GOVERNMENT POLYTECHNIC

AHMEDABAD - 380015

A Project Report
On

"IoT Based Safety & Security for Home & Industries"

Submitted To

Gujarat Technological University
For Partial towards the Award of Diploma
IN

"Information Technology"

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BY

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Certificate

This is to certify that ***Mr. Shubham Solanki*** *from* ***Government Polytechnic Ahmedabad 380015*** *college having Enrollment No:* ***206170316020*** *hascompleted* ***Final Project Report*** *having title* ***SAFETY & SECURITY FOR HOME & INUSTRIES*** ~~*individually*~~ */ in a group consisting of* ***3*** *persons under the guidance of the faculty guide* ***Mr. Rushal G. Chauhan****.*

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Project Profile

Project Title	IOT Based Safety & Security for Home & Industries
Goal of System	To Save Life and Prevent Robbery & Incident
Project Duration	Two Semester
Team Size	Three Student
Internal Project Guide	Mr. Rushal G. Chauhan
Front End Tool	HTML,CSS,
Back End Tool	PYHON,DJANGO

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ABSTRACT

(IoT Based Safety & Security System For Home & Industries)

Nowadays, theft cases are increasing day by day, as well as fire cases are increasing. Thus , homes or industries have fears of robbery and other unwanted activity . Keeping this context in mind and to provide security for homes & industries , we have developed an IOT-based safety and security system for home and industries. The proposed system can work on real-time monitoring . As we know,IoT conceptualizes the idea of remotely connecting and monitoring real-world objects (thing) through the internet . when it comes to our house or our workspace , this concept can be applied to make it smarter, safer, and automated . This device can solve multiple problems and it can be installed near a door or window in order to detect any unsual movement or activity . If movement is detected the alarm is turned on as well as an SMS alert is sent to the client and also GPS location is also sent to client device and nearest police station. In addition to this,we can place sensors that sense smoke and fire.In case of fire or smoke detection, a notification can be sent.Motion sensors can be used to detect motion in a particular area . In order to prevent accident cause gas leakage can also prevented . CNG gas leakage can be sensed and an immediate alert can be generated . The proposed outcome of the project aims at multiple benefits for the security of homes and Industry.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

1.1 PROJECT PURPOSE-

- It is used to provide security for homes and industries from theft using motion sensor and gas leakage using MQ4 sensor.
- Information is easily accessible, even if you are far away from your actual location and it is updated real-time via website.
- Our motion sensor was engineered to detect motion within 2 meters.

1.2 PROJECT SCOPE

- In this project we will provide detection in 180 degrees which is not there in most of the sensor.
- Our sensor has Battery backup for device monitoring that will last 1 week.
- An alert message will be sent to client phone if any motion sensor or MQ4 sensor is triggered.
- User can view history and manage history of the device installed in home and industries.

1.3 IoT (Internet of Things)

The Internet of Things is the network of physical devices and other items embedded with electronics, software, sensors, actuators and network connectivity which enable this object to collect and exchange data.

The IoT allows objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computerbased system, and resulting in the improved efficiency, accuracy and the economic benefit in addition to reduced human intervention. The experts estimate that the IoT will consist about 30 billion objects by 2020.

1.4 Arduino Uno

Arduino is an open-source computer hardware and software company, and user community that designs and manufactures Single Board Microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world.

Figure 1.1 Arduino Uno

The Arduino boards are equipped with sets of digital and analog input/output pins that may be interfaced to various expansion boards and other circuits. The boards feature serial communication interfaces, including Universal Serial Bus (USB) on some models, which are also used for loading programs from personal computers.

1.5 ESP 8266 – NodeMCU

The NodeMCU (***N***ode ***M***icro***C***ontroller ***U***nit) is an open-source software and hardware development environment built around an inexpensive System-on-a-Chip (SoC) called the ESP8266.

The ESP8266, designed and manufactured by Espressif Systems, contains the crucial elements of a computer: CPU, RAM, networking (WiFi), and even a modern operating system and SDK. That makes it an excellent choice for the Internet of Things (IoT) projects of all kinds.

Figure 1.2 ESP 8266 – NodeMCU

1.6 Breadboard

Breadboard is a way of constructing electronics without having to use a soldering iron. The middle section of the board has two columns, each with 30 strips of connector,

like the one pulled out and to the side of the breadboard. These connect together anything that is pushed through from the front into one of those five holes.

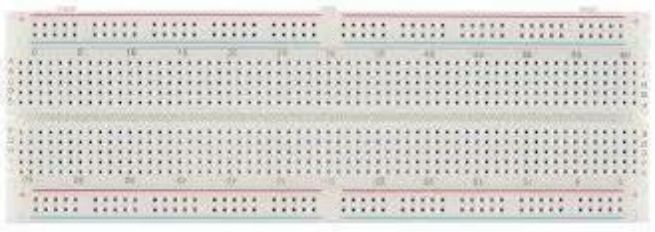


Figure 1.3 Breadboard

On either edge of the board are much longer sections of clip that join together the columns of holes marked by the blue and red lines on the front of the breadboard. These are generally used for GND (blue) and 5V (red).

1.7 LED

To turn on an LED, the Arduino needs to send a HIGH signal to one of its pins. To turn off the LED, it needs to send a LOW signal to the pin. You can make the LED flash by changing the length of the HIGH and LOW states.

Figure 1.4 LED

1.8 Buzzer

A "piezo buzzer" is basically **a tiny speaker that you can connect directly to an Arduino**. ... From the Arduino, you can make sounds with a buzzer by using tone. You have to tell it which pin the buzzer is on, what frequency (in Hertz, Hz) you want, and how long (in milliseconds) you want it to keep making the tone.

Figure 1.5 Buzzer

1.9 Methane CNG Gas Sensor - MQ-4

This is a simple-to-use compressed natural gas (CNG) sensor, suitable for sensing natural gas (composed of mostly Methane [CH4]) concentrations in the air. The MQ-4 can detect natural gas concentrations anywhere from 200 to 10000ppm.

Figure 1.6 Methane CNG Gas Sensor - MQ-4

This sensor has a high sensitivity and fast response time. The sensor's output is an analog resistance. The drive circuit is very simple; all you need to do is power the heater coil with 5V, add a load resistance, and connect the output to an ADC.

1.10 Flame Sensor

A flame-sensor is one kind of detector which is mainly designed for detecting as well as responding to the occurrence of a fire or flame. It includes an alarm system, a natural gas line, propane & a fire suppression system.

Figure 1.7 Flame Sensor.

This sensor is used in industrial boilers. The main function of this is to give authentication whether the boiler is properly working or not. The response of these sensors is faster as well as more accurate compare with a heat/smoke detector because of its mechanism while detecting the flame.

1.11 PIR Motion Sensor

A passive infrared sensor (PIR sensor) is an electronic sensor that measures infrared(IR) light radiating from objects in its field of view. They are most often used in PIR-based motion detectors.

Figure 1.8 PIR Motion Sensor

The term passive in this instance refers to the fact that PIR device do not generate or radiate energy for detection purpose. They work entirely by detecting infrared radiation emitted by or reflected from objects. A PIR-based motion detector is used to sense movement of people, animal or other objects.

1.12 Jumper cables

Jumper wires are simply wires that have connector pins at each end, allowing them to be used to connect two points to each other without soldering. Jumper wires are typically used with breadboards and other prototyping tools in order to make it easy to change a circuit as needed. Fairly simple. In fact, it doesn't get much more basic than jumper wires.

Figure 1.9 Jump cables

1.13 MQ-135 Sensor

The MQ-135 Gas sensor can detect gases like Ammonia (NH3), sulfur (S), Benzene (C6H6),CO2, and other harmful gases and smoke. this sensor has a digital and analog output pin. When the level of these gases goes beyond a threshold limit in the air the digital pin goes high. The analog output pin outputs an analog voltage which can be used to approximate the level of these gases in the atmosphere.

Figure 1.10 MQ-135 Sensor

2. SYSTEM REQUIREMENT ANALYSIS.

2.1 Tool & Technology

2.1.1 Html

Figure 2.1 Html

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997. A form of HTML, known as HTML5, is used to display video and audio, primarily using the <canvas> element, in collaboration with javascript.

2.1.2 Css

Figure 2.2 Css

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.[3] This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content; and enable the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as onscreen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

The name cascading comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.

2.1.3 Django :

Figure2.3 : django

Django is a high-level Python web framework that enables rapid development of secure and maintainable websites. Built by experienced developers, Django takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It is free and open source, has a thriving and active community, great documentation

Django was initially developed between 2003 and 2005 by a web team who were responsible for creating and maintaining newspaper websites. After creating a number of sites, the team began to factor out and reuse lots of common code and design patterns. This common code evolved into a generic web development framework, which was open-sourced as the "Django" project in July 2005.

Django web applications typically group the code that handles each of these steps into separate files:

2.1.4 Python

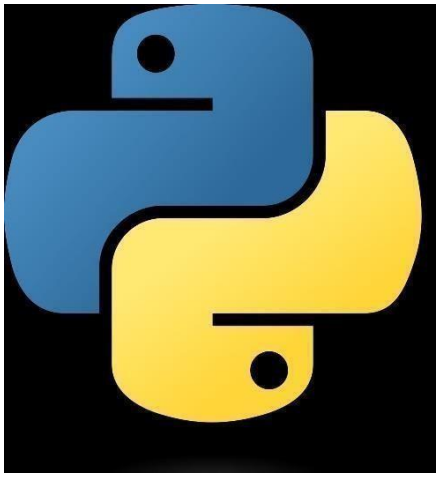


Figure 2.4 Python

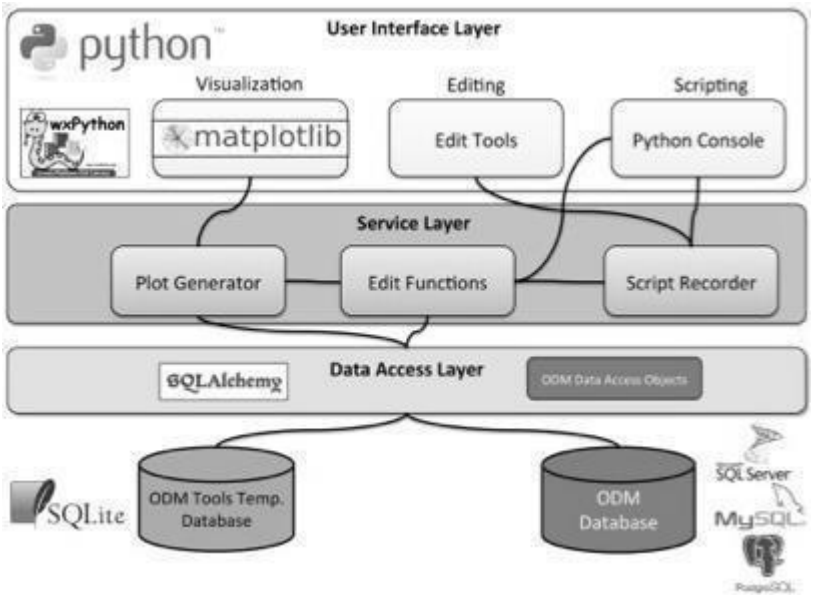
Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation

Python is dynamically-typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly procedural), objectoriented and functional programming. It is often described as a "batteries included" language due to its comprehensive standard library.

Guido van Rossum began working on Python in the late 1980s as a successor to the ABC programming language and first released it in 1991 as Python 0.9.0.
Python 2.0 was released in 2000 and introduced new features such as list comprehensions, cycle-detecting garbage collection, reference counting, and Unicode support. Python 3.0, released in 2008, was a major revision that is not completely backward-compatible with earlier versions. Python 2 was discontinued with version 2.7.18 in 2020.

Python consistently ranks as one of the most popular programming languages

Architecture:



2.5 Python Architecture

The Python source code goes through the following to generate an executable code :

- **Step 1:** The python compiler reads a python source code or instruction. Then it verifies that the instruction is well-formatted, i.e. it checks the syntax of each line. If it encounters an error, it immediately halts the translation and shows an error message.
- **Step 2:** If there is no error, i.e. if the python instruction or source code is wellformatted then the compiler translates it into its equivalent form in an intermediate language called “Byte code”.
- **Step 3:** Byte code is then sent to the Python Virtual Machine(PVM) which is the python interpreter. PVM converts the python byte code into machine-executable code. If an error occurs during this interpretation then the conversion is halted with an error message.

2.1.5 Pycharm

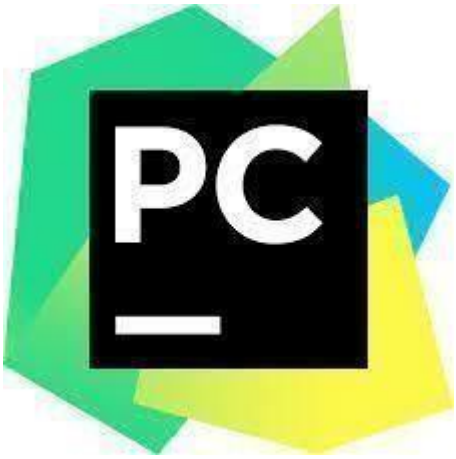


Figure 2.6: pycharm

Pycharm is a dedicated Python Intregrated Development Environment(IDE) providing a wide range of essential tools for python developers, tightly integrated to create a convenient environment for productive Python,web,and data science development

Features of PyCharm

1. Intelligent Code Editor

PyCharm comes with a smart code editor that facilitates writing high-quality Python code. It offers an enhanced level of code comprehension and readability by means of distinct color schemes for keywords, classes, and functions, i.e., syntax and error highlighting.

2. Availability of Integration Tools

PyCharm provides support for integrating a range of tools. These tools vary from helping in enhancing the code productivity to facilitate dealing with data science projects. Some of the most essential integration tools available for PyCharm include:

- Anaconda - A free and open-source Python distribution geared towards scientific computing with simplified package management and deployment.
- IPython - A robust command shell for interactive computing.
- Kite - An AI-powered autocomplete plugin.
- Pylint - A source-code, bug, and quality checker.
- pytest - A framework for writing small tests for Python code.
- WakaTime - A developer dashboard with productivity metrics and automatic time tracking

3. Data Science and Machine Learning [Professional Edition Only]

PyCharm comes with support for scientific libraries, such as Matplotlib and SciPy, to help Python developers accomplish data science and machine learning projects.

4. Integrated Debugging and Testing

An IDE comes with support for debugging and testing programs. To accomplish the same, PyCharm features an integrated Python debugger and integrated unit testing with line-by-line code coverage.

2.1.6 MySQL

MySQL is Relational Database Management system which is free Open-Source Software Under GNU License. It is also supported by Oracle Company. It is fast, scalable, easy to use database management System. MYSQL support many operations system like Windows, Linux, MacOS etc. MySQL is Structured Query Language which is used to manipulate, manage and retrieve data with the help of various Queries.

Architecture

Architecture of MySQL describes the relation among the different components of MySQL System. MySQL follow Client-Server Architecture. It is designed so that end user that is Clients can access the resources from Computer that is server using various networking services.

