



College Name: Daffodil Institute of IT

Department Name: Department of Computer Science and Engineering

Name of the students (ID)

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Session: 2016-17

Project Title: Home Automation

Objectives:

1. To implement a low cost, reliable and scalable home automation system that can On Off light, Fan, A/C and also notify the user by all sensor data.
2. Stimulating smart, understandable and accessible solutions and services for the personal environment.
3. To control and monitor every IoT enabled thing.
4. To make smart and intelligent uses of energy and its conservation.
5. To introduce the concept of home automation to all people.
6. To exploit the first mover advantages in the home security industry.
7. User friendly software to control all features.

Limitation of the Existing system:

1. Need internet connection all the time for abroad uses.
2. System crashes due to any damage in the inner connection.

Proposed System:

Our proposed system is able to get notification and message from sensors with user friendly software. The software will make easy to use and control light, fan and ac over the Wi-Fi and also control from aboard over the internet.

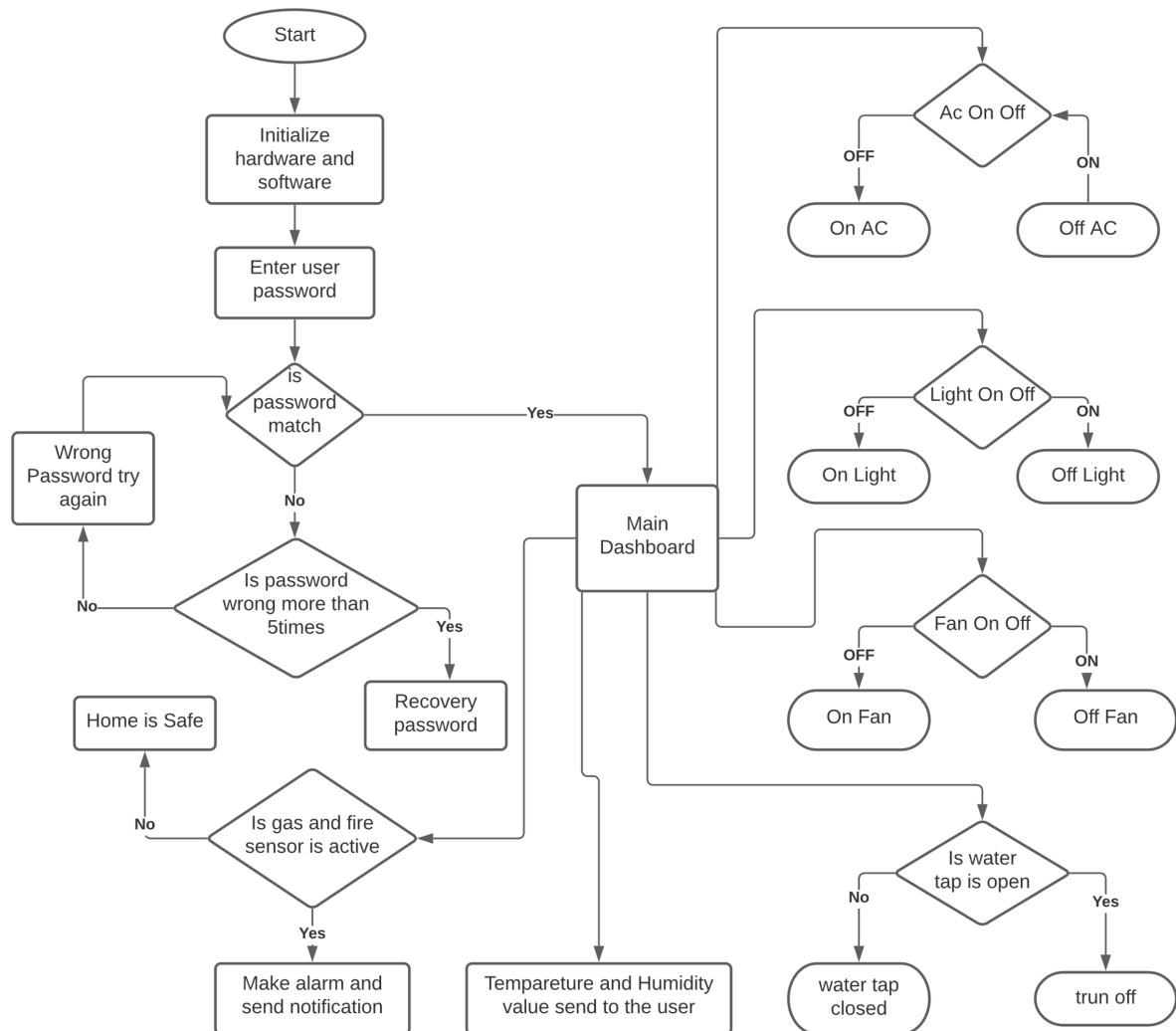
Requirements (Hardware/Software/Other):

1. Esp8266 Wi-Fi Module
2. Gas, Temperature, Humidity, Flame and Movement sensor
3. Blue 0.96" OLED Display I²C 4-pin
4. Light and Fan
5. 5v Relay
6. Wire
7. Some resistor and capacitor
8. Voltage regulator
9. Buzzer
10. Battery and charger
11. Veroboard
12. Wi-Fi Router
13. Arduino IDE for Esp8266 microcontroller programming
14. Visual Studio code for Android and Desktop web app making
15. Vue.js for frontend, Node.js for backend and Firebase for database

Features of your Project:

1. Light, Fan, A/C turn On Off over the internet.
2. Temperature and Humidity update.
3. Gas, Fire and Water alarm and turn off immediately.
4. Theft alarm and Send notification to the owner.
5. Easy understandable software UI.
6. Software is free.
7. Software is multi-platform supported.

Workflow Diagram of your Project:



Business Prospect of your Project:

The global home automation system market reached a value of US\$ 60.2 Billion in 2020 and in 2021 growing more. Home automation involves the incorporation of intelligent technology into homes for safety, comfort, and energy conservation. With time, digitization has increased the consumer spending on home automation systems which enable home owners to control, monitor and automate various functions, appliances and systems around the house with the touch of a button. This evolution is a big opportunity for us to make this kind of project. So, our project will help these types of tech

enthusiast people within low cost, reliable and user-friendly. And also, we can take advantage of the fast mover IoT market.

Future Enhancement:

1. Task automate as per schedule.
2. Face recognition unlocks security.
3. Health and Cooking automate features.

Gantt Chart: As per the instruction of the project supervisor.

It is hereby declared that this project or any part of it has not been submitted elsewhere for the award of any degree.

MD. AL FAHAD

Digital Signatures of the Students (1)

MD. NURUL HUDA

Digital Signatures of the Students (2)

Approval of the Supervisor

Comments:

Approval of the Coordinator

Comments:

