, industrial application, and smart environments.

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With immense pleasure, we present the review paper on "Laser Tripwire Security System using Arduino UNO" as part of the curriculum of the Diploma (Computer). We express sincere and profound thanks to Head of Department Mr. V. S. Solanke, who is ready to help with the most diverse problems that we have encountered along the way. This would not have been feasible without encouragement and guidance of our Project Co-ordinate, Mrs. Geeta Joshi.

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Akshata Salunke, et. al. "Laser Tripwire security system using ArduinoUno." *International Journal of Engineering Research and Applications (IJERA)*, vol.11 (6), 2021, pp 56-59.

FINGERPRINT BASED DOOR LOCK USING ARDUINO

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ABSTRACT

This concept which is of Fingerprint door locker is related to the security issues in the day today life, the physical key can be made as duplicate in very cheap cost and the key can lost somewhere or the key can steal, to overcome these issues we can use biometric security gadgets and try improvise the security much more because it can never be stolen it cannot be lost and the stealing chance of duplication are very low to break the security. From the old times the security is the big issue for the company's houses and other places and every person is worried about the security now a days. The traditional door locks can be bypasses by the duplicate keys, but the best solution for this situation is biometric locks which include Fingerprints, Iris and Handprint scanners.so in this project we are going to try to get upper level of security.

Keywords: Arduino, IOT, Fingerprint, Security, Locks.

I. INTRODUCTION

In this Paper we are trying to solve the problems which occurs related to the security in homes, shops and offices. These issues can be fixed by using traditional locks but here a possibility is may occurred of some unknown person will open the lock without breaking it by using duplicate keys. Using these locks also make problems if we lost keys of lock and we have to carry those keys with us. Again, using these patterns in the locks can improve security but again it can open and cracked if somehow someone guesses the passwords or patterns are known. The pattern which can or will used as key will be unique. Here, to implement this project successfully we will use fingerprint as the key. This Arduino NANO project will make use of different devices to the implementation of the advanced security lock where there are different features to maximize the security levels.

II. MODELING AND ANALYSIS

There are primarily four components which are used for the designing of our Fingerprint door lock using Arduino, and they are:

a. Arduino NANO

Arduino NANO is a microcontroller board based on 8-bit at mega328P microcontroller. Along with at mega328P board, This Arduino NANO has 14 digital pins where (out of 6 used as PWM outputs) and 6 analog featured i/o input pins and USB-B type connection port.



Figure 1: Arduino NANO.

b. Fingerprint Sensor

R307 fingerprint module is a finger print sensor with TTL UART interface. The user or owner can store the fingerprint data template in the module and can configure it in 1:1 or 1: N mode to identify the authorized or registered person.



Figure 2: Fingerprint Scanner.

c. Relay Module

This is 1 channel Relay Module. There is no connection between the low and high voltage circuit operated by the microcontroller and the high power circuit which is operated by the microcontroller. The Relay Module protects every circuit from every port.



Figure 3: Relay Module.

d. Solenoid Lock

This DC 12V strong and rigid door lock, Electric Lock Assembly for Solenoid which is used for locking the sell-machine, storage shelves, file cabinets etc. The hidden way of unlocking it is used for an emergency purpose. The lock will work as when the circuits disconnect, and it unlocks as the instant power-on. It is steady, it's durable, and energy-saving relay and had a long lifespan in future.



Figure 4: Solenoid Lock.

III. RESULTS AND DISCUSSION

This IOT based Fingerprint door lock using Arduino, we are showing the components and connected them to the power supply. This system is based for improving the security which will register the owner's fingerprint into the Arduino using the fingerprint sensor, and this system we have given 5v power supply to Arduino

through the code uploading wire. When you put your thumb on fingerprint sensor after registering yourself the lock will be unlocked and you repeat this process again then the solenoid lock will be got locked. The process of locking and unlocking requires less than 1 second so this is why the Solenoid lock is used inside this project.

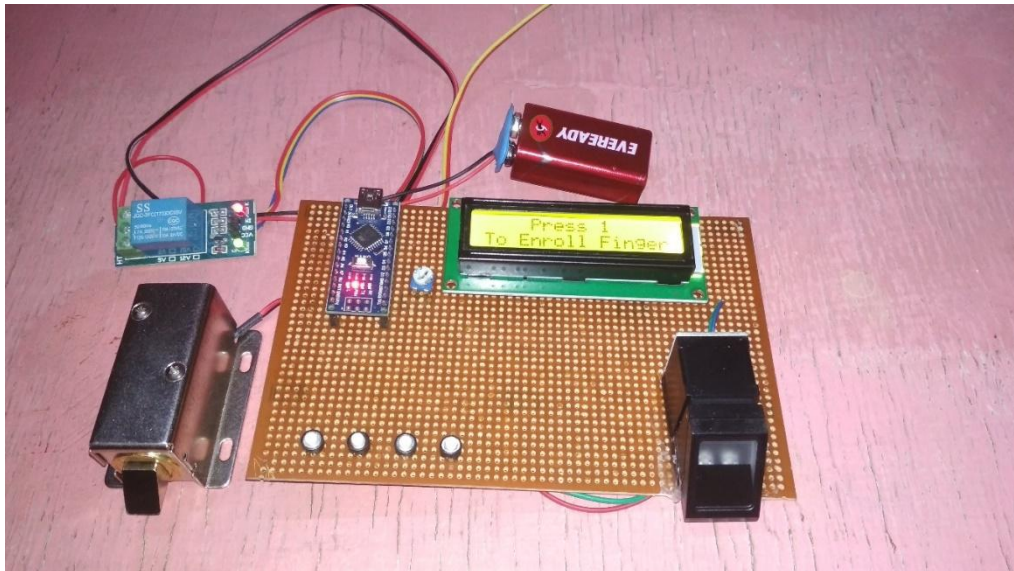


Figure 4: Connected Circuit.

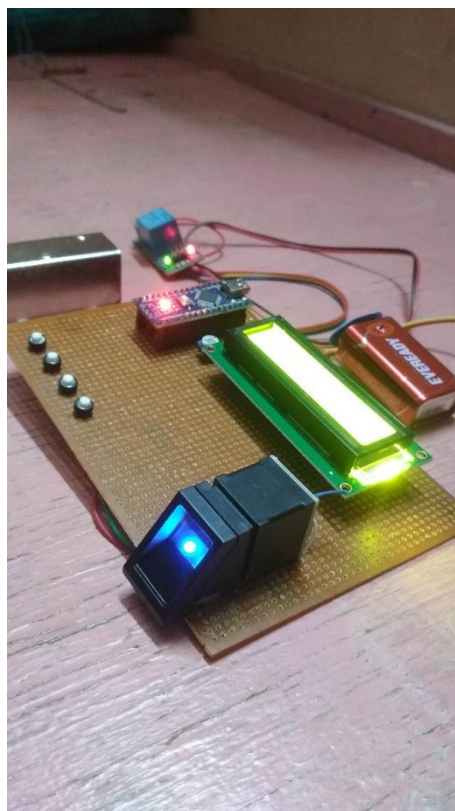


Figure 2: Actual Working Model

IV. CONCLUSION

In this Paper, we have tried to solve the security matters in door locks by bringing the conceptions of biometric fingerprint with the door lock. For that purpose, we are using fingerprint as a rare key to implement device so as to lock or unlock a door lock. This project is going to implemented in multiple applications and this concept

is still in use in the banks but those systems are specially built for those organizations to secure the whole organization and the assured will be very high and other companies and houses.

ACKNOWLEDGEMENTS

We got this opportunity and thank all the individuals connected with this project for their useful direction, help and timely support which helped us to complete the project in specific time. We would really want to express great gratitude to our Head of Department Mr. V. S. Solanke and our project guide Mrs. Rupali Shelke for their all-important support, motivation, guidance and helpful suggestions all into the project work. Lastly but not least our sincere credit goes to our family for their key support since we begin our education and also to our group person.

