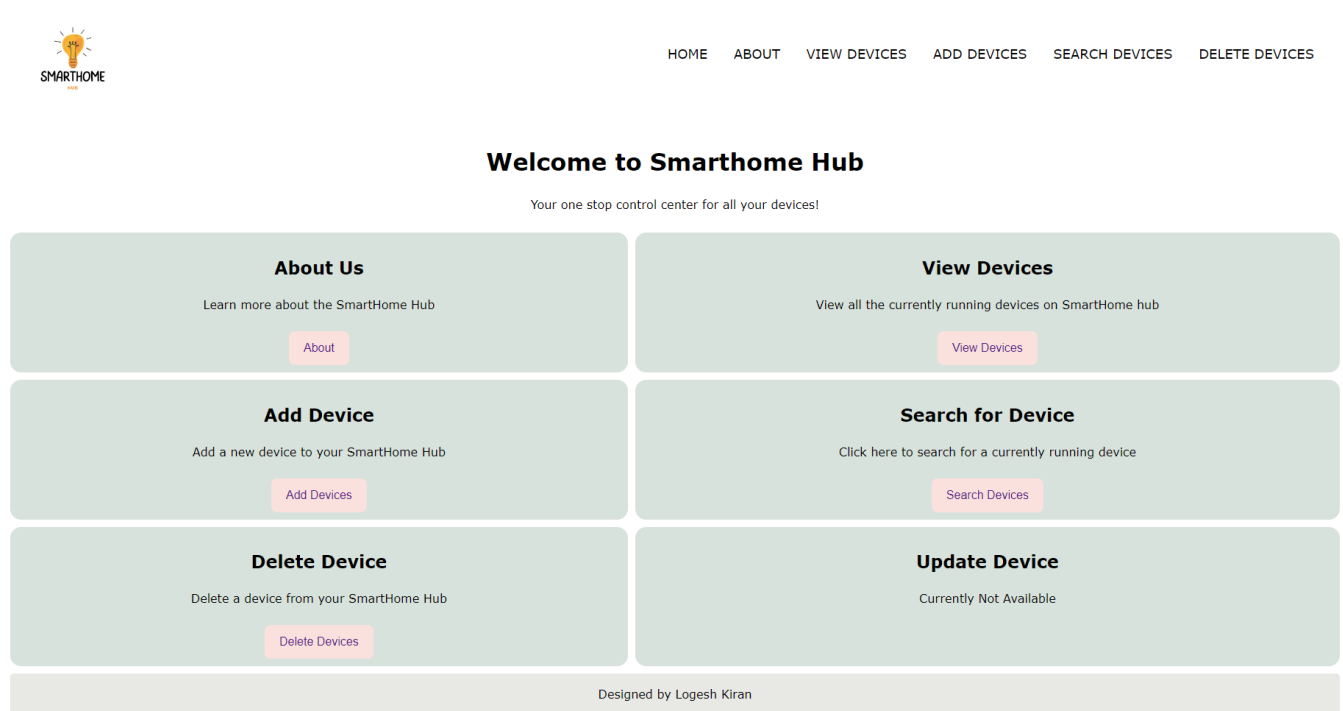The SmartHome Hub is an integrated platform for users to add smart devices, track them and also delete them. I created this by first creating a mySmartDevice database in mySQL with all the relevant fields.

```
mysql> use mysmartdevice;
Database changed
mysql> show tables;
+------------------------+
| Tables_in_mysmartdevice |
+------------------------+
| devices                |
+------------------------+
1 row in set (0.01 sec)
```

```
mysql> describe devices;
+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| id     | int         | NO   | PRI | NULL    | auto_increment |
| name   | varchar(50) | YES  |     | NULL    |                |
| type   | varchar(50) | YES  |     | NULL    |                |
| power  | varchar(50) | YES  |     | NULL    |                |
| state  | varchar(50) | YES  |     | NULL    |                |
