**Team: A-Team**

**Requirements & Use Cases**

**Gathering Ideas:**

Login or Sign Up with username

Connect Sensors to devices

Add/Remove/Shutdown sensors

**Devices:**

Washing machine

Light system

TV

AC

-------------------------------------

**Washing Machine:**

States: Running/Finished/Error

* Running: Shut-Down/Exit
* Finished: Start/Exit

Notification pop up with done message when finished state is reached.

* Error: Shutdown/Exit

Notification pop up with type of error.

**Light System:**

States: On/Off

**TV:**

States: ON/OFF

**AC:**

States: ON/OFF

* ON: Increase/Decrease temperature/Exit
* OFF: Turn on/Exit

**Smoke Sensor:**

Detects smoke and notifies user of unusual behavior.

---------------------------------------------

**Functional requirements:**

Smart-Home is a board that gives the user the ability to control various home machines using sensors connected to each device. The user has to first create an account and then connect the sensors available to the application. Sensors could be shut down without having to disconnect them.

The home page will show the status of each machine at the current time. By clicking on the name of each device another page opens up with all options that could be done at the current state, depending on the machine. The status of devices could be manually or automatically updated, and in case of the automatic the user could choose to be done every 1 or 2 or 5 minutes. Longer periods are not preferable to ensure quality and accuracy of events.

In case of lost connection with sensor, application will try to reconnect automatically every 30 seconds for 5 times and then it will be disconnected if the user did not manually click retry.

In case of system failure the user will have to restart the application.

**Use Cases:**

Name: Sign Up

Participating actor: Home-User

Entry condition: Home-User launches application

Exit condition:

-Home-User successfully submitted all correct information.

-Home-User exits application.

Event flow:

1) Home-User fills the sign up form with all correct personal information.

2) System checks if the information is valid.

3) System notifies user whether to submit or correct info.

4) Home-User clicks submit to create an account.

-------------------------------------------------------

Name: Sign In

Participating actor: Home-User

Entry condition: Home-User launches application

Exit condition:

Home-User enters correct username and password

Home-User exits application.

Event flow:

1)User enters username and password on login page

2)System checks if username and password matches any account

3)Error message is displayed by system if no matches found.

4)System opens home page if information is correct.

---------------------------------------------

Name: Find Sensors

Participating actor: Home-User

Entry condition: Home-User clicked Add/Edit Sensors

Exit condition:

System displays available compatible devices.

Home-User returned to home page

Event flow:

1)User opens application

2)System displays home page to user

3)User clicks on settings

4)User clicks on Add/Edit Sensors option.

5)User clicks on search for new sensors.

6)System finds available sensors in the house and displays them to user.

---------------------------------------------

Name: Add Sensor

Participating actor: Home-User

Entry condition: Home-User clicked Add/Edit Sensors

Exit condition:

Home-User successfully added devices

Home-User returned to home page

Event flow:

1. User selects a sensor available for use.
2. System configures the connection with sensor and displays that the connection is done successfully.
3. In case of connection error, system displays a message with retry or exit option.

---------------------------------------------