**IOT Based Smart Home –Software Requirements Specification**

**Version 8.0**

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**SOFTWARE REQUIREMENT SPECIFICATIONS**

* 1. **Software Requirements and Specification**

A Software Requirements Specification is a comprehensive description of the intended purpose

and environment for software under development. The SRS fully describes what the software

will do and how it will be expected to perform.

The project presents a low cost of flexible home control and monitoring system using a

embedded monitoring system using an embedded microprocessor and microcontroller with IP

connectivity for accessing and controlling devices and appliances remotely using smart phone.

* 1. **Functional Requirements and Non-Functional Requirements**

A functional requirement defines a function of a software system or its component. A function is described as a set of inputs, the behavior, and outputs. It captures the intended behavior of the system. This behavior may be expressed as services, tasks or functions the system is required to perform.

This section deals with the functional requirements of our project:

1. There will be different kinds of home appliances included in the home automation system. Home appliances such glowing of light, control of fan speed, Temperature of room etc.
2. There will be a app based on smart home the user can select that application.
3. The user can choose the device from the menu by clicking on it.
4. The user selects the device and sees its current condition.
5. The user can manipulate the appliance with given commands.
6. The user can choose the device which he wishes to turn on like glowing of light.
7. The user clicks on the turn on button and waits for the system to start it.
8. The user should learn about the usage of sensors from device. Different kinds of sensors are Temperature sensor, Humidity sensors, door close sensor, door open sensor etc.
9. The user should click on the particular button of the sensor.
10. After pressing the particular button, the user will get the information.
11. The user can turn off the home appliances.
12. The device should be turned on.
13. The user should click on turn off after selecting the button.

Non Functional Requirements is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors.

This section deals with the various non-functional requirements of our project:

1. **Interoperability**-Interoperability is the ability for range of system within and between organization to exchange information. The ability to diverse electronic device together so that they can perform unified system.
2. **Expandability-**In expandability new technology can be implemented. The system can easily be expanded both vertically and horizontally to incorporate additional products.
3. **Upgradability-**We can add extra features and update the device.
4. **Availability-** Availability is easily obtainable and ready to use.
5. **Security**-One of the main function is to provide security.
6. **Reliability-**Reliability can consistentlyperformaccording to the specifications. Reliability system are more secure and dependable.