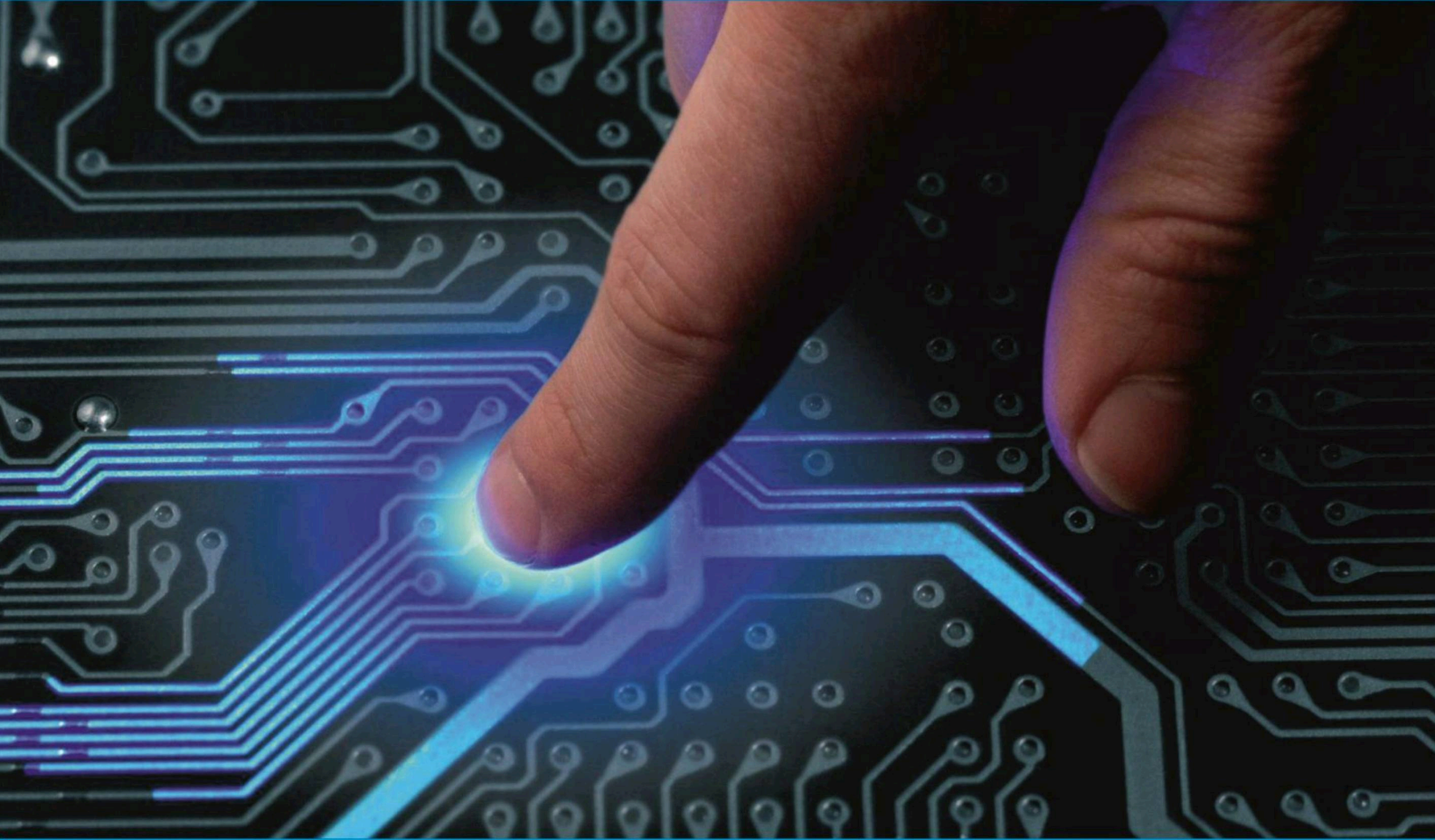
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Random Signature Verification Using Image Processing

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ABSTRACT: In today's international forgery of signature can be very significantly increased. There are many ultra-modern clinical techniques to emerge as privy to a correct signature. As signatures are substantially normal bio-metric for authentication and identification of a person because of the truth all of us has a awesome signature with its precise behavioral property, so it's miles very a great deal essential to show the authenticity of signature itself. A large increase in forgery times relative to signatures prompted a need of Signature popularity device. However human signatures can be handled as an image and recognized using computer vision and neural network techniques. In this paper we have got taken a difficult and rapid of knowledgeable pictures and stored their features in a database and to test an unknown image we examine the features and calculating the matching elements. We have considered 70 % as threshold for human signature popularity.

KEYWORD: SIGNATURE VERIFICATION, PIXEL-PRIMARILY BASED TOTALLY TECHNIQUE

I. INTRODUCTION

Signature has been a distinguishing function for man or woman identification through ages. But to make this traditional method evolve with the modern-day internet technology, inexperienced and reliable techniques of automatic signature verification need to be advanced if authenticity is to be confirmed on a normal basis. The signature verification problem is in concept a pattern popularity mission used to discriminate lessons, the precise and forgery signatures. In off-line signature verification the signature template is captured using an imaging tool, as a end result handiest static characteristic of the signatures are acquired. Offline systems art work on the scanned image of a signature. The man or woman need now now not be present at the time of verification. Hence off-line signature verification is accessible in severa situations like record verification, banking transactions etc.. Off-line records is a 2-D image of the signature. Processing Off-line is complex due to the absence of strong dynamic characteristics. Difficulty moreover lies withinside the fact that it is difficult to segment signature strokes due to quite stylish and unconventional writing styles. The non-repetitive nature of version of the signatures, because of age, illness, geographic place and in all likelihood to some extent the emotional united states of the individual, accentuates the problem. All the ones coupled together cause large intra-personal version. A robust system should be designed which should now now not best be able to remember the ones factors but moreover find out severa forms of forgeries. The system have to neither be too sensitive nor too coarse.