The Architecture of MySQL contain following major layer's:

- Client
- Server • Storage Layer

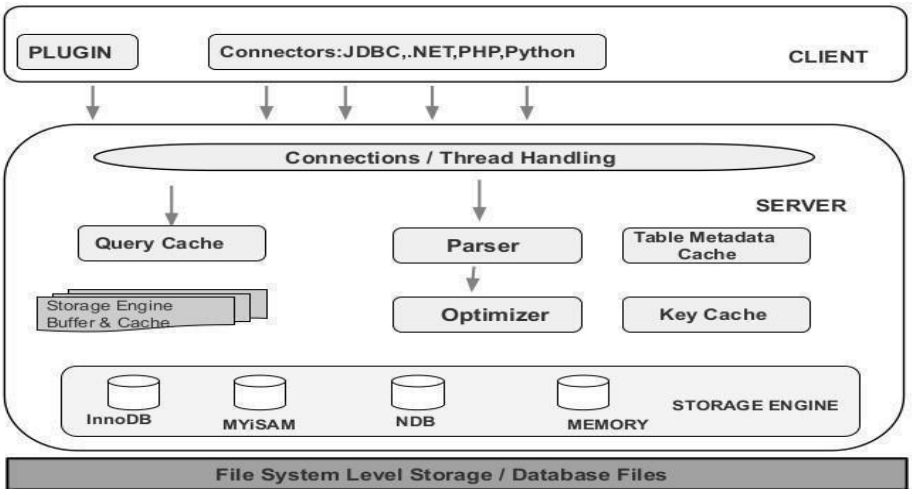


Figure 2.7 : MySQL Architecture

Features of MySQL

1. MySQL language is easy to use as compared to other programming language like C, C++, Java etc. By learning with some basic command, we can work, create and interact with Database.
2. MySQL consist of Data Security layer which protect the data from violator. Also, passwords are encrypted in MySQL.

3. MySQL follow Client-Server Architecture where Client request Commands and instructions and Server will produce output as soon as the instruction is matched.
4. MySQL is free to use under Community version of it. So, we can download it from MySQL website and work on it freely.
5. MySQL use multithreading which makes it Scalable. It can handle any amount of data. The default file size limit is 4 GB, but we can increase it according to our need.
6. MySQL is considered as one of the fast databases. Its fastness is determined on the basis of large number of benchmark tests.
7. MySQL is very flexible because it supports large number of embedded systems.
8. MySQL is compatible to run on various operating system such as Windows, MacOS, Linux etc.
9. MySQL allow transactions to be rolled back, commit and cash recovery.
10. It has low memory leakage problem which increase its memory efficiency.

2.2 Software Process Model

Spiral model

Spiral model is one of the most important Software Development Life Cycle models, which provides support for Risk Handling. In its diagrammatic representation, it looks like a spiral with many loops. The exact number of loops of the spiral is unknown and can vary from project to project. Each loop of the spiral is called a Phase of the software development process. The exact number of phases needed to develop the product can be varied by the project manager depending upon the project risks. As the project manager dynamically determines the number of phases, so the project manager has an important role to develop a product using the spiral model

The Radius of the spiral at any point represents the expenses(cost) of the project so far, and the angular dimension represents the progress made so far in the current phase.

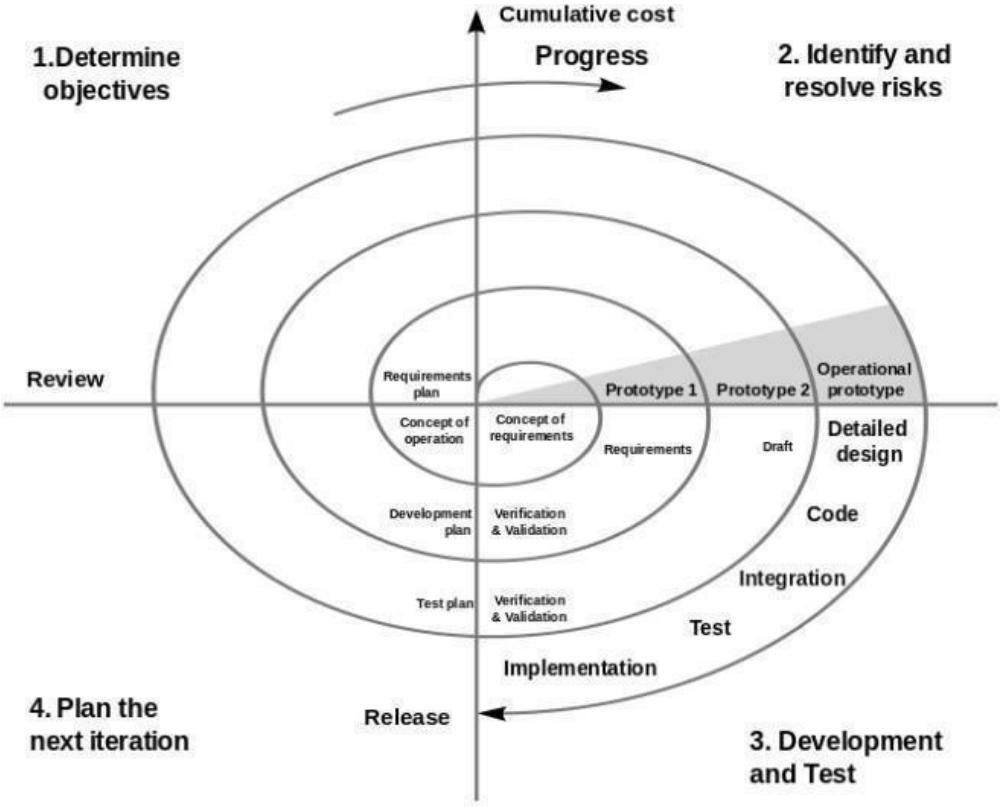


Figure 2.8 :Spiral Model Each cycle in the spiral is divided into four parts:

1. **Objective setting:** Each cycle in the spiral starts with the identification of purpose for that cycle, the various alternatives that are possible for achieving the targets, and the constraints that exists.

2. **Risk Assessment and reduction**: The next phase in the cycle is to calculate these various alternatives based on the goals and constraints. The focus of evaluation in this stage is located on the risk perception for the project.
3. **Development and validation:** The next phase is to develop strategies that resolve uncertainties and risks. This process may include activities such as benchmarking, simulation, and prototyping.

4. **Planning:** Finally, the next step is planned. The project is reviewed, and a choice made whether to continue with a further period of the spiral. If it is determined to keep, plans are drawn up for the next step of the project. *Pros*

- Software is produced early in the software life cycle.
- Risk handling is one of important advantages of the Spiral model, it is best development model to follow due to the risk analysis and risk handling at every phase.

- Flexibility in requirements. In this model, we can easily change requirements at later phases and can be incorporated accurately. Also, additional Functionality can be added at a later date.
- It is good for large and complex projects.
- It is good for customer satisfaction. We can involve customers in the development of products at early phase of the software development. Also, software is produced early in the software life cycle.
- Strong approval and documentation control.
- It is suitable for high-risk projects, where business needs may be unstable. A highly customized product can be developed using this.

Cons

- It is not suitable for small projects as it is expensive.
- It is much more complex than other SDLC models. Process is complex.
- Too much dependable on Risk Analysis and requires highly specific expertise.
- Difficulty in time management. As the number of phases is unknown at the start of the project, so time estimation is very difficult.
- Spiral may go on indefinitely.
- End of the project may not be known early.
- It is not suitable for low-risk projects.
- May be hard to define objective, verifiable milestones. Large numbers of intermediate stages require excessive documentation.

2.3 Gantt Chart

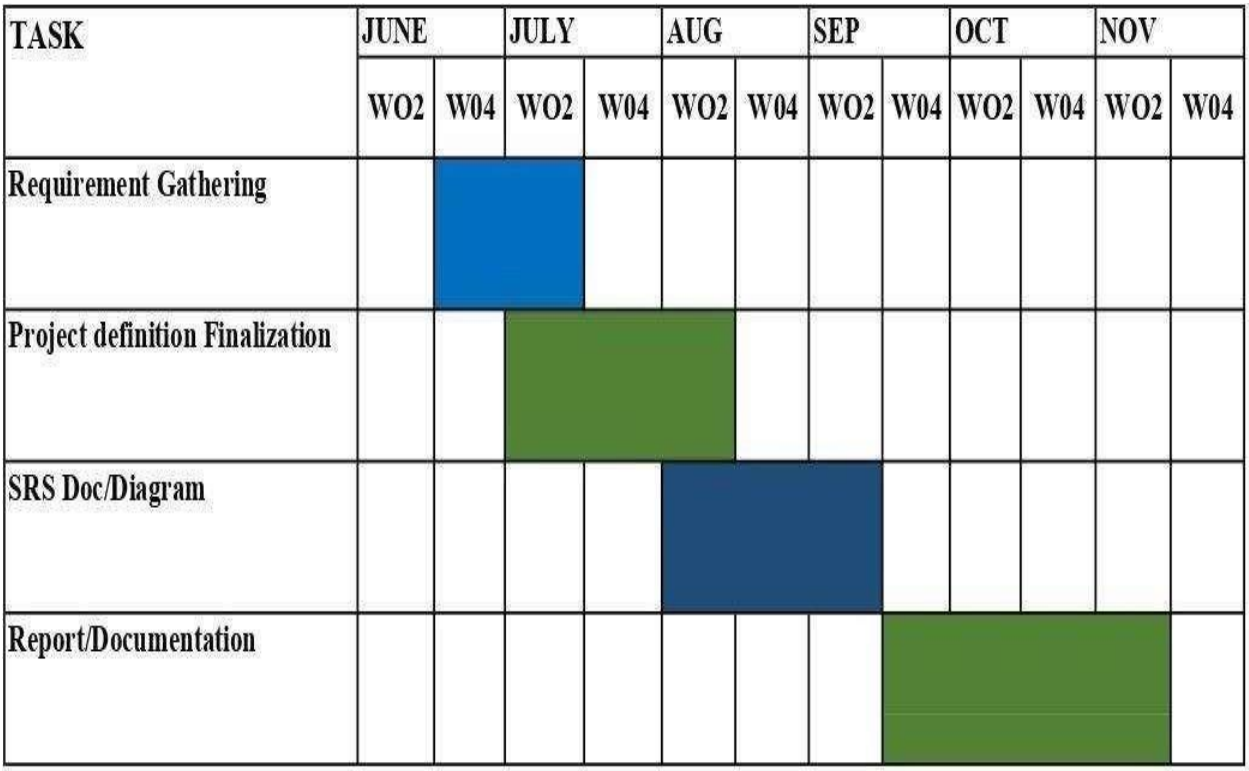


Figure 2.9: Gantt chart

2.3 User Characteristics

1. ADMIN :

- Admin can login to the website using their email and password.
- Admin can manage users.
- Admin can monitor device as well as can manage history.
- Admin can manage complaints as well as feedback.
- Admin can view warnings.
- Admin can log out from the website.

2. USER :

- After registration user can login to the website using their provided email and password.
- Users can monitor the device.
- Users can see warnings.
- Users can view their past history.
- Users will be notified whenever any unusual movement or activity is detected.
- Users can give complaints and feedback about the device.
- Users can log out.

3. FUNCTION OF SYSTEM.

3.1 Flowchart

Following are the basic symbols of flowchart:

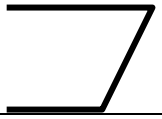
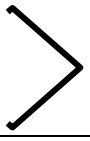
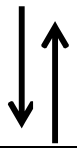
	Start/ Stop
	Input/Output
	Processing
	Decision
	Connectors
	Flow Lines

