Smart House System

Under the supervision

of

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**Chapter 1: Introduction**

Internet of Things

The internet of things (IoT) is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices. The term is closely identified with RFID as the method of communication, although it also may include other sensor technologies, wireless technologies or QR codes.

The IoT is significant because an object that can represent itself digitally becomes something greater than the object by itself. No longer does the object relate just to its user, but it is now connected to surrounding objects and database data. When many objects act in unison, they are known as having "ambient intelligence."

Android

Android is a mobile operating system (OS) first developed by a Silicon Valley company by the name of Android Inc. A collaboration spearheaded by Google in 2007 through the Open Handset Alliance (OHA) gave Android an edge in delivering a complete software set, which includes the main OS, middleware and specific mobile application, or app.

Cloud Computing

Cloud computing is a method for delivering information technology (IT) services in which resources are retrieved from the Internet through web-based tools and applications, as opposed to a direct connection to a server. Rather than keeping files on a proprietary hard drive or local storage device, cloud-based storage makes it possible to save them to a remote database. As long as an electronic device has access to the web, it has access to the data and the software programs to run it.

**Chapter 2: Problem Statement and Feasibility Study**

Problem Statement

A system that controls home appliances by the Smartphone using an android application with the help of cloud mqtt. This system can be build using Internet of Things and an Android Application which can be controlled from any part of the world having an internet access. System should be designed in a way to make the life easier,more comfortable and our appliances more secure.

Feasibility Study

The purpose of this project is to build a smart home system to control switching of home appliances from any part of the world having an internet access. This will lead to less consumption of energy in case a person forgets to turn off their home appliances. As we know that, electricity is precious and should be used in an efficient way, this project will help others to build an efficient habit towards the usage of electricity consumption.

In studies, it has been found that most of the working people forgets to turn off their appliances while leaving to work. This project will help those people in need.

This project is feasible, efficient, reliable, cost effective, revolutionary, eco friendly, easy operational.

**Chapter 3: Hardware & Software Requirements**

Hardware Requirements

Node MCU Board (ESP 8266 Wi-fi module)

Breadboard

Jumper Wires

Home Appliances (light or fan)

Power Supply

Data Cable

A Smartphone

A Laptop

An active Internet Connection

Software requirements

VS Code Editor for C/C++

Cloud Mqtt for Cloud Computing

An Android Studio

**Chapter 4: Workload Matrix**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assignee** | **Tushar** | **Gagan** | **Shubham** |
| **Contribution** | Programming and Hardware Installation | Programming And Android Application Development | Android App Development And Testing |
| **Project Effort** | 2 Weeks | 2 Weeks | 2 Weeks |
| **Project Status** | 50% | 20% | 20% |
| **Peak Work Time** | Weekends | Weekends | Weekends |

**References**

**For Links:**

<https://www.coursera.org/specializations/iot>

<https://www.steves-internet-guide.com/mqtt\>

<https://www.survivingwithandroid.com>

<https://www.tutorialspoint.com/internet_of_things/>

<https://www.tutorialspoint.com/android/>

<https://developer.android.com/guide/>

<https://www.udemy.com/topic/internet-of-things/>