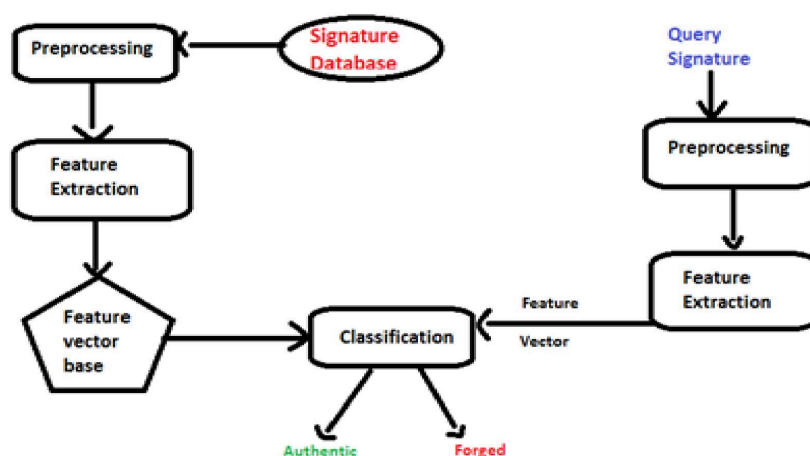
II. LITERATURE REVIEW

It additionally contributes an aggregated dataset of signatures such as 137 topics and 467 topics respectively. Deals simplest with random forgery detection.[4]George S. Eskander,RobertSabourin, Eric GrangerIn this study, a hybrid WI-WD machine is proposed, as a compromise of the 2 approaches.When a consumer is enrolled to the device, a WI classifier is used to affirm his queries. During operation, consumer samples are accumulated and adapt the WI classifier to his signatures. Once adapted, the ensuing WD classifier replaces the WI classifier for this consumer.[5]Muhammad Sharifa,MuhammadAttiqueKhana, Muhammad Faisala, MussaratYasminaband Steven Lawrence Fernandes,The supplied machine includes 4 principal steps: preprocessing,capabilities extraction, functions choice, and function verification. Global functions withinside the proposed paintings include of thing ratio, the location of signature, natural width, natural peak and normalized real signature top. Local functions include signature centroid, slope,angle, and distance. In functions choice component, a genetic set of rules is applied to locate suitable functions set that are afterward given to help vector system for verification.[6]Amir SoleimaniaBabakN.AraabiabKazimFouladi, Unlike present strategies that to affirm puzzled signatures

of an person simply take into account the schooling samples of that magnificence, DMML makes use of the expertise from the similarities and dissimilarities among the real and cast samples of different lessons too. To this cease, the use of the concept of multitask and switch studying, DMML teach a distance metric for every elegance collectively with different lessons simultaneously.[7]SimaShariatmadari,SimaEmadi,·YounesAkbari.Proposes a hierarchical one-magnificence convolutional neural community for getting to know most effective true signatures with specific characteristic tiers. In addition, to gain a clean shape in picturegraph, designing hierarchical community structure primarily based totally at the coarse-to-nice precept can cause extra specific results.[8]Amruta B. Jagtap, Dattatray D. Sawat, Rajendra S. Hegadi, Ravindra S. Hegad.Uses a brand new type of community known as siamese community, which is largely an amalgamation of CNN's with same weights and hidden layers, along side a contrastive loss feature which allows us calculate how comparable the outputs of the 2 enter signatures are and in flip enables us finish whether or not they may be proper/solid.[9]Luiz G. Hafemann,RobertSabourin, Member, IEEE, and Luiz S. Oliveira.In this paintings,the authors advise an answer for this hassle primarily based totally on meta-studying, wherein there are degrees of getting to know: a assignment-level (in which a undertaking is to research a classifier for a given consumer) and a meta-level (getting to know throughout tasks).In particular, the meta-learner courses the adaptation (gaining knowledge of) of a classifier for every person, that is a light-weight operation that simplest calls for actual signatures.[10]Gulzar A. Khuwaja and Mohammad S.Laghari advised OfflineHandwritten Signature Recognition usingBiometrics, which refers to figuring out an person primarily based totally on hisor her physiological or behavioral characteristics, has the functionality to reliably distinguish among anauthorized individual and an imposter. This paper offers a neural community primarily based totally reputation of offline handwritten signatures device this is skilled with low-decision scanned signature images.

III.PROPOSED SYSTEM

The first step is to convert the received RGB picturegraph into gray scale picturegraph. This is completed to reduce the complexity and the execution time of the gadget. It is easy for the gadget to artwork with gray scale photos instead of the RGB pictures .Then a cropping set of guidelines is done to the gray scale image. Cropping is completed to cut up out precisely the actual place of interest from the complete image. This receives rid of the extra pixels from the image for that reason reducing the processing time.After obtaining the cropped image the noise that entered on the identical time as scanning or via each different deliver wishes to be removed. For this a Gaussian clean out out on the facet of the unsharp clean out out is used. The Gaussian filters smooth the picturegraph casting off the noise and the unsharp clean out out receives rid of the blur created via the Gaussian clean out out. This filtered picturegraph is then threshold to convert it proper right into a binary form. Finally the boundary of the signature is extracted from this binary image using the canny side detector.



INPUT SECTION :

There are inputs to this section. One input is used for growing new customer account in bank, while distinctive being used

for importing the signature for verification using media which include scanner, web-cam. For importing the signature there need to be a replica of standardized signature for the corresponding purchaser account number. If the consumer opens new account then the related information is saved in database with some modifications in line with the requirement. NO you can interfere with the database of the software program software as this facility is available best to the supervisor of application. The signature to be seemed i.e. the relevant part of signature is selected from the image and this records is passed to the pre-processing block.