Table 3.1 Symbols for Flowchart

3.1.1 ARDUINO (DEVICE) FLOWCHART

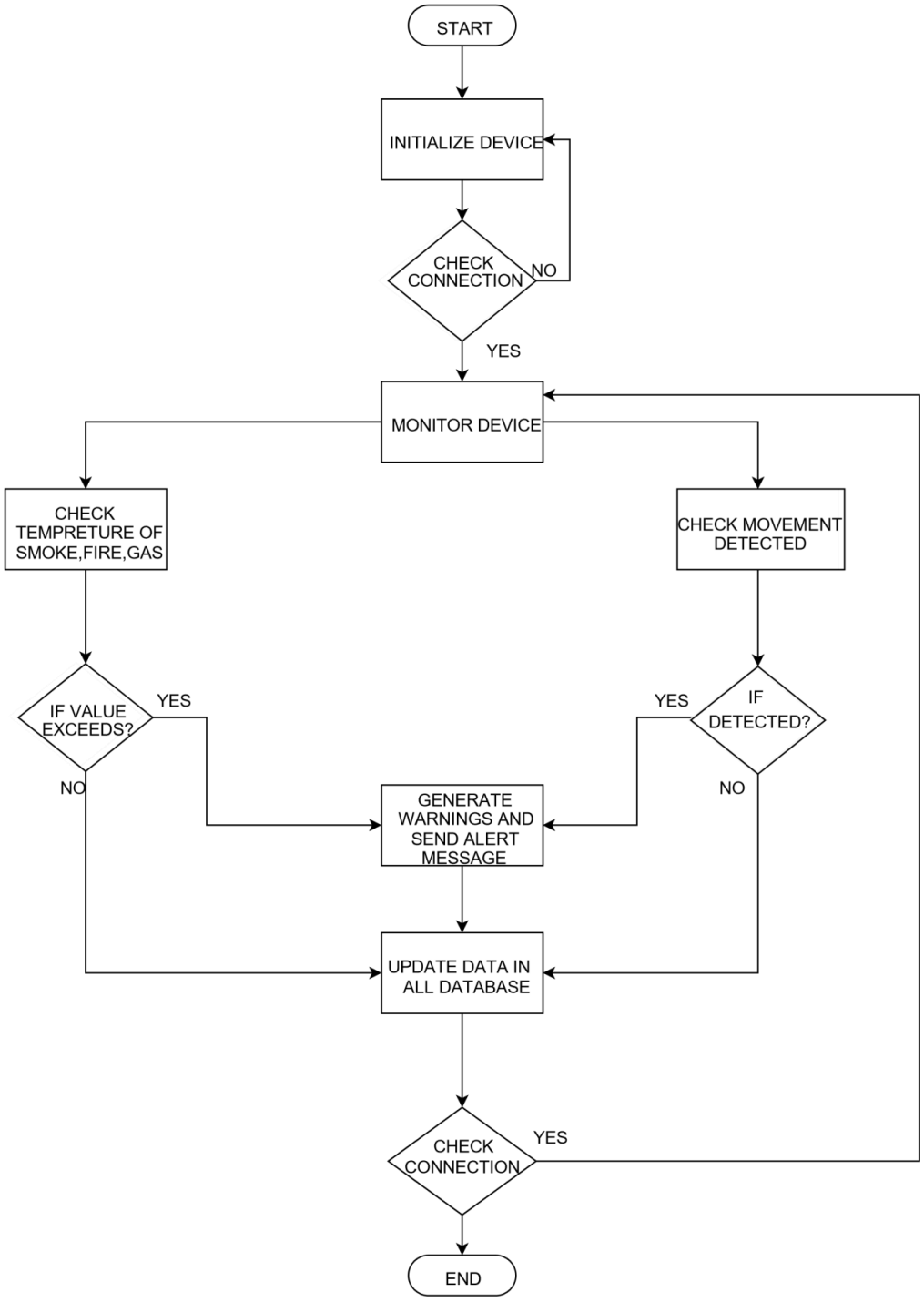


Figure 3.1 Arduino Flowchart

3.1.2 Application

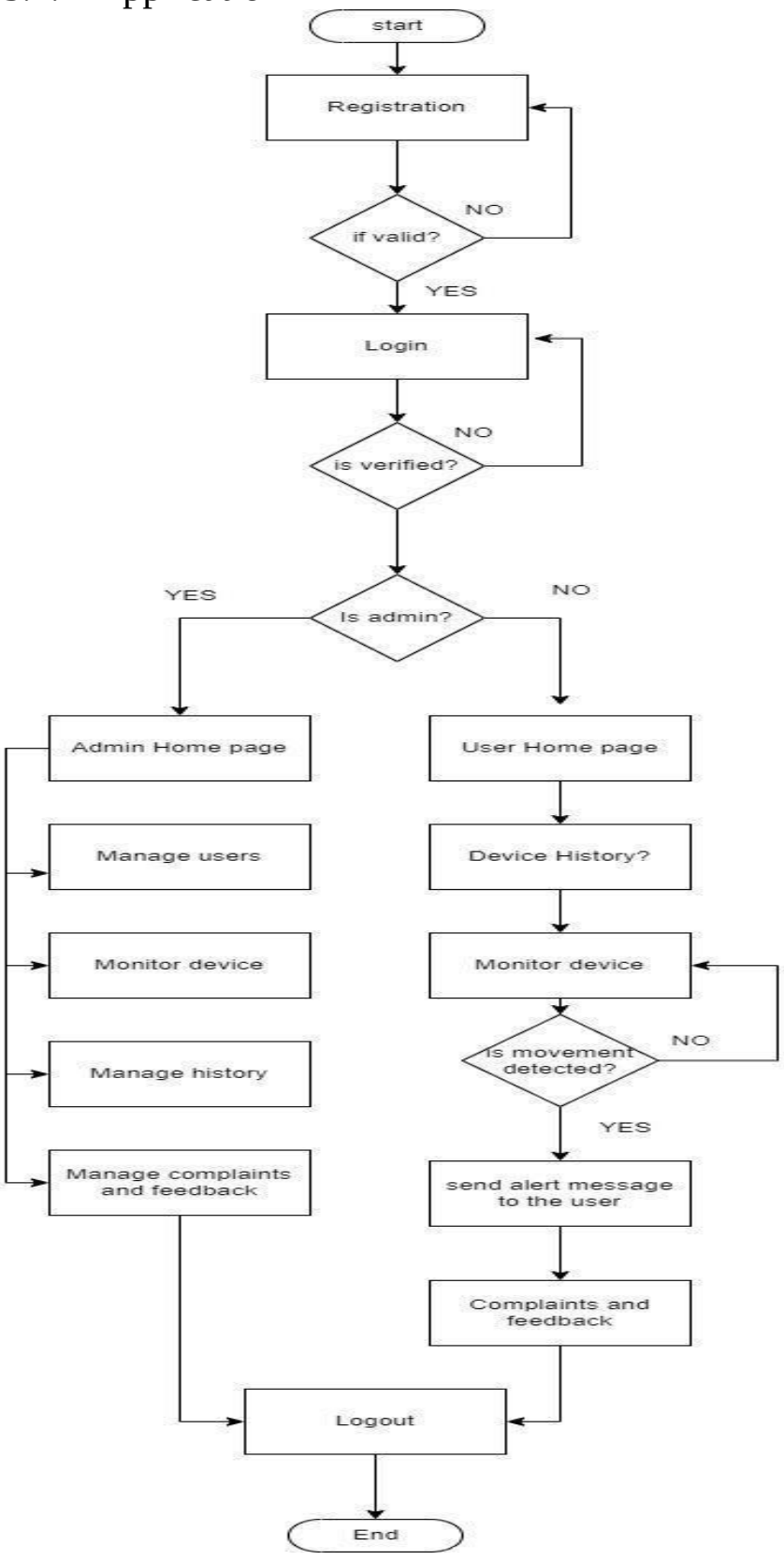


Figure 3.2 : Application flowchart

3.2 Data Flow Diagram

3.2.1 Context Level Diagram

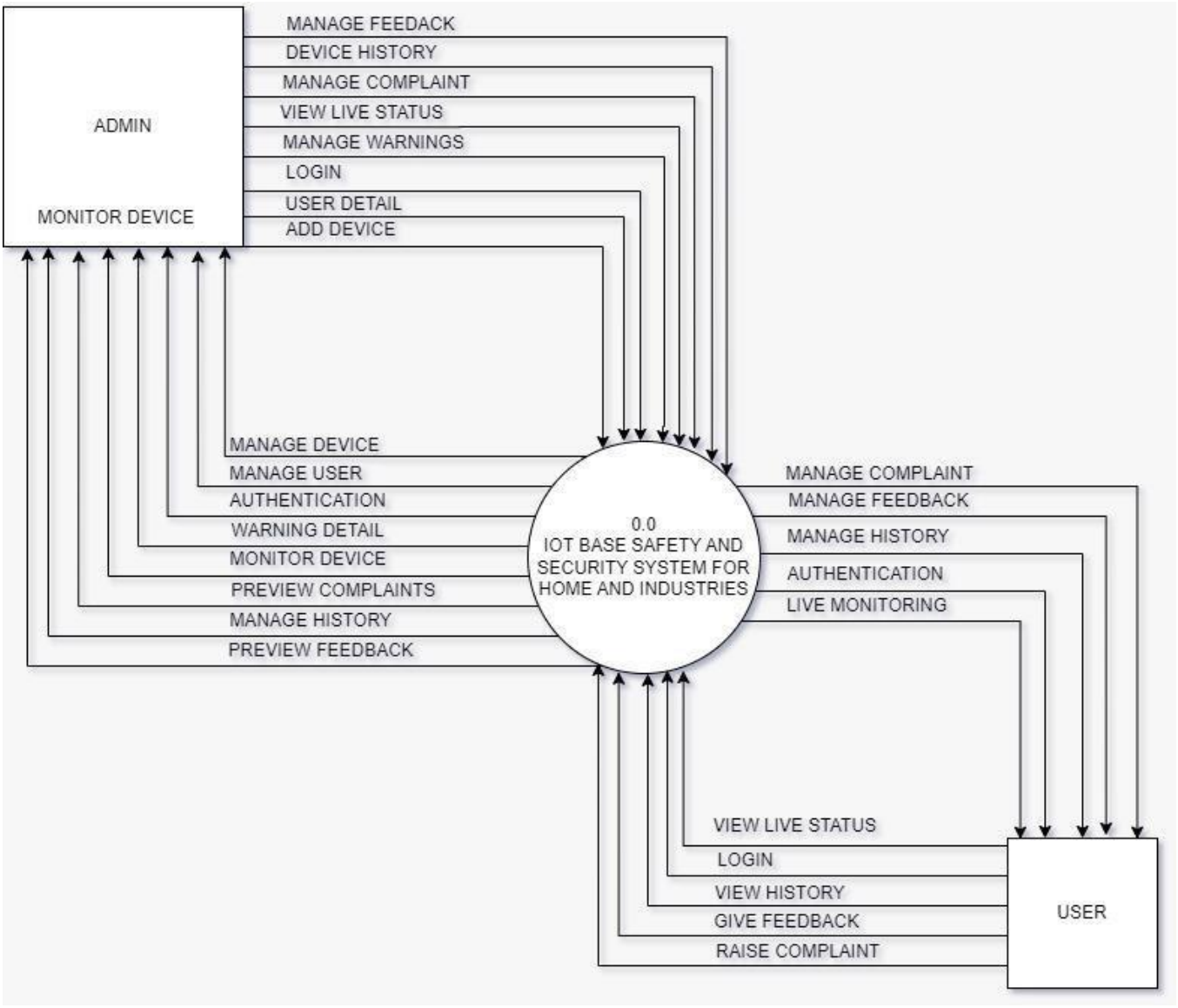


Figure 3.3 : CONTEXT LEVEL DIAGRAM

3.2.2 Top Level Diagram (Level 1)

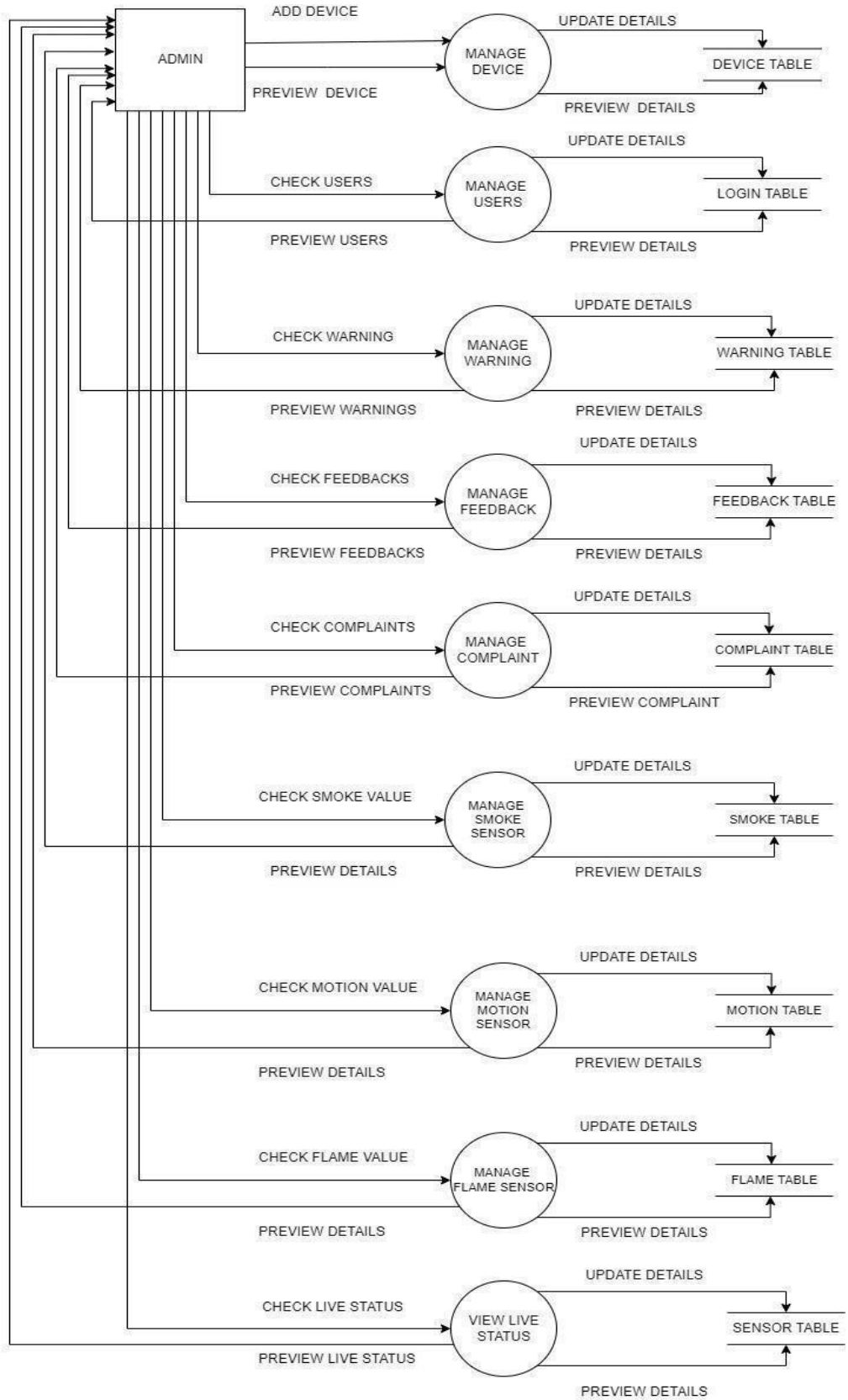


Figure 3.4 :TOP LEVEL DIAGRAM(ADMIN)

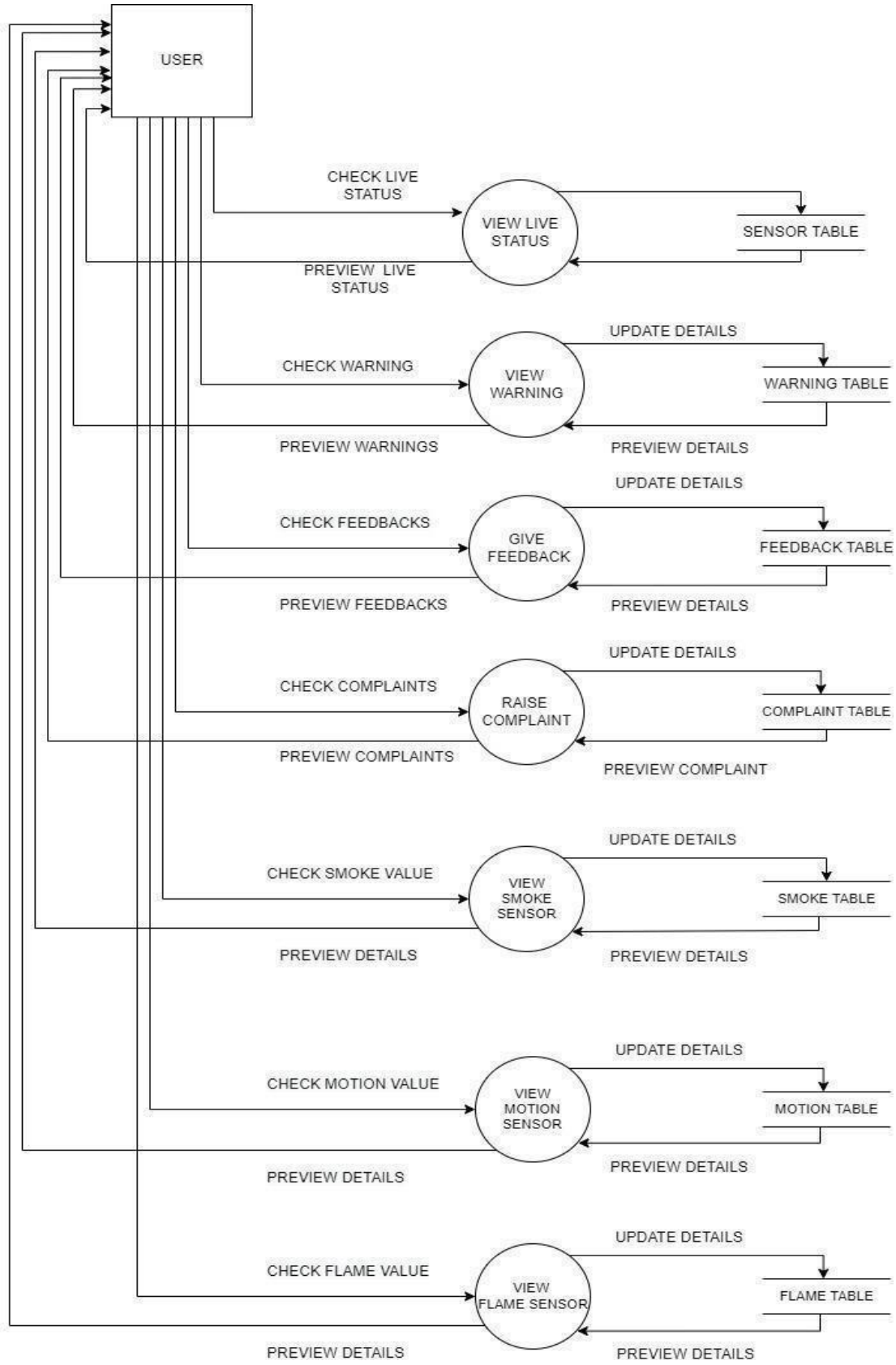


Figure 3.5 : TOP LEVEL DIAGRAM(USER)

