# Requirements Documentation

# Smart House Project

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 10/09/2015 | 0.1 | Description of demands from stakeholder | Jabir Al Fatah, Hassan |
| 23/09/2015 | 0.2 | Description of demands from stakeholder | Jabir Al Fatah, Hassan |
| 17/10/2015 | 0.3 | Description of demands from stakeholder | Liaquath Hassan |

Requirements List

|  |  |
| --- | --- |
| **Requirement Name** | **Priority** |
| R1. Connect microprocessor with the smart house devices.  R1.1: Connect Arduino with smart house through corresponding ports and pins. | Essential |
| R2. Set up connection between microprocessor and servers  R2.1: Connect XBee radio module with smart house and implement the connection in Arduino sketch. | Essential |
| R3. Update device states according to users command through server. | Essential |

Requirements Descriptions

### R1

In order for serial communication, the Arduino have to be connected with the smart house devices.

**R.1.1**: For sending and receiving information from the corresponding device, the Arduino pins will be initialized with the correct ports in the smart house. In this way the communication between microprocessor and devices is set up.

### R2

We need to update the device status concurrently so that the user gets recent update about each and every component. For this the Arduino needs to send the information to the server and update the status in database.

**R2.1**: For efficient communication we will use a Wi-Fi radio module called Xbee. It will send information to the server wirelessly. We will write program that implements Xbee and do the desired operation.

### R3

When user send command to control device, Arduino gets the command through server and implement those commands by controlling corresponding signals.