Team name-Asgardians

**Group’s topic-ROOM AUTOMATION**

Subject-Software Engineering Project

Introduction->This project basically works upon that whenever a human motion detected; if amount of light is less then the bulb automatically glow and if there is sufficient light then the bulb wouldn’t glow.

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**REQUIREMENTS ANALYSIS**

**1. Software Requirements Specification**

A software requirements specification (SRS) is a complete description of the behaviour of the system to be developed. It includes a set of use cases that describe all of the interactions that the users will have with the software. SRS also contains non-functional (or supplementary) requirements. Non-functional requirements are requirements which impose constraints on the design or implementation (such as performance requirements, quality standards, or design constraints). [3]

The details of software requirements specification of our project given below

**1.1 Hardware Requirement**

* RAM: 256 MB
* Hard drive space: 200 MB (For executing any internet browser)
* Internet Connection

**1.2 Software Requirement**

* Any kinds of internet browser

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**1.3 Functional Requirement**

* Controlling light bulb

Decrease the waste of electricity

**1.4 Non-Functional Requirement**

* Secured system
* Better design and less complexity
* Available on android. Mac or windows

**1.2 Use Case model**

The Following use case diagram shows that the task which is controlled by user. In this use case user send the information to the server and then server takes the next step according to user signal. Server also sends the information through the application. Other task like SMS alerts system or night light work automatically.

**1.3 Stakeholder of the Application**

Stakeholder means any person or group that has a stake or an interest in the system. It may be internal, external, technical or nontechnical .Thus our system also has stakeholders of different types. Here we will show some technical and nontechnical stake holders of our proposed application.

**1.3.1 Technical**

* Mobile/Computer
* Internet browser
* Internet Connection

**1.3.2 Non-Technical**

* Users

**1.4 Implementation Requirement**

Hardware:

* Arduino Uno R3
* Motion sensor (PIR sensor)
* Light Dependent Resistors(LDR) for detecting light
* Interfacing relays with ac and dc power sources.
* Photoresistor
* Kohm Resistor
* (0.6) amperes ,7.19999 volts power supply

Developing Tools:

* Arduino IDE
* Breadboard
* wire

Language:

* Embedded programming.
* HTML and CSS (For designing web application)