3.3 Class Diagram

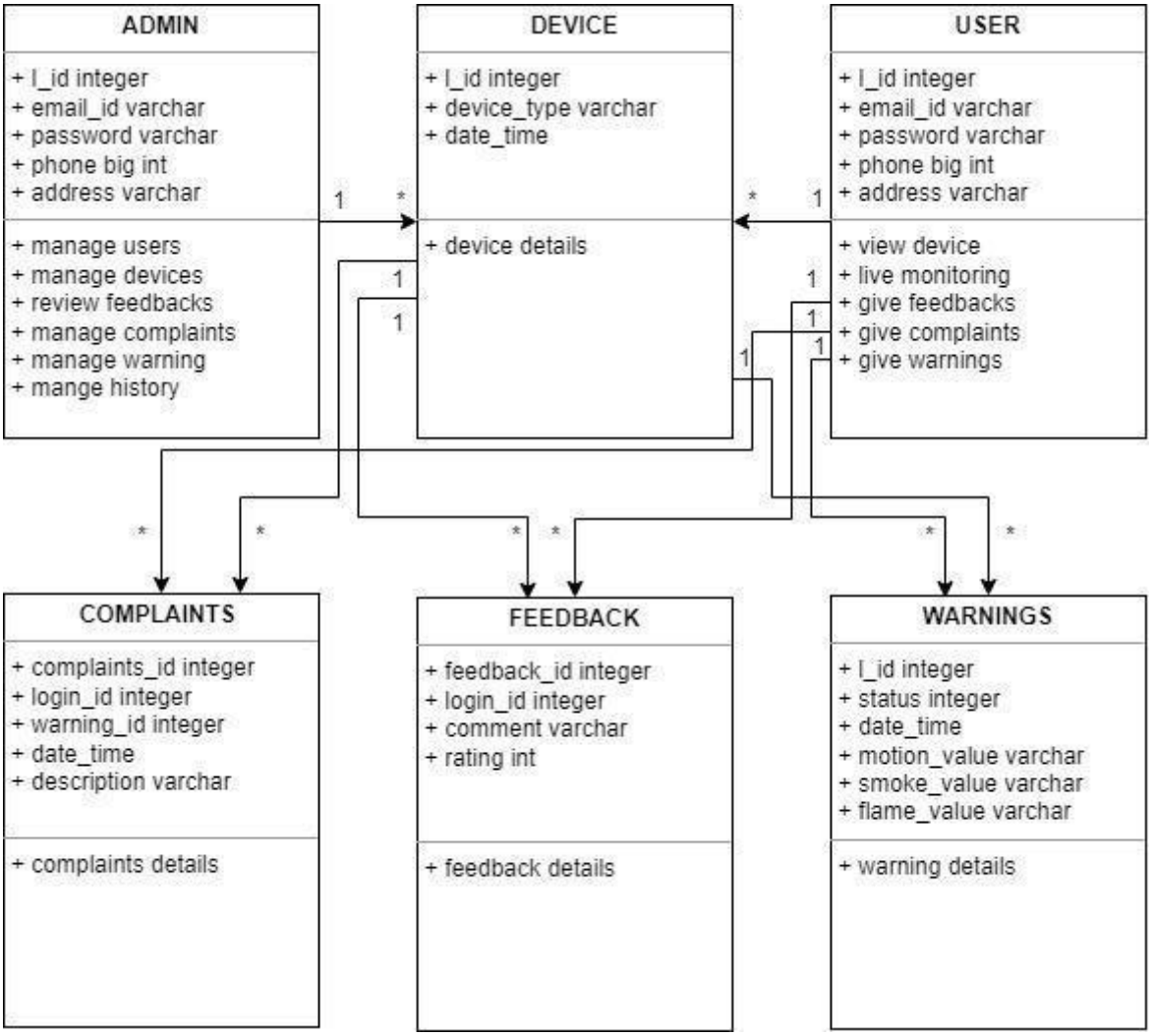


Figure 3.6 : Class Diagram

3.4 Use Case Diagram

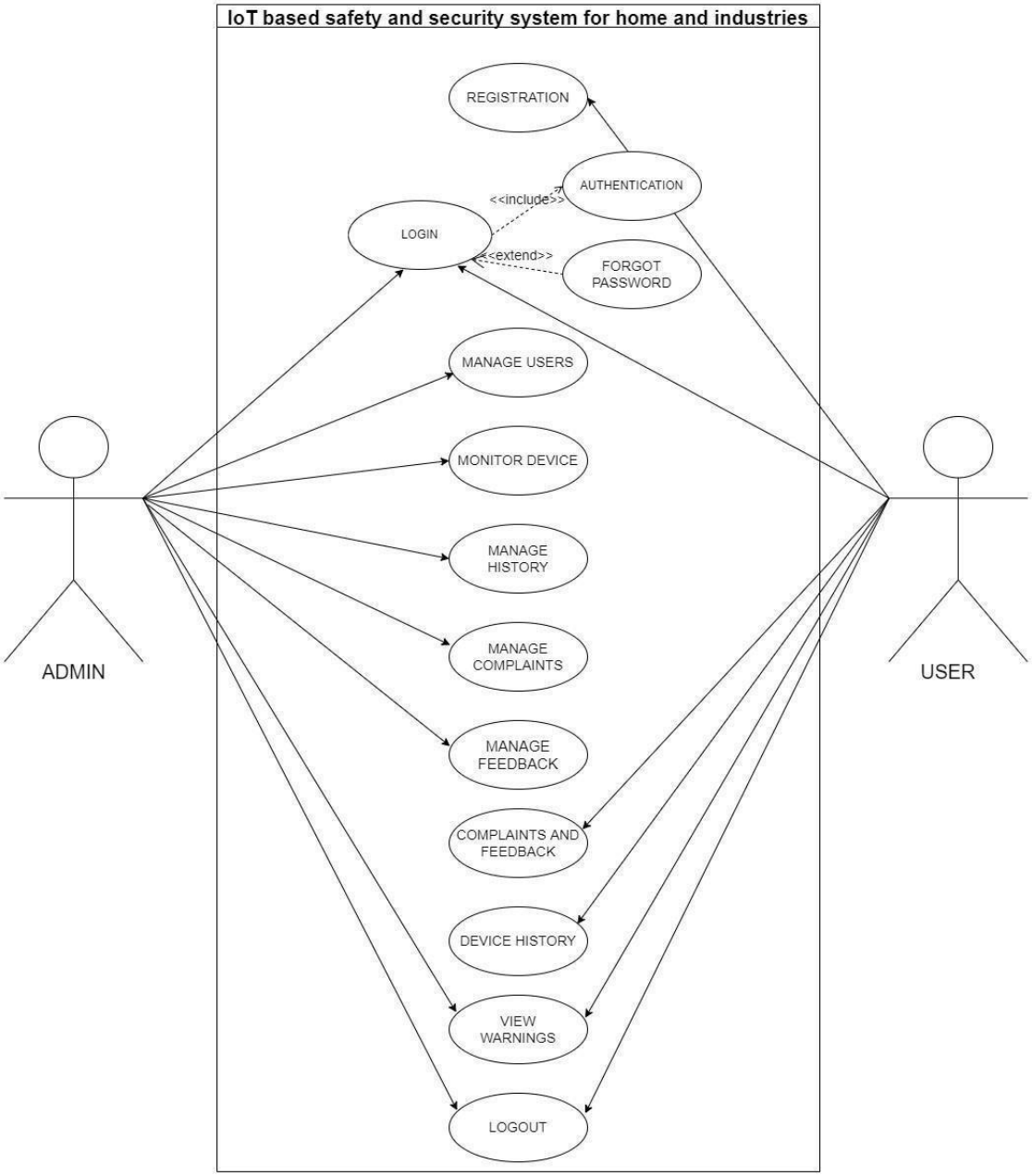


Figure 3.7: Use Case Diagram

3.5 Activity Diagram

3.5.1 Admin Activity Diagram

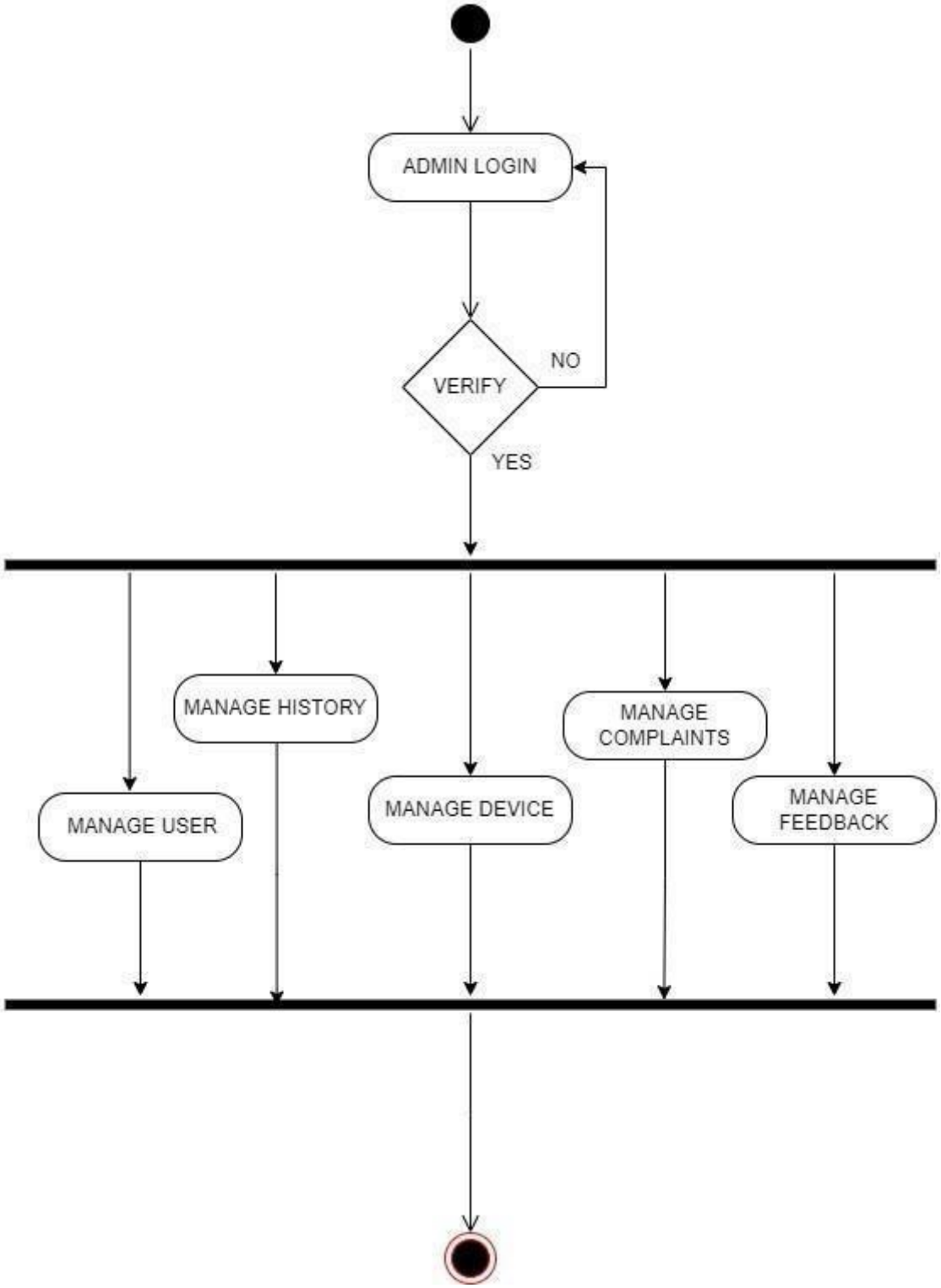


Figure 3.8 Activity Diagram of Admin

3.5.2 User Activity Diagram

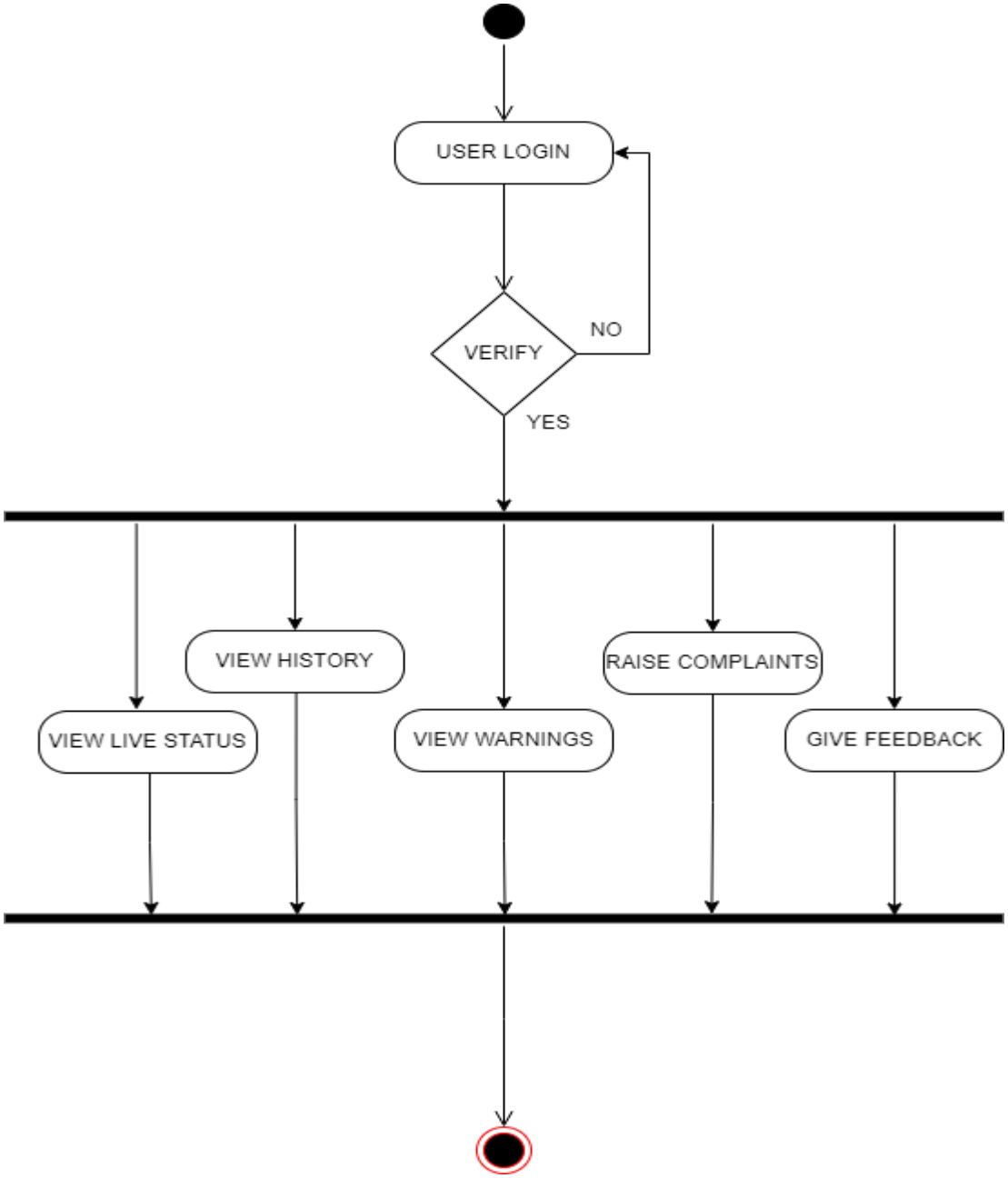


Figure 3.9 : Activity Diagram of User

3.6 ER Diagram:

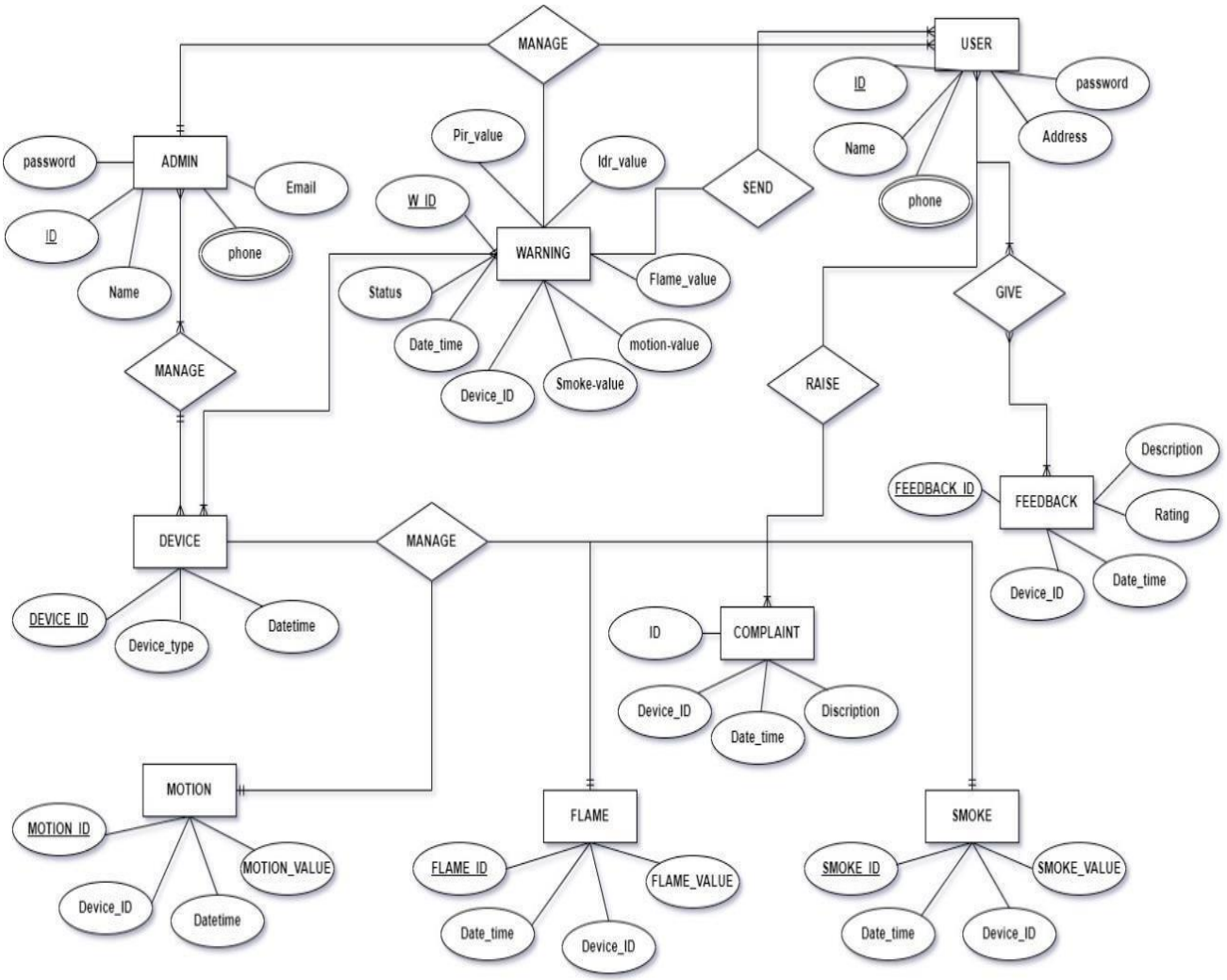


Figure 3.10 : ER Diagram

3.7 Circuit Diagram

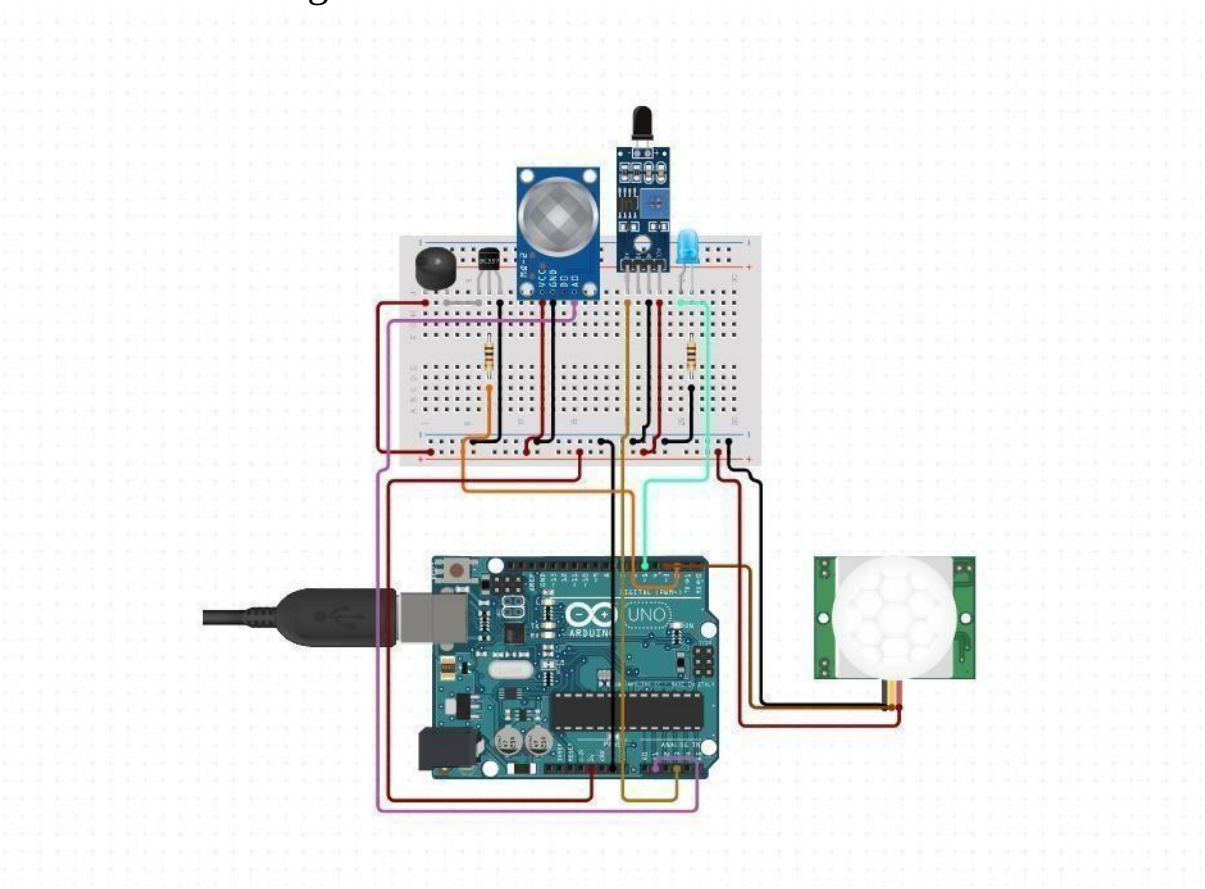


Figure 3.11 : Circuit Diagram

3.8 Data Dictionary

1. LOGIN_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
L_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
L_EMAIL	NOT_NULL	VARCHAR	25	EMAIL OF PERSON
L_PASS	NOT_NULL	VARCHAR	25	PASSWORD OF PERSON
L_PHONE	NOT_NULL	BIG INT	10	PHONE NUMBER OF PERSON
L_ROLE	NOT_NULL	INT	2	ROLE: 0 - ADMIN, 1 - USER
L_STATUS	NOT_NULL	INT	2	STAUS: 0 – INACTIVE, 1 –ACTIVE
ADDRESS	NOT_NULL	VARCHAR	100	ADDRESS

Table 3.7.1 : Login Table

2. DEVICE_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
DEVICE_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_TYPE	NOT_NULL	INT	10	TYPE OF THE DEVICE
DATE_TIME	NOT_NULL	DATETIME		READING TIMESTAMP OF DEVICE ADDED

Table 3.7.2 : Device Table

3. SMOKE_SENSOR_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
SMOKE_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID	FOREIGN KEY	INT	5	MAPPED WITH DEVICE TABLE
SMOKE_VALUE	NOT_NULL	VARCHAR	25	SMOKE SENSOR VALUE
DATE_TIME	NOT_NULL	DATETIME		READING TIMESTAMP OF VALUE

Table 3.7.3 : Smoke Sensor Table

4. FLAME_SENSOR_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
FLAME_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID	FOREIGN KEY	INT	5	MAPPED WITH DEVICE TABLE