PRE-PROCESSING BLOCK :

The hardware being used for imposing the Software offers certain limitations as we are going to use the scanner, show and VGA of the computer which have finite decision (now now not very high) and skills, which in the long run effects withinside the shortage of statistics at the input aspect of the application. Hence, pre-processing becomes critical.

1. Colour normalization :

As the character can sign with any pen and with specific coloured inks, it's miles critical to convert the signature in black and historical past in white. To put in force this we use histogram kind of approach. One of the very nice techniques of obtaining an approximate density function $p(x)$ from sampled facts if no parametric form is idea for the underlying density is to form a histogram of the facts as tested in decide under.

(a)The actual ordinary density from which 50 random numbers had been chosen

(b)A histogram of fifty typically allotted random numbers with 6 intervals

A histogram is a accessible way to give an explanation for the records. To form a histogram; the statistics from a single class are grouped into intervals. Over each interval, a vertical rectangle is drawn, with its vicinity proportional to the sort of information elements falling into that interval. It basically gives us the statistics about the sort of pixels in an image of precise intensity / luminosity. For coloured images, luminance can be calculated as

$$L=0.3*R+0.59*G+0.11*B$$

Depending upon the quit end result of histogram colour normalisation can be carried out such that signature becomes black and history becomes white.

2. Scaling :

As we are going to placed into impact morphological concept for signature detection, signature want to be notably of huge duration as dilation operation is used for further processing. Also the signature have to now not be too huge as it will increase the processing time. Hence, proper scaling of the signature have to be done.

3. Filtering :

After scaling, the signature will become quite blocky. To reduce this effect i.e. blockiness of the signature we use averaging type of clean out out. Smoothing filters are used for blurring and for noise cut price. Blurring is applied in pre-processing steps, inclusive of removal of small facts from an image in advance to (large) object extraction, and bridging of small gaps in lines or curves. Noise cut price can be carried out through manner of way of blurring with a linear clean out out and moreover through manner of way of nonlinear filtering. Blockiness effect want to be reduced because of the truth after thinning operation it produces shaky lines.

4. Thinning :

The tip of the pen being used for the signature might not be standardised for that reason thinning want to be executed. Basically thinning is a data bargain machine of an object until it becomes one pixel extensive, producing a skeleton of the object.

5. Rotation :

It may be quite feasible that the signature to be regarded is became round at a high quality angle. In order to avoid any misalignment with respect to the standardised signature it will become critical to rotate the signature to be regarded via particular angle.

IV. FEATURE EXTRACTION AND IMPLEMENTATION

COLOUR NORMALISATION :

In reputation method color normalization can be very crucial. The signatures can be performed on any paper with first-rate color inks, consequently color normalization is used in which we make the signature BLACK and the background is made WHITE. Due to the image scaling approach the image becomes blocky; consequently we perform a smoothening operation, which may also moreover introduce grey solar sun shades to the signature. Hence the color normalization is re initiated.

IMAGE SCALING :

The signature is wanted to be properly scaled. This is accomplished as huge signatures may want to take longer time to method .In case of small signature template the check pattern is not generated properly, which may additionally moreover purpose wrong results. So if the signature is simply too big then it's miles scaled to reduce its duration or if the signature is small then it is enlarged for proper check pattern generation.The popular duration of the picture applied in our software program is 4 hundred pixels width or peak, maximum of these. If the signature width or the height is extra than the preferred popular then, the picture is scaled to the cited trendy. Also if the signature is smaller than the mentioned trendy then, it's miles enlarged.After scaling the signature becomes blocky, consequently smoothening clean out out is applied to put off the spike edges. Then color normalization is performed to get rid of the grey solar sun shades.

FILTERS :

1 SMOOTHENING FILTERS:

Smoothening filters are used for blurring and for noise reduction. Blurring is applied in preprocessing steps, which include removal of small information from an picture preceding to object extracting, and bridging of small gaps in strains or curves.

2 LOW PASS FILTER USED:

The clean out out applied in our software program is a smooth low byskip clean out out. After the scaling operation, each amplify the smaller signature, or making smaller signature massive makes the image blocky. Hence to smoothen the picture we use the low byskip clean out out. It is a 3 x 3 low byskip clean out out. The low byskip clean out out is confirmed withinside the subsequent determine.

$$\begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$$

THINNING :