| temp   | varchar(50) | YES  |     | NULL    |                |
| volume | varchar(50) | YES  |     | NULL    |                |
+--------+-------------+------+-----+---------+----------------+
7 rows in set (0.01 sec)
```
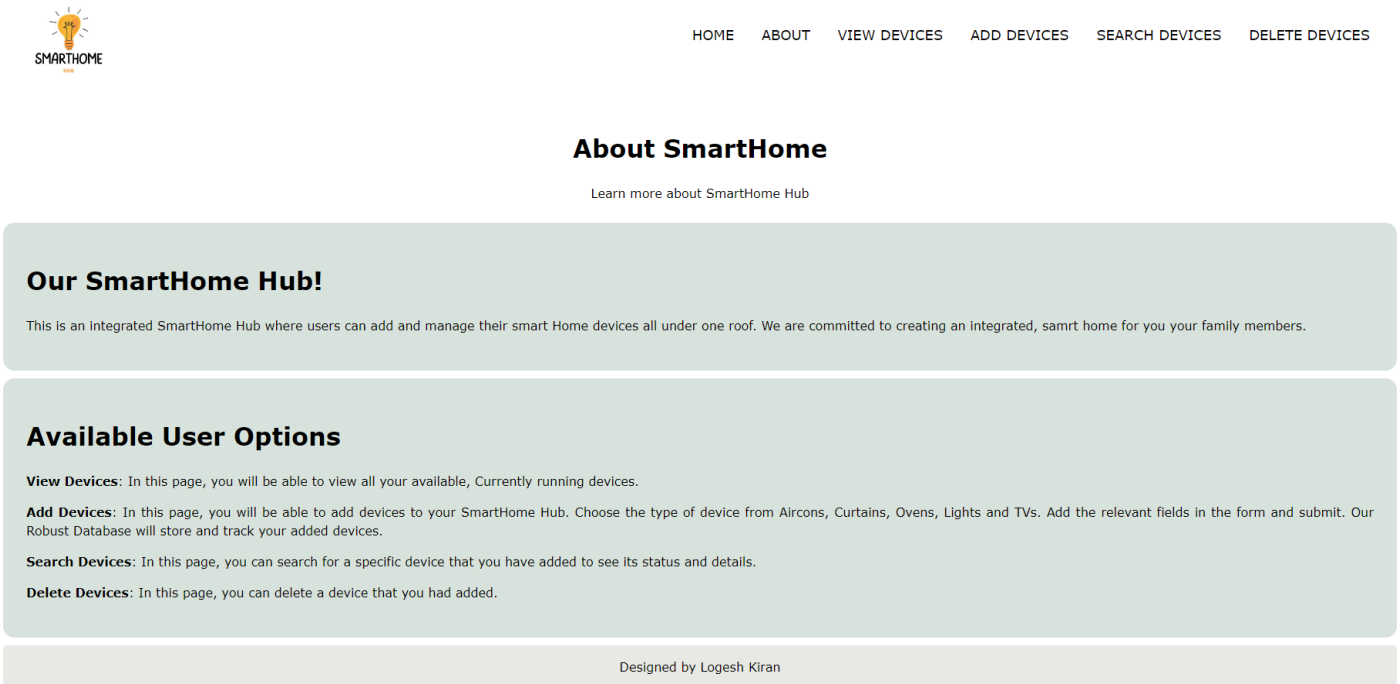
```
mysql> select * from devices;
+----+---------------+----------+-------+-------+------+--------+
| id | name          | type     | power | state | temp | volume |
+----+---------------+----------+-------+-------+------+--------+
| 33 | Kitchen Oven  | oven     | ON    | NA    | 180  |        |
| 35 | Hall Curtains | curtains | NA    | OPEN  |      |        |
| 36 | Hall Lights   | lights   | ON    | NA    |      |        |
| 37 | Hall TV       | tv       | ON    | NA    |      | 50     |
| 38 | Hall Aircon   | aircon   | ON    | NA    | 20   |        |
+----+---------------+----------+-------+-------+------+--------+
5 rows in set (0.00 sec)
```