FLAME_VALUE	NOT_NULL	VARCHAR	25	FLAME SENSOR VALUE
DATE_TIME	NOT_NULL	DATETIME		READING TIMESTAMP OF VALUE

Table 3.7.4 : Flame Sensor Table

5. MOTION_SENSOR_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
SENSOR_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID	FOREIGN KEY	INT	5	MAPPED WITH DEVICE TABLE
MOTION_VALUE	NOT_NULL	VARCHAR	25	MOTION SENSOR VALUE
DATE_TIME	NOT_NULL	DATETIME		READING TIMESTAMP OF VALUE

Table 3.7.5 : Motion Sensor Table

6. FEEDBACK_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
FEEDBACK_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID	FOREIGN KEY	INT	5	MAPPED WITH DEVICE TABLE
DATE_TIME	NOT_NULL	DATETIME	25	READING TIMESTAMP
DESCRIPTION	NOT_NULL	VARCHAR	100	FEEDBACK DESCRIBED HERE
RATING	NOT_NULL	VARCHAR	5	

Table 3.7.6 : Feedack Table

7. COMPLAINT_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
COMPLAINT_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID	FOREIGN KEY	INT	5	MAPPED WITH DEVICE TABLE
DATE_TIME	NOT_NULL	DATETIME	25	READING TIMESTAMP
DESCRIPTION				NOT_NULL VARCHAT 100 COMPLAINT IS DESCRIBED HERE
RATING	NOT_NULL	VARCHAR	5	

Table 3.7.7 : Complaint Table

8. WARNING_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
W_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID				FOREIGN KEY INT 5 MAPPED WITH DEVICE TABLE
SMOKE_VALUE	NOT_NULL	VARCHAR	25	SMOKE SENSOR VALUE
FLAME_VALUE	NOT_NULL	VARCHAR	25	FALME SENSOR VALUE
MOTION_VALUE	NOT_NULL	VARCHAR	25	MOTION SENSOR VALUE

Table 3.7.7 : Warning Table

9. CNG_TABLE

ATTRIBUTE	CONSTRAIN	DATATYPE	SIZE	DESCRIPTION
CNG_ID	PRIMARY_KEY	INT	5	PRIMARY KEY FOR THIS TABLE, UNIQUE FOR EVERY ROW
DEVICE_ID		INT	5	FOREIGN KEY MAPPED WITH DEVICE TABLE
CNG_VALUE	NOT_NULL	VARCHAR	25	SMOKE SENSOR VALUE
DATE_TIME	NOT_NULL	DATETIME	25	READING TIMESTAMP