A alternate of erosion known as thinning converts any elongated factors or strips withinside the picture regardless of their bits, into narrow strips which may be excellent about one pixel massive, but are although about as long as the proper strips. The narrow strips lie near the centres of the genuine big strips. Thinning may be useful, for example, in studying snap shots that contain finger prints or handwriting. Also, if the output of an side detector has been threshold to discover the edges in an image, the edges may be more than one pixel big in some places.The feature of these edges may be diffused with the resource of the use of thinning the aspect-detected image. The principal problem with the use of clean erosion is that eroding a strip enough to cause the widest part of it to be fine one pixel massive produces gaps withinside the slim factors of it. The following set of guidelines assumes that regions are 4-related, but they may with out issues regulate to anticipate 8-connectedness.The thinning set of regulations, with updating of the picture after each pixel is removed, consists of the following steps. The picture is scanned left to right, top to backside. Each object pixels that has a background pixel as aright 4-neighbor is removed, supplied that getting rid of the pixel ought to now not cause any close by chain-breaking and pixel isn't always at the give up aspect.Eliminating an object pixel p motives close by chain-breaking if, whilst a 3 x 3 mask is focused at p and p is removed, of the object pixels withinside the mask that during which previously 4-related with the useful resource of the use of a sequence withinside the mask becomes disconnected. For example, getting rid of the centre pixel in each of the following 3 x 3 regions breaks a chain but no chain is broken withinside the subsequent regions. However, the canter pixel withinside the location on the right below ought to now now not be removed because of the truth it's miles an stop thing. An object pixel is an end aspect if it has exactly one 4- neighbour withinside the object. In the

discern the uppermost pixel is removed, but the pixel under it isn't always removed because it becomes an stop element whilst the pixel above it is removed.

As withinside the algorithms with updating at each pixel, the way is repeated for object pixels that have history pixels on their left, top, and backside. This set of policies allows some elongated location to turn out to be a bit shorter but generates a cease end result with fewer branches than the set of guidelines with updating.

IMAGE ROTATION :

Rotation is also the part of the normalization. As it isn't always critical that signature alevenaleven though correct, is also aligned in angular fashion with respect to the genuine signature that is wellknown signature withinside the database.

Therefore, this machine determines the attitude in which the signature beneathneath interest have to be turned around. If the angle is interior wonderful particular limit, then it is turned around; else the signature is rejected for further processing. The following diagram explains how an image is turned around. Each block withinside the picture represents the pixel of the picture. The Formulae used for the rotation are as follows

$$x' = x \cos \theta - (y - y_r) \sin \theta$$

$$y' = y \cos \theta + (x - x_r) \sin \theta$$

Overlapping and finding the Percentage Matching :

The vital step withinside the recognition method is the overlapping of the two signatures. The widespread signature is opened in a picture box and the take a look at pattern is generated for that picture. Then the test signature is processed and the attitude of rotations are found. If there can be terrific change withinside the angle of rotation, the test signature is turned around through the difference angle. Then the two pics are overlapped to generate the final check pattern. The final check pattern is then analyzed as cited above to find the percentage matching.

V.STEPS IN THE RECOGNITION PROCESS

- Firstly the signature to be identified is opened (imported)
 - The operations which includes normalization, thinning, scaling are performed.
 - The wellknown signature withinside the database is opened.
 - The attitude of rotation of the take a look at signature is calculated.
 - If required, the test signature is turned around with the useful resource of the use of the difference angle, to compensate the attitude extrade.
 - The centroids for every the snap shots are found.
 - The take a look at pattern is generated for the same old picture.
 - According to the centroids the take a look at picture is moved and then located at the check pattern.
 - The resultant pattern is analyzed and the matching percentage is calculated.
 - According to the selection thresholds the selection is given about the validity of the signature.
- After strolling and executing software stop end result of project is verified under :