Logesh Kiran
DNW Mid Sem Report

## **Home Page**

SMARTHOME

### **Welcome to Smarthome Hub**

Your one stop control center for all your devices!

| **About Us** | **View Devices** |
| --- | --- |
| Learn more about the SmartHome Hub | View all the currently running devices on SmartHome hub |
| About | View Devices |

| **Add Device** | **Search for Device** |
| --- | --- |
| Add a new device to your SmartHome Hub | Click here to search for a currently running device |
| Add Devices | Search Devices |

| **Delete Device** | **Update Device** |
| --- | --- |
| Delete a device from your SmartHome Hub | Currently Not Available |
| Delete Devices | |

Designed by Logesh Kiran

This is the Homepage of SmartHome hub. On this page, the users can view all the features available to them. By clicking the buttons or the navigation bar, they can access the relevant features.

**About Page**

SMARTHOME

## About SmartHome

Learn more about SmartHome Hub

### Our SmartHome Hub!

This is an integrated SmartHome Hub where users can add and manage their smart Home devices all under one roof. We are committed to creating an integrated, samrt home for you your family members.

### Available User Options

**View Devices**: In this page, you will be able to view all your available, Currently running devices.

**Add Devices**: In this page, you will be able to add devices to your SmartHome Hub. Choose the type of device from Aircons, Curtains, Ovens, Lights and TVs. Add the relevant fields in the form and submit. Our Robust Database will store and track your added devices.

**Search Devices**: In this page, you can search for a specific device that you have added to see its status and details.

**Delete Devices**: In this page, you can delete a device that you had added.

Designed by Logesh Kiran

This is the about page where users can get more information on:
- What is the SmartHome Hub
- What are the available user options and what those options do

## View Devices Page:

SMARTHOME

HOME     ABOUT     VIEW DEVICES     ADD DEVICES     SEARCH DEVICES     DELETE DEVICES

**This is where you check the device status**

**Your Aircons:**

    **Name of Device:**

    Hall Aircon

    **Power:**

    ON

    **Temperature:**

    25 Degree Celcius

**Your Curtains:**

    **Name of Device:**

    Hall Curtains

    **State of Device:**

    OPEN

**Your Lights:**

    **Name of Device:**

    Hall Lights

    **Power:**

    ON

**Your TV:**

    **Name of Device:**

    Hall TV

    **Power:**

    ON

    **Volume (if applicable):**

    50

**Your Oven:**

    **Name of Device:**

    Kitchen Oven

    **Power:**

    ON

    **Temperature (if applicable):**

    180 Degree Celcius

On this page, the user can view all the devices that they have all in one page. There is a section for each type of device and it shows the relevant information for each device.

**Add Device:**

SMARTHOME

## This is add device page

Name of Device:

Hall TV

Type of Device:

TV

Power:

ON

State:

NA

Temperature:

Volume:

50

SUBMIT

Designed by Logesh Kiran

On this page, users can add their devices. There are drop down bars for users to choose from the type of device that they are adding. There are limits being added to the Temperature and Volume fields so that users *can only add values that are within the range*. Users only have to key in values that are relevant to the device. The irrelevant values will not be displayed on any of the pages.

Upon adding, a page will let the user know that the device has been added.

SMARTHOME

**You have added device**

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DNW Mid Sem Report

## **Search Device:**

SMARTHOME

HOME    ABOUT    VIEW DEVICES    ADD DEVICES    SEARCH DEVICES    DELETE DEVICES

### **This is Device Search page**

Select Name of Device to check its status

Name of Device:

Hall Aircon

SUBMIT

Designed by Logesh Kiran

On this page, users can search for their devices using the drop down bar which will display all the names of the devices that are currently on their database. Upon selection and submission, the device status page will display all the relevant information.

SMARTHOME

HOME    ABOUT    VIEW DEVICES    ADD DEVICES    SEARCH DEVICES    DELETE DEVICES
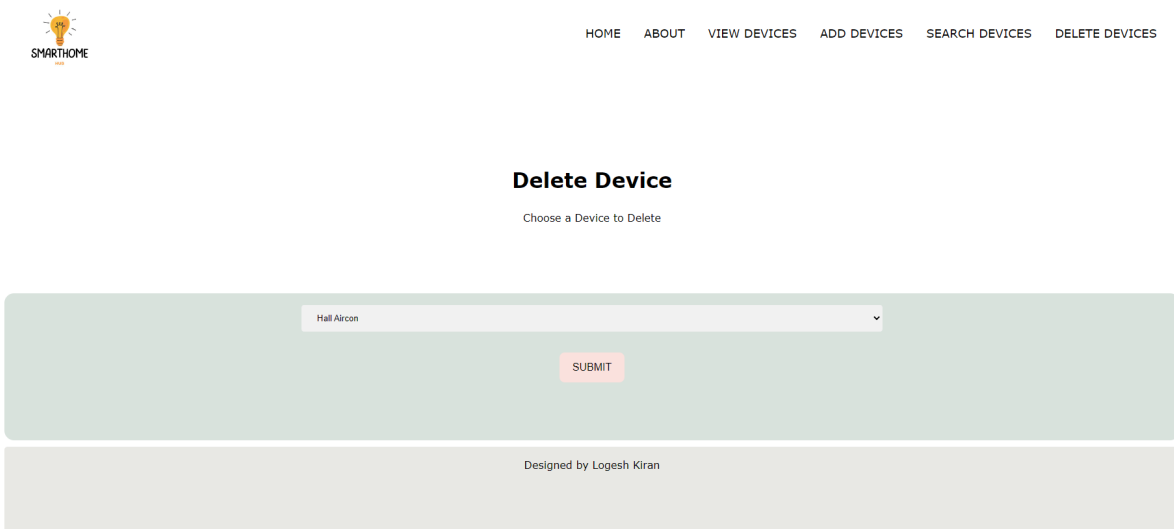
### **View Status**

