**Test Plan**

**Team Name:** AHStudio

**Project Name:** ActiveHouse V2

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Test Case #1: Testing Temp Service

Purpose: To notify the user that the room is very hot and allows the user to be weary of their kids (if they have any) at home

Precondition: Making sure the sensor is reading properly or the database has the data stored

Steps: Using a heat gun, to see if the sensor is reading the data and sending it to the database. If the database is receiving the data, once the temperature data go beyond a certain set point, it should pop up a notification.

Expected Result: A notification should pop up telling the user that a certain room is above a certain temperature, so the user can act according to it.

Test Case #2: Testing Settings to see if change theme changes colour

Purpose: Customize the colour of the application.

Precondition: N/A - default theme is applied when running the app for the first time or has not been changed before.

Steps:In the Navigation Drawer, Users will be able to access the setting where they can choose the choice to change the color of the theme. Once they had chosen their preferences, it will apply right away.

Expected Result: Should show user a different colour theme when clicked.

Test Case #3: Testing Statistic to add up over time from data collected

Purpose: To show the user how much utility usage over time

Precondition: Data has been recorded before hand

Steps: After retrieving the data, it will do the calculation and display them in each of the categories in the statistic page.

Expected Result: It should show the user over time data that was collected like last 7 days, last month, last year and etc.

Test Case #4: Testing Setting to see if metric to imperial converts

Purpose: To show the conversion between metric and imperial

Precondition: In Home, it should convert the metric into imperial

Steps: In the Navigation Drawer, Users will be able to access the setting where they can choose if they want to change from metric to imperial converts and will apply right away once it has been clicked.

Expected Result: It should show the User the conversion.

Test Case #5: Testing Firebase to see if clients can log in/sign up

Purpose: Each user will have their own house, setting, number of lights and etc. User account will store that and keep track

Precondition: Making sure Firebase is working correctly to take user information

Steps: User will go through the registration page that has been setup and Firebase will take the user information. If the sign up was completed correctly, the account will be made and the User will be able to log in.

Expected Result: User should be able to log in to their account if they have one made or sign up for one. Once they sign in, the application should load their setting.

Test Case #6: Testing Gas Service

Purpose: Check to see whether the gas is turned on or off

Precondition:Making sure the sensor is reading properly or the database has the data stored

Steps: User will check in the room activity to check whether the gas is able to be detected. This will make sure that the sensor will alert the user if the Gas is turned on.

Expected Result: To display Gas Service and show the user the amount of gas being used.

Test Case #7: Testing Smart Lights

Purpose: Turns on smart lights when user clicks on the icon.

Precondition: Making sure that the smart lights is connected with the actual smart light.

Steps: User will go to home activity, click turn on/off lights and then determine whether the lights can be turned on or off.

Expected Result: To turn on/off the smart lights when user clicks on the icon.

Test Case #8: Testing Water Usage

Purpose: To show the User, the water usage within their home and allow them to change their usage if needed

Precondition: Making sure the sensor is reading properly or the database has the data stored

Steps: User will go into home activity, click on the water usage to see what that current water usage and today water usage is displaying.

Expected Result: To display Current Water Usage and Today Water Usage and show the User

Test Case #9: Testing Power Usage

Purpose: To show the User, the power usage within their home and allow them to change their usage if needed

Precondition: Making sure the sensor is reading properly or the database has the data stored

Steps: User will go into home activity, click on the power usage and see the values on how much watts have been used.

Expected Result: Current Power Usage and Power Usage to display to show the User

Test Case #10: Testing Numbers of Lights on

Purpose: To show the User, how many Lights are currently on in their home and to see if there are any lights left on at night or not at home.

Precondition: Turn on the lights to start calculating

Steps: User will turn on certain number of lights in their home connected to the application and double check to see if the number they are getting, match the number on the application.

Expected Result: Total Number of Lights in the home.