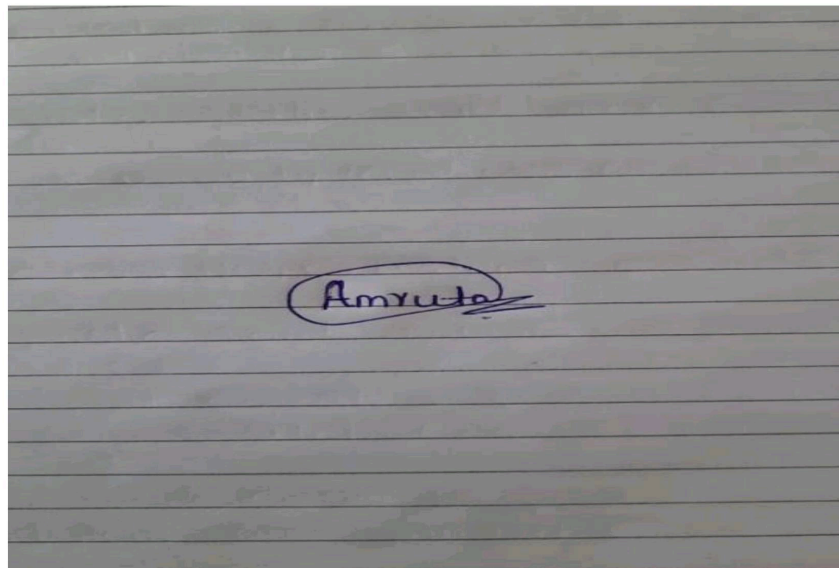


Fig 1

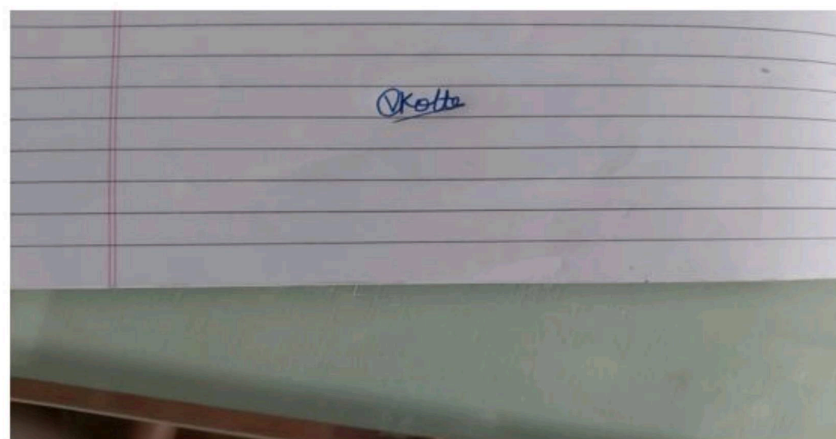


Fig.2

VI. CONCLUSION

In our project, we have got advanced an inexperienced signature verification tool. In this undertaking, we used Image processing this is one of the most trending and most used region nowadays for skills like picturegraph detection, fingerprint verification etc. This project enables in controlling human errors in signature verification and moreover makes the signature verification correct, clean and faster. It moreover makes the artwork much less complex for understanding and executing it thru manner of way of everybody without any data of image processing. If any monetary organization or any agency uses this tool the customers will sense masses extra solid and trustworthy. Thus, we propose that this tool brings a change withinside the walking of severa banks, groups etc.

VII.FUTURE SCOPE

The set of guidelines advanced with the resource of the usage of us, uses numerous geometric features to suggest signatures that effectively serve to distinguish signatures of diverse persons. Using a higher dimensional characteristic vicinity and moreover incorporating dynamic records accumulated for the duration of the time of signature can also decorate the general overall performance

VIII.ACKNOWLEDGMENT

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DRIVER DROWSINESS DETECTION SYSTEM USING PYTHON

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ABSTRACT

Major road accidents are caused by drowsiness while driving. Drowsiness caused by tiredness driving is becoming more common these days. If the driver's eyes are drowsy for more than 5 seconds, the eye blink sensor detects the blink rate. If the eyes are found to be closed, the car's speed is reduced. Along with sleepiness detection, the CNY70 sensor is used in our suggested system. If the driver's eyes show signs of weariness, the alarm system is activated. These sensors are linked to an Arduino UNO, and a buzzer sounds to inform the user if sleepiness is detected.

Keywords: Eye Blink, Drowsiness, Fatigue, Buzzer, Arduino, CNY70.

I. INTRODUCTION

Drivers who are drowsy are one of the leading causes of traffic accidents. The danger, risk, and other grave consequences of sleepy driving are frightening. Drowsy driving is a dangerous mixture of drowsiness, weariness, and prolonged driving. This commonly occurs when a driver has not slept enough, but it can also occur due to a lack of focus, medicines, a sleep problem, consuming alcohol, or shift work. They cannot foresee when sleep will enter their body. Although falling asleep behind the wheel is harmful, being drowsy impairs a person's ability to drive safely even if they are not asleep. It is believed that one out of every twenty drivers has dozed off while driving. Truck drivers and bus drivers who have a lengthy 10-12 hour commute are the most vulnerable to sleepy driving. These individuals endanger other drivers more than they endanger themselves. This is because bigger vehicles may inflict greater damage to tiny vehicles such as cars, bicycles, and bikes. There are also a few drivers who suffer from sleep apnea, which causes breathing to stop and start. Drivers who take prescription drugs may also feel drowsy, and persons who sleep fewer than 6 hours each night are more prone to fall asleep behind the wheel.



Figure 1: Drowsiness situation while driving car

A. Existing System

The majority of existing systems consist of a camera mounted in front of the driver. It scans the driver's face and eyes to determine whether or not he is asleep. However, while facing in front of the driver, it obstructs the driver's frontal view. As a result, it may present further issues when driving. As a result, this System is not recommended. Furthermore, it displays varied findings depending on the location of the eye. When the eye is in the uplink position, the result is 80 percent accurate, while in the downlink position, the result is 55 percent accurate.

II. METHODOLOGY

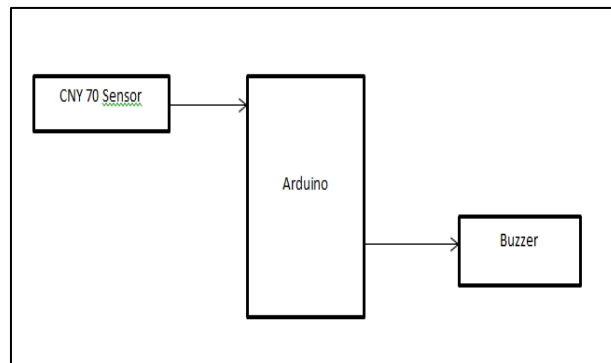


Figure 2: System Design

The majority of existing systems consist of a camera mounted in front of the driver. It scans the driver's face and eyes to determine whether or not he is asleep. However, while facing in front of the driver, it obstructs the driver's frontal view. As a result, it may present further issues when driving. As a result, this System is not recommended. Furthermore, it displays varied findings depending on the location of the eye. When the eye is in the uplink position, the result is 80 percent accurate, while in the downlink position, the result is 55 percent accurate. It is stated that the CV identifies just 40% of the driver's face and fails in oblique position. Furthermore, the current system is insufficient for heavy and huge trucks. To solve this conundrum, we have developed a novel detecting technique for this project. Block diagram of system shown in figure 1.