Table 3.7.9 : Cng Table

4.1 Implementation

4.1.1 Snapshots of Website

1. LOGIN VIEW

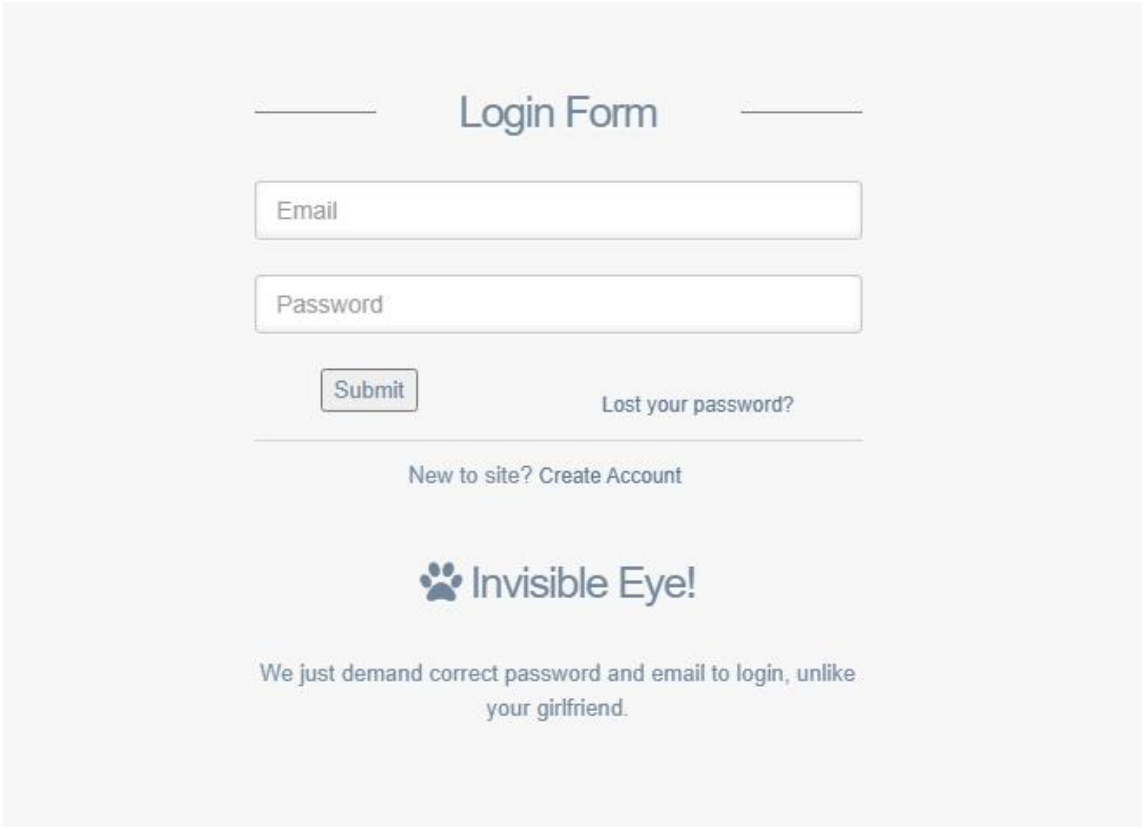


Figure 4.1 Login Screen

2. Registration View

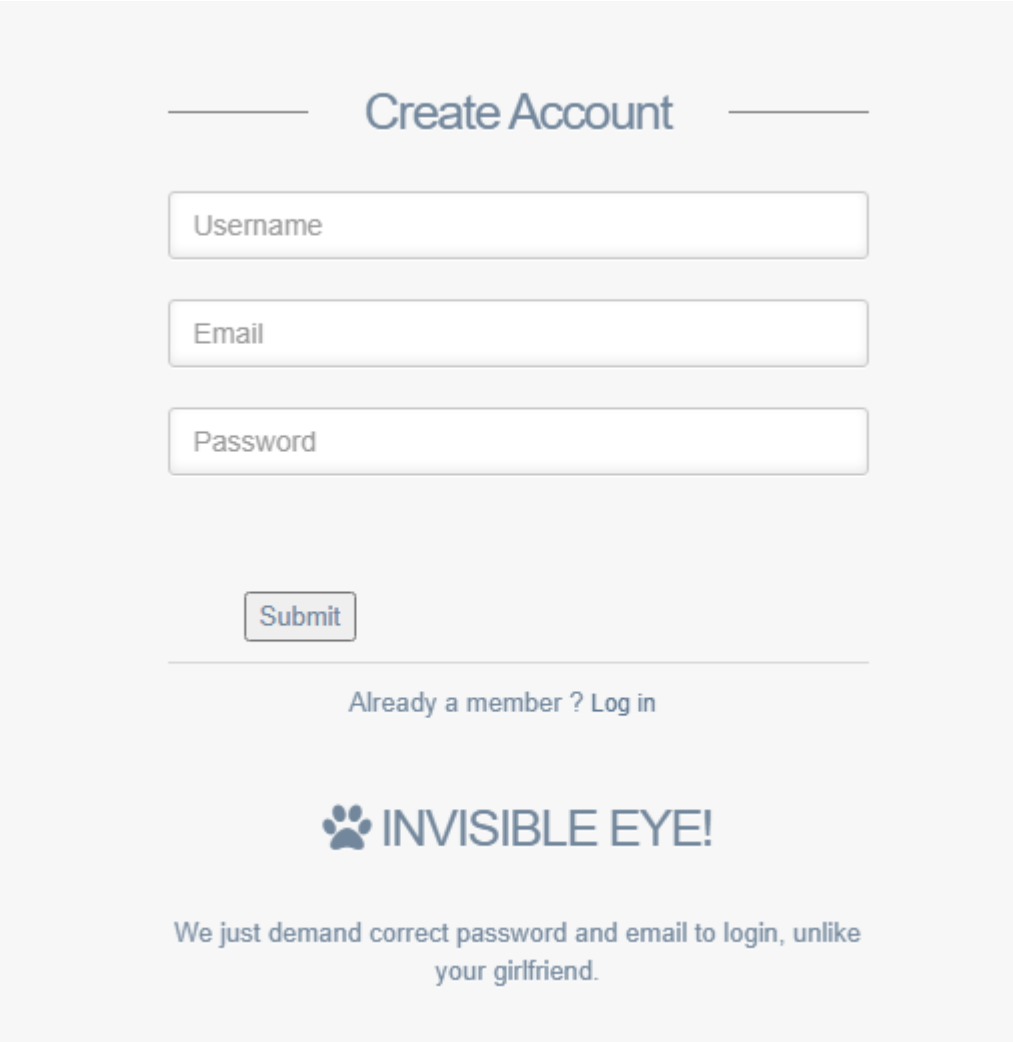


Figure 4.2 Sign-Up Page

3. **Home View**

Figure 4.3 Home Page

4. Smoke History

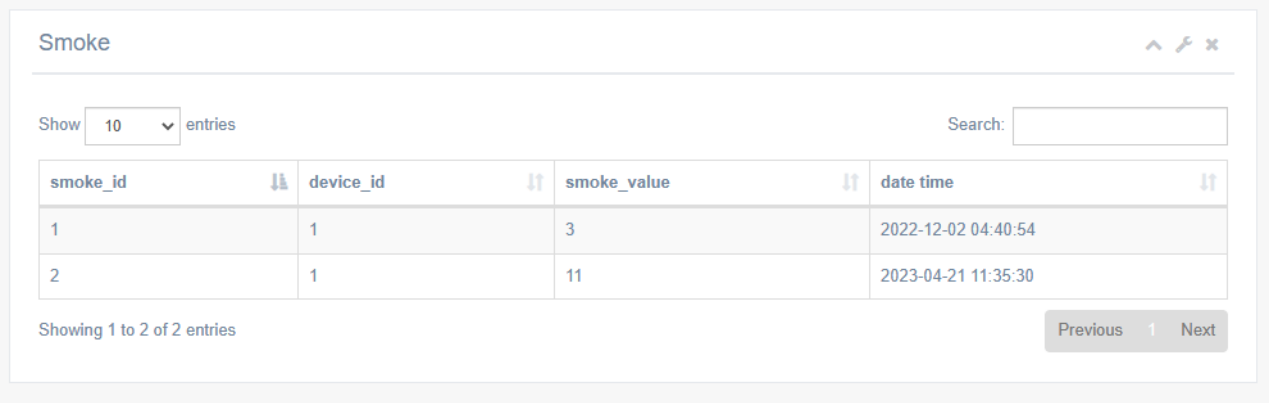


Figure 4.4 Smoke History

5. Motion History

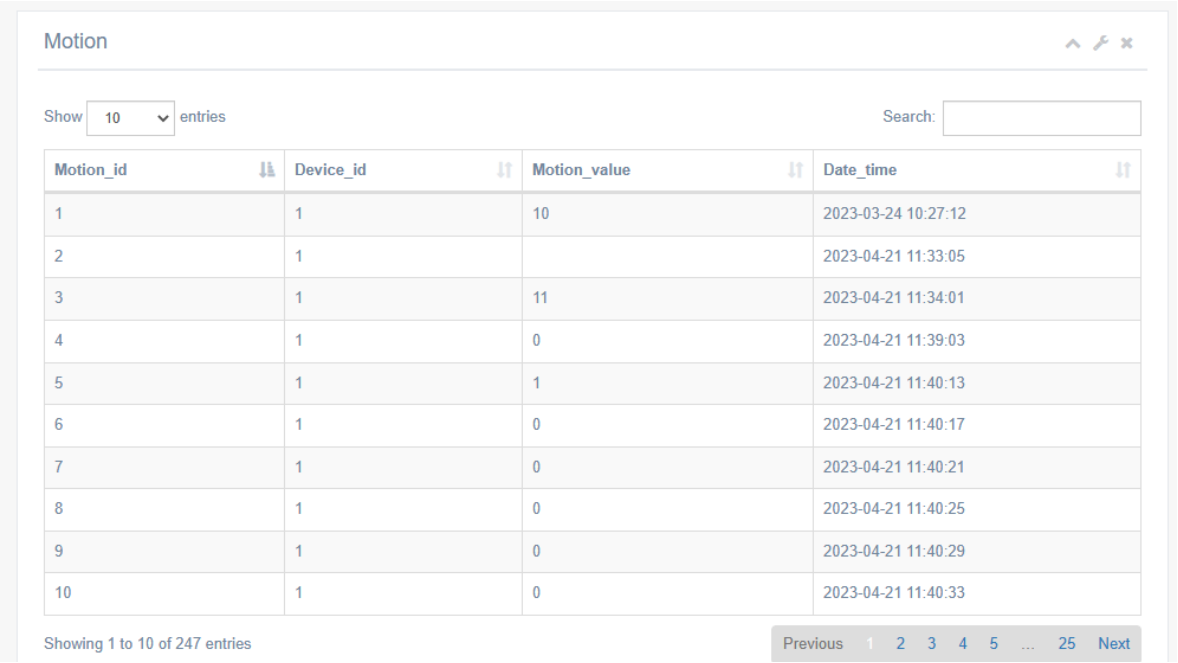


Figure 4.5 Motion History

6. Ldr History

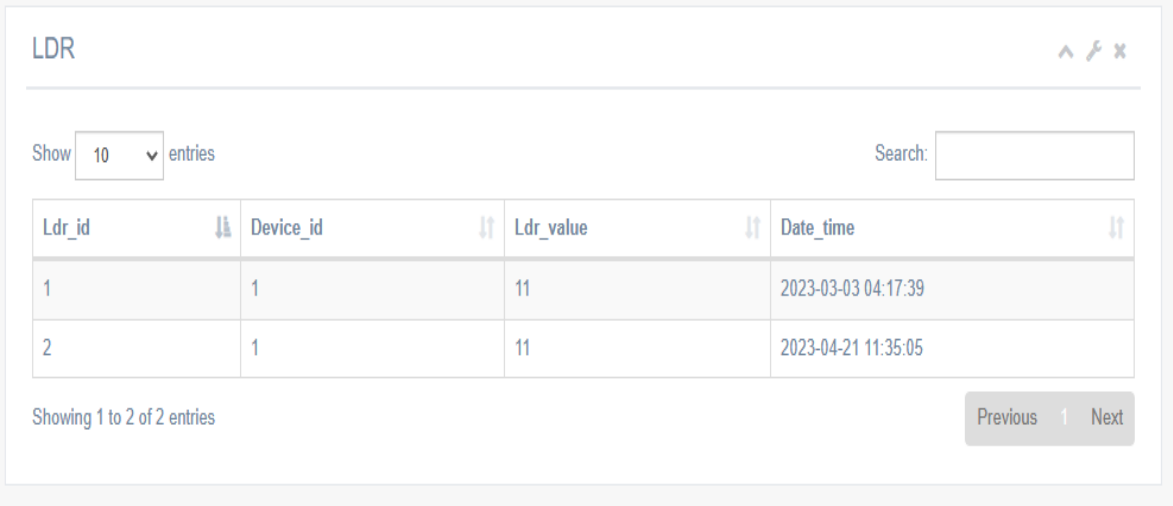


Figure 4.6 Ldr History

7. Warning History

Figure 4.7 Warning History

8.Fire History

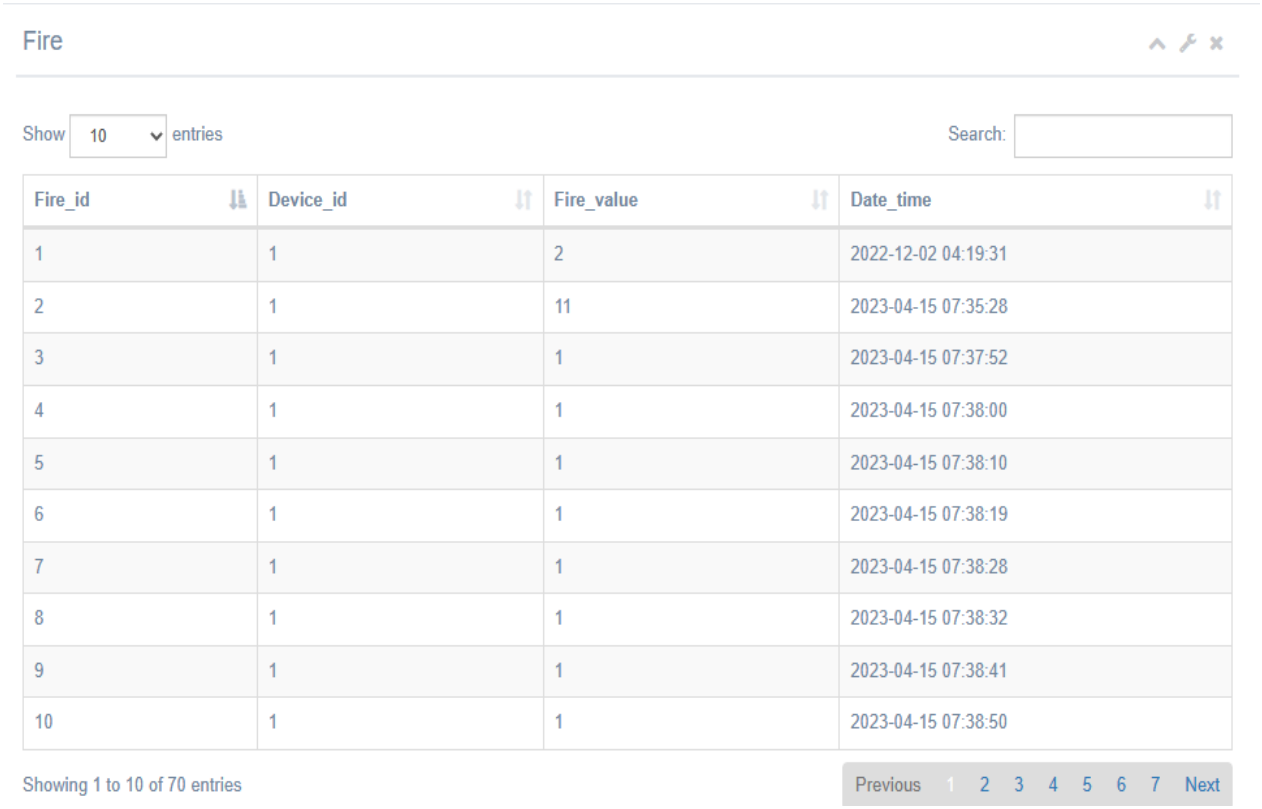


Figure 4.8 Fire History

9. CNG History

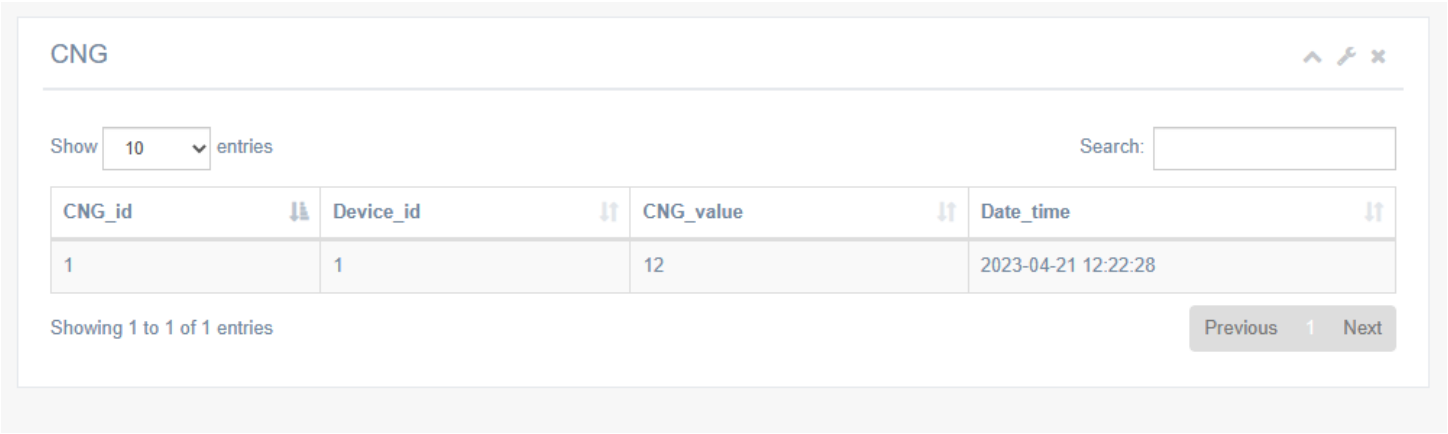


Figure 4.9 CNG History

4.1.1 Snapshot of Hardware

Figure 4.10 Hardware

4.1.2 Coding

Login.html

```
<!DOCTYPE html>
{%load static%}
<html lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <!-- Meta, title, CSS, favicons, etc. -->
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <title>Invisible Eye!</title>

    <!-- Bootstrap -->
    <link href=" {% static '/vendors/bootstrap/dist/css/bootstrap.min.css' %} " rel="stylesheet">
    <!-- Font Awesome -->
    <link href=" {% static '/vendors/font-awesome/css/font-awesome.min.css' %} " rel="stylesheet">
    <!-- NProgress -->
    <link href=" {% static '/vendors/nprogress/nprogress.css' %} " rel="stylesheet">
    <!-- Animate.css -->
    <link href=" {% static '/vendors/animate.css/animate.min.css' %} " rel="stylesheet">

    <!-- Custom Theme Style -->
    <link href=" {% static '/build/css/custom.min.css' %} " rel="stylesheet">
  </head>

  <body class="login">
  {% if messages %}
{% for msg in messages %}
<p>{{ msg }}</p>
{% endfor %}
{% endif %}
    <div>
      <a class="hiddenanchor" id="signup"></a>
      <a class="hiddenanchor" id="signin"></a>

      <div class="login_wrapper">
        <div class="animate form login_form">
          <section class="login_content">

            <form method="POST" action="/fetchlogindata">
              {% csrf_token %}
              <h1>Login Form</h1>
              <div>
                <input type="email" name="useremail" class="form-control" placeholder="Email"
required="" />
              </div>
              <div>
```

```
          <input type="password" name="userpass" class="form-control" placeholder="Password"
required="" />
          </div>
          <div>
           <input type="submit" name="Login" placeholder="login">
            <a class="reset_pass" href="#">Lost your password?</a>
          </div>

          <div class="clearfix"></div>

          <div class="separator">
            <p class="change_link">New to site?
              <a href="#signup " class="to_register"> Create Account </a>
            </p>

            <div class="clearfix"></div>
            <br />

            <div>
              <h1><i class="fa fa-paw"></i> Invisible Eye!</h1>
              <p>We just demand correct password and email to login, unlike your girlfriend.</p>
            </div>
          </div>
        </form>
      </section>
    </div>

    <div id="register" class="animate form registration_form">
      <section class="login_content">
        <form method="post" action="/fetchregdata">
            {% csrf_token %}
          <h1>Create Account</h1>
          <div>
            <input type="text"  name="username" class="form-control" placeholder="Username"
required="" />
          </div>
          <div>
            <input type="email" name="useremail" class="form-control" placeholder="Email"
required="" />
          </div>
          <div>
            <input type="password" name="userpass" class="form-control" placeholder="Password"
required="" />
          </div><br><br>

          <div>
           <input type="submit" name="submit">
          </div>

          <div class="clearfix"></div>
```

```
        <div class="separator">
          <p class="change_link">Already a member ?
            <a href=" #signin" class="to_register"> Log in </a>
          </p>

          <div class="clearfix"></div>
          <br />

          <div>
            <h1><i class="fa fa-paw"></i> INVISIBLE EYE!</h1>
            <p>We just demand correct password and email to login, unlike your girlfriend.</p>
          </div>
        </div>
      </form>
    </section>
  </div>



  </div>
 </div>
</body>
</html>
```