**Name of Device:**

Hall Aircon

**Power:**

ON

**Temperature:**

25 Degree Celcius

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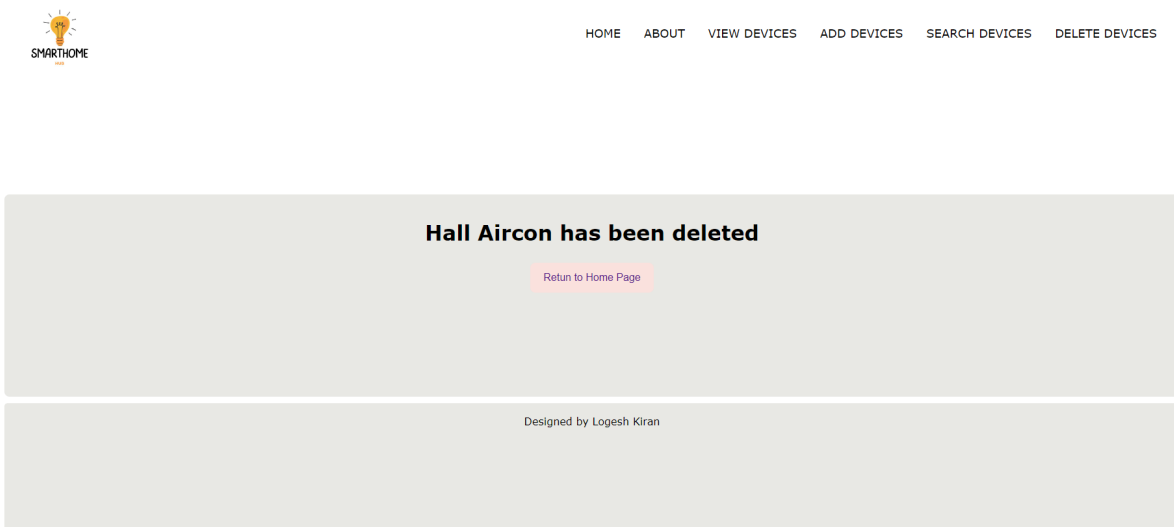## **Delete Device:**

On this page, users can delete a specific device by selecting it in the drop down bar. Upon selection and submission, the device will be deleted. There is also a confirmation page letting the user know that the device that they chose has been deleted.

SMARTHOME
HOME   ABOUT   VIEW DEVICES   ADD DEVICES   SEARCH DEVICES   DELETE DEVICES

**Delete Device**

Choose a Device to Delete

Hall Aircon

SUBMIT

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SMARTHOME
HOME   ABOUT   VIEW DEVICES   ADD DEVICES   SEARCH DEVICES   DELETE DEVICES

**Hall Aircon has been deleted**

Retun to Home Page

Designed by Logesh Kiran

Upon deleting, the database will be updated accordingly and that deleted device will not be displayed elsewhere. To check that, when the user goes to the View Devices page, that deleted device will not be displayed.

SMARTHOME    HOME    ABOUT    VIEW DEVICES    ADD DEVICES    SEARCH DEVICES    DELETE DEVICES

## This is where you check the device status

**Your Aircons:**

**Your Curtains:**

    **Name of Device:**

    Hall Curtains

    **State of Device:**

    OPEN

**Your Lights:**

    **Name of Device:**

    Hall Lights

    **Power:**

    ON

**Your TV:**

    **Name of Device:**

    Hall TV

    **Power:**

    ON

    **Volume (if applicable):**

    50

**Your Oven:**

    **Name of Device:**

    Kitchen Oven

    **Power:**

    ON

    **Temperature (if applicable):**

    180 Degree Celcius

**<u>Describe what extensions you implemented and how:</u>**

For the extensions, I have added confirmation pages for users to tell if they have added or deleted their devices successfully. The site is also fully navigationable and is beautifully designed for users to have a pleasant and user friendly experience.

**<u>Describe any aspects that you struggled with and how you eventually overcame them:</u>**

Major challenge came when implementing the add device page when I had to link the user inputs into the forms to the database. I overcame it by revisiting the lecture videos and using that as a base code and adapting and verifying my own code.