III. MODELING AND ANALYSIS

In 2018, there were 1,643 traffic incidents due by fatigued drivers. As a result, adopting the eye blink sensor can help to prevent accidents caused by tiredness. The eye-blink sensor functions by lighting the eye and eyelid regions with infrared light and then detecting variations in the reflected light with a phototransistor and differentiator circuit. The precise functioning is highly dependent on the location and targeting of the emitter and detector in relation to the eye. The sensor is linked to an Arduino UNO. On one side, we have an Arduino linked to the optical glass and a buzzer chip attached to the battery. The ground wire that connects the Buzzer to the Arduino's D2 Pin. The cable from the eye Blink Sensor is linked to the A2 Pin. After connecting the devices, a code is formed in the system, and when we blink, the sensor detects the signal from the transmitter-receiver. As a result, sensor sleepiness can be detected.

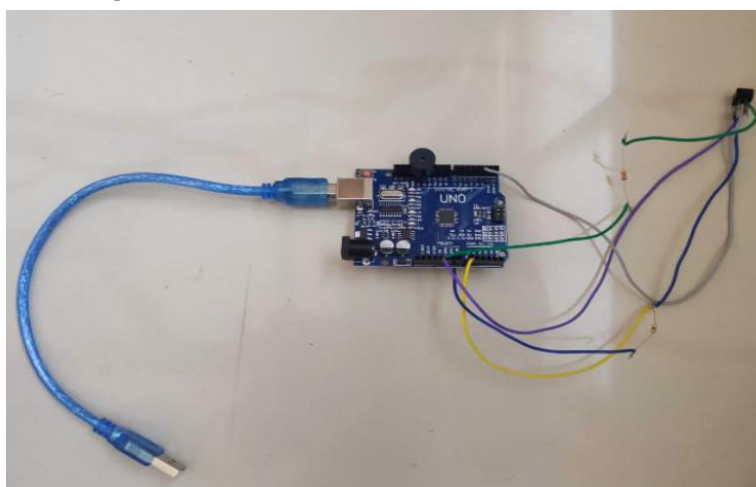


Figure 3: Designed Proposed System

IV. RESULTS AND DISCUSSION

In this study, we demonstrated an application of sensor-based embedded systems aimed at minimising road accidents caused by driver sleepiness. Because road accidents occur, it is critical to monitor and identify the driver's behavior to maintain road safety. As a result, it is critical to monitor driver behaviour in order to

reduce accidents caused by drunk driving. The suggested system uses sensors to detect alcohol and drowsiness, and safeguards are taken as a result.

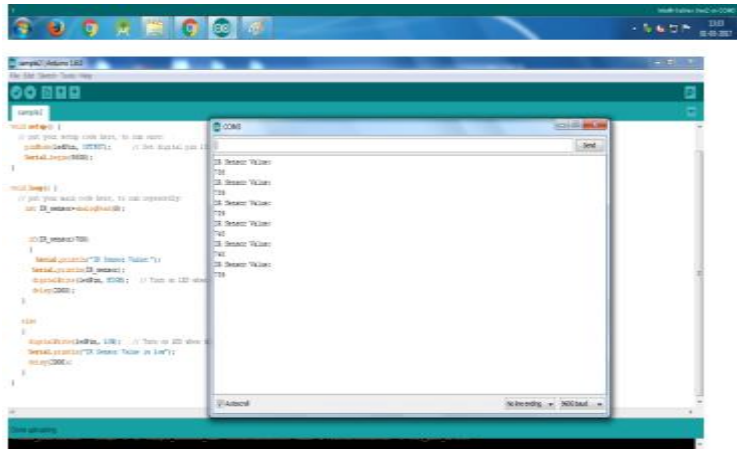


Figure 4: Output on Arduino IDE

V. CONCLUSION

The sleepiness detection is used to identify tiredness quickly. This technology keeps the driver from falling asleep while driving. The buzzer informs the driver if the driver's eyes are closed for a period of time that may be set in the code. This article is intended to protect drivers from drowsiness-related accidents. It may be used in a variety of automobiles. As a follow-up project, this technology might be modified to determine whether or not coma patients have recovered. This technique may also be used in automobiles. It may concentrate on the use of additional external elements for tiredness measures, such as sleeping hours, vehicle status, weather conditions, and mechanical data.

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