Index.html

```
<!DOCTYPE html>
{%load static%}
<html lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <!-- Meta, title, CSS, favicons, etc. -->
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <title>Invisible Eye </title>

    <!-- Bootstrap -->
    <link href=" {% static '/vendors/bootstrap/dist/css/bootstrap.min.css' %} " rel="stylesheet">
    <!-- Font Awesome -->
    <link href=" {% static '/vendors/font-awesome/css/font-awesome.min.css' %} " rel="stylesheet">
    <!-- NProgress -->
    <link href=" {% static '/vendors/nprogress/nprogress.css' %} " rel="stylesheet">
    <!-- bootstrap-daterangepicker -->
    <link href=" {% static '/vendors/bootstrap-daterangepicker/daterangepicker.css' %} "
rel="stylesheet">

    <!-- Custom Theme Style -->
    <link href=" {% static '/build/css/custom.min.css' %} " rel="stylesheet">
  </head>

  <body class="nav-md">
    <div class="container body">
      <div class="main_container">
        <div class="col-md-3 left_col">
          <div class="left_col scroll-view">
            <div class="navbar nav_title" style="border: 0;">
              <a href="/index.html" class="site_title"><i class="fa fa-paw"></i> <span>Invisible
Eye</span></a>
            </div>

            <div class="clearfix"></div>

            <!-- menu profile quick info -->
            <div class="profile clearfix">
              <div class="profile_pic">
                <img src=" {% static 'images/img.jpg' %} " alt="..." class="img-circle profile_img">
              </div>
              <div class="profile_info">
                <span>Welcome,</span>
                <h2>to Invisible Eye</h2>
              </div>
            </div>
```

```
<!-- /menu profile quick info -->

<br />

<!-- sidebar menu -->
<div id="sidebar-menu" class="main_menu_side hidden-print main_menu">
 <div class="menu_section">
  <h3>General</h3>
  <ul class="nav side-menu">
   <li><a><i class="fa fa-home"></i> Home <span class="fa fa-chevron-down"></span></a>
    <ul class="nav child_menu">
     <li><a href="/index.html">Dashboard</a></li>
      <li><a href="/index2.html">Dashboard2</a></li>
      <li><a href="/index3.html">Dashboard3</a></li>
    </ul>
   </li>
   <li><a><i class="fa fa-edit"></i> Forms <span class="fa fa-chevron-down"></span></a>
    <ul class="nav child_menu">
       <li><a href="/form.html">General Form</a></li>
    </ul>
   </li>

   <li><a><i class="fa fa-table"></i> Tables <span class="fa fa-chevron-down"></span></a>
    <ul class="nav child_menu"
     <li><a href=" /tables_dynamic.html">Table Dynamic</a></li>
    </ul>
   </li>


 <div class="menu_section">
  <h3>Live On</h3>
  <ul class="nav side-menu">


   <li><a><i class="fa fa-sitemap"></i> Multilevel Menu <span class="fa fa-chevron-
down"></span></a>
     <ul class="nav child_menu">
       <li><a href=" {% static '#level1_1' %} ">Level One</a>
       <li><a>Level One<span class="fa fa-chevron-down"></span></a>
        <ul class="nav child_menu">
         <li class="sub_menu"><a href=" /level2.html ">Level Two</a>
         </li>
         <li><a href=" {% static '#level2_1' %} ">Level Two</a>
         </li>
         <li><a href=" {% static '#level2_2' %} ">Level Two</a>
         </li>
        </ul>
       </li>
       <li><a href=" {% static '#level1_2' %} ">Level One</a>
```

```
                </li>
              </ul>
            </li>
            <li><a href=" {% static 'javascript:void(0)' %} "><i class="fa fa-laptop"></i> Landing Page
<span class="label label-success pull-right">Coming Soon</span></a></li>
          </ul>
        </div>

      </div>
      <!-- /sidebar menu -->

      <!-- /menu footer buttons -->
      <div class="sidebar-footer hidden-small">
        <a data-toggle="tooltip" data-placement="top" title="Settings">
          <span class="glyphicon glyphicon-cog" aria-hidden="true"></span>
        </a>
        <a data-toggle="tooltip" data-placement="top" title="FullScreen">
          <span class="glyphicon glyphicon-fullscreen" aria-hidden="true"></span>
        </a>
        <a data-toggle="tooltip" data-placement="top" title="Lock">
          <span class="glyphicon glyphicon-eye-close" aria-hidden="true"></span>
        </a>
        <a data-toggle="tooltip" data-placement="top" title="Logout" href=" /login.html ">
          <span class="glyphicon glyphicon-off" aria-hidden="true"></span>
        </a>
      </div>
      <!-- /menu footer buttons -->
    </div>
  </div>

  <!-- top navigation -->
  <div class="top_nav">
    <div class="nav_menu">
      <nav>
        <div class="nav toggle">
          <a id="menu_toggle"><i class="fa fa-bars"></i></a>
        </div>

        <ul class="nav navbar-nav navbar-right">
          <li class="">
            <a href=" {% static 'javascript:;' %} " class="user-profile dropdown-toggle" data-
toggle="dropdown" aria-expanded="false">
              <img src=" {% static 'images/img.jpg' %} " alt="">John Doe
              <span class=" fa fa-angle-down"></span>
            </a>
            <ul class="dropdown-menu dropdown-usermenu pull-right">
              <li><a href=" {% static 'javascript:;' %} "> Profile</a></li>
              <li>
                <a href=" {% static 'javascript:;' %} ">
```

```
                <span class="badge bg-red pull-right">50%</span>
                <span>Settings</span>
              </a>
            </li>
            <li><a href=" {% static 'javascript:;' %} ">Help</a></li>
            <li><a href=" /login.html "><i class="fa fa-sign-out pull-right"></i> Log Out</a></li>
          </ul>
        </li>

        <li role="presentation" class="dropdown">
          <a href=" {% static 'javascript:;' %} " class="dropdown-toggle info-number" data-
toggle="dropdown" aria-expanded="false">
            <i class="fa fa-envelope-o"></i>
            <span class="badge bg-green">6</span>
          </a>
          <ul id="menu1" class="dropdown-menu list-unstyled msg_list" role="menu">
            <li>
              <a>
                <span class="image"><img src=" {% static 'images/img.jpg' %} " alt="Profile Image"
/></span>
                <span>
                  <span>John Smith</span>
                  <span class="time">3 mins ago</span>
                </span>
                <span class="message">
                  Film festivals used to be do-or-die moments for movie makers. They were where...
                </span>
              </a>
            </li>
            <li>
              <a>
                <span class="image"><img src=" {% static 'images/img.jpg' %} " alt="Profile Image"
/></span>
                <span>
                  <span>John Smith</span>
                  <span class="time">3 mins ago</span>
                </span>
                <span class="message">
                  Film festivals used to be do-or-die moments for movie makers. They were where...
                </span>
              </a>
            </li>
            <li>
              <a>
                <span class="image"><img src=" {% static 'images/img.jpg' %} " alt="Profile Image"
/></span>
                <span>
                  <span>John Smith</span>
                  <span class="time">3 mins ago</span>
                </span>
```

```
                <span class="message">
                  Film festivals used to be do-or-die moments for movie makers. They were where...
                </span>
              </a>
            </li>
            <li>
              <a>
                <span class="image"><img src=" {% static 'images/img.jpg' %} " alt="Profile Image"
/></span>
                <span>
                  <span>John Smith</span>
                  <span class="time">3 mins ago</span>
                </span>
                <span class="message">
                  Film festivals used to be do-or-die moments for movie makers. They were where...
                </span>
              </a>
            </li>
            <li>
              <div class="text-center">
                <a>
                  <strong>See All Alerts</strong>
                  <i class="fa fa-angle-right"></i>
                </a>
              </div>
            </li>
          </ul>
        </li>
      </ul>
    </nav>
  </div>
</div>
<!-- /top navigation -->

<!-- page content -->
<div class="right_col" role="main">
  <div class="">
    <div class="row top_tiles">
      <div class="animated flipInY col-lg-3 col-md-3 col-sm-6 col-xs-12">
        <div class="tile-stats">
          <div class="icon"><i class="fa fa-caret-square-o-right"></i></div>
          <div class="count">179</div>
          <h3>New Sign ups</h3>
          <p>Lorem ipsum psdea itgum rixt.</p>
        </div>
      </div>
      <div class="animated flipInY col-lg-3 col-md-3 col-sm-6 col-xs-12">
        <div class="tile-stats">
          <div class="icon"><i class="fa fa-comments-o"></i></div>
          <div class="count">179</div>
          <h3>New Sign ups</h3>
          <p>Lorem ipsum psdea itgum rixt.</p>
```

```
          </div>
         </div>
         <div class="animated flipInY col-lg-3 col-md-3 col-sm-6 col-xs-12">
          <div class="tile-stats">
           <div class="icon"><i class="fa fa-sort-amount-desc"></i></div>
           <div class="count">179</div>
           <h3>New Sign ups</h3>
           <p>Lorem ipsum psdea itgum rixt.</p>
          </div>
         </div>
         <div class="animated flipInY col-lg-3 col-md-3 col-sm-6 col-xs-12">
          <div class="tile-stats">
           <div class="icon"><i class="fa fa-check-square-o"></i></div>
           <div class="count">179</div>
           <h3>New Sign ups</h3>
           <p>Lorem ipsum psdea itgum rixt.</p>
          </div>
         </div>
        </div>

        <div class="row">
         <div class="col-md-12">
          <div class="x_panel">
           <div class="x_title">
            <h2>Transaction Summary <small>Weekly progress</small></h2>
            <div class="filter">
             <div id="reportrange" class="pull-right" style="background: #fff; cursor: pointer;
padding: 5px 10px; border: 1px solid #ccc">
              <i class="glyphicon glyphicon-calendar fa fa-calendar"></i>
              <span>December 30, 2014 - January 28, 2015</span> <b class="caret"></b>
             </div>
            </div>
            <div class="clearfix"></div>
           </div>
           <div class="x_content">
            <div class="col-md-9 col-sm-12 col-xs-12">
             <div class="demo-container" style="height:280px">
              <div id="chart_plot_02" class="demo-placeholder"></div>
             </div>
             <div class="tiles">
              <div class="col-md-4 tile">
               <span>Total Sessions</span>
               <h2>231,809</h2>
               <span class="sparkline11 graph" style="height: 160px;">
                  <canvas width="200" height="60" style="display: inline-block; vertical-align: top;
width: 94px; height: 30px;"></canvas>
               </span>
              </div>
              <div class="col-md-4 tile">
```

```
                  <span>Total Revenue</span>
                  <h2>$231,809</h2>
                  <span class="sparkline22 graph" style="height: 160px;">
                      <canvas width="200" height="60" style="display: inline-block; vertical-align: top;
width: 94px; height: 30px;"></canvas>
                  </span>
                 </div>
                 <div class="col-md-4 tile">
                  <span>Total Sessions</span>
                  <h2>231,809</h2>
                  <span class="sparkline11 graph" style="height: 160px;">
                       <canvas width="200" height="60" style="display: inline-block; vertical-align: top;
width: 94px; height: 30px;"></canvas>
                  </span>
                 </div>
                </div>

               </div>

               <div class="col-md-3 col-sm-12 col-xs-12">
                <div>
                 <div class="x_title">
                  <h2>Top Profiles</h2>
                  <ul class="nav navbar-right panel_toolbox">
                   <li><a class="collapse-link"><i class="fa fa-chevron-up"></i></a>
                   </li>
                   <li class="dropdown">
                    <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-
expanded="false"><i class="fa fa-wrench"></i></a>
                    <ul class="dropdown-menu" role="menu">
                     <li><a href="#">Settings 1</a>
                     </li>
                     <li><a href="#">Settings 2</a>
                     </li>
                    </ul>
                   </li>
                   <li><a class="close-link"><i class="fa fa-close"></i></a>
                   </li>
                  </ul>
                  <div class="clearfix"></div>
                 </div>
                 <ul class="list-unstyled top_profiles scroll-view">
                  <li class="media event">
                   <a class="pull-left border-aero profile_thumb">
                    <i class="fa fa-user aero"></i>
                   </a>
                   <div class="media-body">
```

```
    <a class="title" href="#">Ms. Mary Jane</a>
    <p><strong>$2300. </strong> Agent Avarage Sales </p>
    <p> <small>12 Sales Today</small>
    </p>
  </div>
</li>
<li class="media event">
  <a class="pull-left border-green profile_thumb">
    <i class="fa fa-user green"></i>
  </a>
  <div class="media-body">
    <a class="title" href="#">Ms. Mary Jane</a>
    <p><strong>$2300. </strong> Agent Avarage Sales </p>
    <p> <small>12 Sales Today</small>
    </p>
  </div>
</li>
<li class="media event">
  <a class="pull-left border-blue profile_thumb">
    <i class="fa fa-user blue"></i>
  </a>
  <div class="media-body">
    <a class="title" href="#">Ms. Mary Jane</a>
    <p><strong>$2300. </strong> Agent Avarage Sales </p>
    <p> <small>12 Sales Today</small>
    </p>
  </div>
</li>
<li class="media event">
  <a class="pull-left border-aero profile_thumb">
    <i class="fa fa-user aero"></i>
  </a>
  <div class="media-body">
    <a class="title" href="#">Ms. Mary Jane</a>
    <p><strong>$2300. </strong> Agent Avarage Sales </p>
    <p> <small>12 Sales Today</small>
    </p>
  </div>
</li>
<li class="media event">
  <a class="pull-left border-green profile_thumb">
    <i class="fa fa-user green"></i>
  </a>
  <div class="media-body">
    <a class="title" href="#">Ms. Mary Jane</a>
    <p><strong>$2300. </strong> Agent Avarage Sales </p>
    <p> <small>12 Sales Today</small>
    </p>
  </div>
</li>
</ul>
```

```
            </div>
           </div>

          </div>
         </div>
        </div>
       </div>



       <div class="row">
        <div class="col-md-12">
         <div class="x_panel">
          <div class="x_title">
           <h2>Weekly Summary <small>Activity shares</small></h2>
           <ul class="nav navbar-right panel_toolbox">
            <li><a class="collapse-link"><i class="fa fa-chevron-up"></i></a>
            </li>
            <li class="dropdown">
             <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-
expanded="false"><i class="fa fa-wrench"></i></a>
             <ul class="dropdown-menu" role="menu">
              <li><a href="#">Settings 1</a>
              </li>
              <li><a href="#">Settings 2</a>
              </li>
             </ul>
            </li>
            <li><a class="close-link"><i class="fa fa-close"></i></a>
            </li>
           </ul>
           <div class="clearfix"></div>
          </div>
          <div class="x_content">

           <div class="row" style="border-bottom: 1px solid #E0E0E0; padding-bottom: 5px; margin-
bottom: 5px;">
            <div class="col-md-7" style="overflow:hidden;">
             <span class="sparkline_one" style="height: 160px; padding: 10px 25px;">
                    <canvas width="200" height="60" style="display: inline-block; vertical-align: top;
width: 94px; height: 30px;"></canvas>
                </span>
             <h4 style="margin:18px">Weekly sales progress</h4>
            </div>

            <div class="col-md-5">
             <div class="row" style="text-align: center;">
              <div class="col-md-4">
```

```
                    <canvas class="canvasDoughnut" height="110" width="110" style="margin: 5px 10px
10px 0"></canvas>
                    <h4 style="margin:0">Bounce Rates</h4>
                   </div>
                   <div class="col-md-4">
                    <canvas class="canvasDoughnut" height="110" width="110" style="margin: 5px 10px
10px 0"></canvas>
                    <h4 style="margin:0">New Traffic</h4>
                   </div>
                   <div class="col-md-4">
                    <canvas class="canvasDoughnut" height="110" width="110" style="margin: 5px 10px
10px 0"></canvas>
                    <h4 style="margin:0">Device Share</h4>
                   </div>
                  </div>
                 </div>
                </div>
               </div>
              </div>
             </div>
            </div>



           <div class="row">
            <div class="col-md-4">
             <div class="x_panel">
              <div class="x_title">
               <h2>Top Profiles <small>Sessions</small></h2>
               <ul class="nav navbar-right panel_toolbox">
                <li><a class="collapse-link"><i class="fa fa-chevron-up"></i></a>
                </li>
                <li class="dropdown">
                 <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-
expanded="false"><i class="fa fa-wrench"></i></a>
                 <ul class="dropdown-menu" role="menu">
                  <li><a href="#">Settings 1</a>
                  </li>
                  <li><a href="#">Settings 2</a>
                  </li>
                 </ul>
                </li>
                <li><a class="close-link"><i class="fa fa-close"></i></a>
                </li>
               </ul>
               <div class="clearfix"></div>
              </div>
              <div class="x_content">
               <article class="media event">
                <a class="pull-left date">
```

```
    <p class="month">April</p>
    <p class="day">23</p>
  </a>
  <div class="media-body">
    <a class="title" href="#">Item One Title</a>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
  </div>
</article>
<article class="media event">
  <a class="pull-left date">
    <p class="month">April</p>
    <p class="day">23</p>
  </a>
  <div class="media-body">
    <a class="title" href="#">Item Two Title</a>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
  </div>
</article>
<article class="media event">
  <a class="pull-left date">
    <p class="month">April</p>
    <p class="day">23</p>
  </a>
  <div class="media-body">
    <a class="title" href="#">Item Two Title</a>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
  </div>
</article>
<article class="media event">
  <a class="pull-left date">
    <p class="month">April</p>
    <p class="day">23</p>
  </a>
  <div class="media-body">
    <a class="title" href="#">Item Two Title</a>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
  </div>
</article>
<article class="media event">
  <a class="pull-left date">
    <p class="month">April</p>
    <p class="day">23</p>
  </a>
  <div class="media-body">
    <a class="title" href="#">Item Three Title</a>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
  </div>
</article>
```

```
          </div>
        </div>
      </div>

      <div class="col-md-4">
        <div class="x_panel">
          <div class="x_title">
            <h2>Top Profiles <small>Sessions</small></h2>
            <ul class="nav navbar-right panel_toolbox">
              <li><a class="collapse-link"><i class="fa fa-chevron-up"></i></a>
              </li>
              <li class="dropdown">
                <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-
expanded="false"><i class="fa fa-wrench"></i></a>
                <ul class="dropdown-menu" role="menu">
                  <li><a href="#">Settings 1</a>
                  </li>
                  <li><a href="#">Settings 2</a>
                  </li>
                </ul>
              </li>
              <li><a class="close-link"><i class="fa fa-close"></i></a>
              </li>
            </ul>
            <div class="clearfix"></div>
          </div>
          <div class="x_content">
            <article class="media event">
              <a class="pull-left date">
                <p class="month">April</p>
                <p class="day">23</p>
              </a>
              <div class="media-body">
                <a class="title" href="#">Item One Title</a>
                <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
              </div>
            </article>
            <article class="media event">
              <a class="pull-left date">
                <p class="month">April</p>
                <p class="day">23</p>
              </a>
              <div class="media-body">
                <a class="title" href="#">Item Two Title</a>
                <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
              </div>
            </article>
            <article class="media event">
```

```
            <a class="pull-left date">
              <p class="month">April</p>
              <p class="day">23</p>
            </a>
            <div class="media-body">
              <a class="title" href="#">Item Two Title</a>
              <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
            </div>
          </article>
          <article class="media event">
            <a class="pull-left date">
              <p class="month">April</p>
              <p class="day">23</p>
            </a>
            <div class="media-body">
              <a class="title" href="#">Item Two Title</a>
              <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
            </div>
          </article>
          <article class="media event">
            <a class="pull-left date">
              <p class="month">April</p>
              <p class="day">23</p>
            </a>
            <div class="media-body">
              <a class="title" href="#">Item Three Title</a>
              <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
            </div>
          </article>
        </div>
      </div>
    </div>

    <div class="col-md-4">
      <div class="x_panel">
        <div class="x_title">
          <h2>Top Profiles <small>Sessions</small></h2>
          <ul class="nav navbar-right panel_toolbox">
            <li><a class="collapse-link"><i class="fa fa-chevron-up"></i></a>
            </li>
            <li class="dropdown">
              <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-
expanded="false"><i class="fa fa-wrench"></i></a>
              <ul class="dropdown-menu" role="menu">
                <li><a href="#">Settings 1</a>
                </li>
                <li><a href="#">Settings 2</a>
                </li>
              </ul>
            </li>
            <li><a class="close-link"><i class="fa fa-close"></i></a>
```

```
    </li>
   </ul>
   <div class="clearfix"></div>
  </div>
  <div class="x_content">
   <article class="media event">
    <a class="pull-left date">
     <p class="month">April</p>
     <p class="day">23</p>
    </a>
    <div class="media-body">
     <a class="title" href="#">Item One Title</a>
     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    </div>
   </article>
   <article class="media event">
    <a class="pull-left date">
     <p class="month">April</p>
     <p class="day">23</p>
    </a>
    <div class="media-body">
     <a class="title" href="#">Item Two Title</a>
     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    </div>
   </article>
   <article class="media event">
    <a class="pull-left date">
     <p class="month">April</p>
     <p class="day">23</p>
    </a>
    <div class="media-body">
     <a class="title" href="#">Item Two Title</a>
     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    </div>
   </article>
   <article class="media event">
    <a class="pull-left date">
     <p class="month">April</p>
     <p class="day">23</p>
    </a>
    <div class="media-body">
     <a class="title" href="#">Item Two Title</a>
     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    </div>
   </article>
```

```
            <article class="media event">
              <a class="pull-left date">
                <p class="month">April</p>
                <p class="day">23</p>
              </a>
              <div class="media-body">
                <a class="title" href="#">Item Three Title</a>
                <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
              </div>
            </article>
          </div>
        </div>
      </div>
    </div>
  </div>
  <!-- /page content -->

  <!-- footer content -->
  <footer>
    <div class="pull-right">

    </div>
    <div class="clearfix"></div>
  </footer>
  <!-- /footer content -->
 </div>
</div>

<!-- jQuery -->
<script src=" {% static '/vendors/jquery/dist/jquery.min.js' %} "></script>
<!-- Bootstrap -->
<script src=" {% static '/vendors/bootstrap/dist/js/bootstrap.min.js' %} "></script>
<!-- FastClick -->
<script src=" {% static '/vendors/fastclick/lib/fastclick.js' %} "></script>
<!-- NProgress -->
<script src=" {% static '/vendors/nprogress/nprogress.js' %} "></script>
<!-- Chart.js -->
<script src=" {% static '/vendors/Chart.js/dist/Chart.min.js' %} "></script>
<!-- jQuery Sparklines -->
<script src=" {% static '/vendors/jquery-sparkline/dist/jquery.sparkline.min.js' %} "></script>
<!-- Flot -->
<script src=" {% static '/vendors/Flot/jquery.flot.js' %} "></script>
<script src=" {% static '/vendors/Flot/jquery.flot.pie.js' %} "></script>
<script src=" {% static '/vendors/Flot/jquery.flot.time.js' %} "></script>
<script src=" {% static '/vendors/Flot/jquery.flot.stack.js' %} "></script>
<script src=" {% static '/vendors/Flot/jquery.flot.resize.js' %} "></script>
```

```
    <!-- Flot plugins -->
    <script src=" {% static '/vendors/flot.orderbars/js/jquery.flot.orderBars.js' %} "></script>
    <script src=" {% static '/vendors/flot-spline/js/jquery.flot.spline.min.js' %} "></script>
    <script src=" {% static '/vendors/flot.curvedlines/curvedLines.js' %} "></script>
    <!-- DateJS -->
    <script src=" {% static '/vendors/DateJS/build/date.js' %} "></script>
    <!-- bootstrap-daterangepicker -->
    <script src=" {% static '/vendors/moment/min/moment.min.js' %} "></script>
    <script src=" {% static '/vendors/bootstrap-daterangepicker/daterangepicker.js' %} "></script>

    <!-- Custom Theme Scripts -->
    <script src=" {% static '/build/js/custom.min.js' %} "></script>
  </body>
</html>
```

4.2 Testing

4.2.1 Test Case

Test Case Description	Test Scenario	Expected Results	Actual Results	Pass / Fail
LOGIN	Valid username AND password	Redirects to home page	Directs to home page	**PASS**
	Invalid username AND password	User can't login and displays login failure messaged	User can't login and displays login failure messaged	**PASS**
REGISTRATION	Invalid Email-ID	User can't register and displays registration failure message	User can't register and displays registration failure message	**PASS**
	Email-ID already exist	User can't register and displays registration failure message	User can't register and displays registration failure message	**PASS**
	Dashboard visibility	Dashboard is not visible	Dashboard is not visible	**PASS**
	All Fields Valid	Redirects the user to Home page	Redirects the user to Home page	**PASS**

Table 4.1 Test Case

5. Limitation And Future Enhancements

5.1 Limitations

- Our website don`t provide any live location.
- We don`t provide any repairing or maintenance of device .coverage area is not so far.
- Internet connectivity is required
- Bulk of wires needed.

5.2 Future Enhancements

We know that there are many software for security, what we provide better is that we send alert messages and user can also see past history and can manage it. Battery support is of 1 week. we provide detection in 180 degrees .so this the best place to provide security to your homes and industries

6. Conclusion-

This web application provides several features of security which makes it easy and fast to use.It is easy to maintain ,acess frequently and live monitoring than keeping security man on door.Security of their properties is the first priority of a person.This website will be used by many business mans and individual for their homes and industries.The best feature of our website is to provide quick access and monitoring.