Deliverable 1

GreenOps

Smart Building

Bibek Dhakal(N01419953), Mofifoluwa Leke-Akinrowo (N01343651), Andrew Fraser(N01309442)

Table of Contents

1. Project Background and Final Vision:

1.1 Project Goals and Final Vision:

The smart building app is an app that is aimed to help save on electricity, and allow easy control over devices used in commercial or residential buildings. These devices can be controlled once connected through the app with switches allowing you to turn off all devices in a room in the building all at once or selectively.

Our final vision is to increase building efficiency and reduce operating expenses with remote temperature control, predictive analysis, elimination of rekeying costs, and safe security.

1.2 Software Aspect and Hardware

This system consists of different components which are Sensors, Connectivity, Data Processing, and User Interface. Sensors are the devices that start the whole process of data collection, verification. The data collected in the step above needs to be sent out to a step where it can be processed and a thoughtful decision be made out of that data through connectivity. The device can be connected to cloud through Wi-Fi. Once the data is collected and obtained to this step via our pre-set connectivity, then it is all logical to process this data. Based on the processed data, what are the next set of actions that we want to perform that could be checked on a user interface. This could probably be our Mobile application on a phone.

1.3 Screen Flows

The app starts with a splash screen that will display the app logo. Following this splash screen is some onboarding screens to give a quick brief of the app. Then we have a Login Screen for the user, prompting their login details to be able to access devices. Once logged in, there is an overview of all rooms in building which include switches on them to turn off all devices in selected room at once. One can also tap specific room to control specific devices in each room. There are three menu bar buttons; Overview, Events and Settings. The events page (bell button) shows actions made by user i.e., if user turned off lights, the events page will report such action. The settings page has options to send notifications from app, and to report technical issues or suggest new features.

1.4 Feedback Implementation

Take some time to process the feedback before responding to it. Instead of addressing it immediately, thank the person and take some time to think about what they've said. Since feedback is designed to help us improve, having a concrete way to implement it is really important. In order to do this, we will make sure to walk away from the meeting with a concrete list of next steps. Once we've outlined our next steps, it's time to apply the feedback. The key to doing this successfully is to focus on each step carefully.

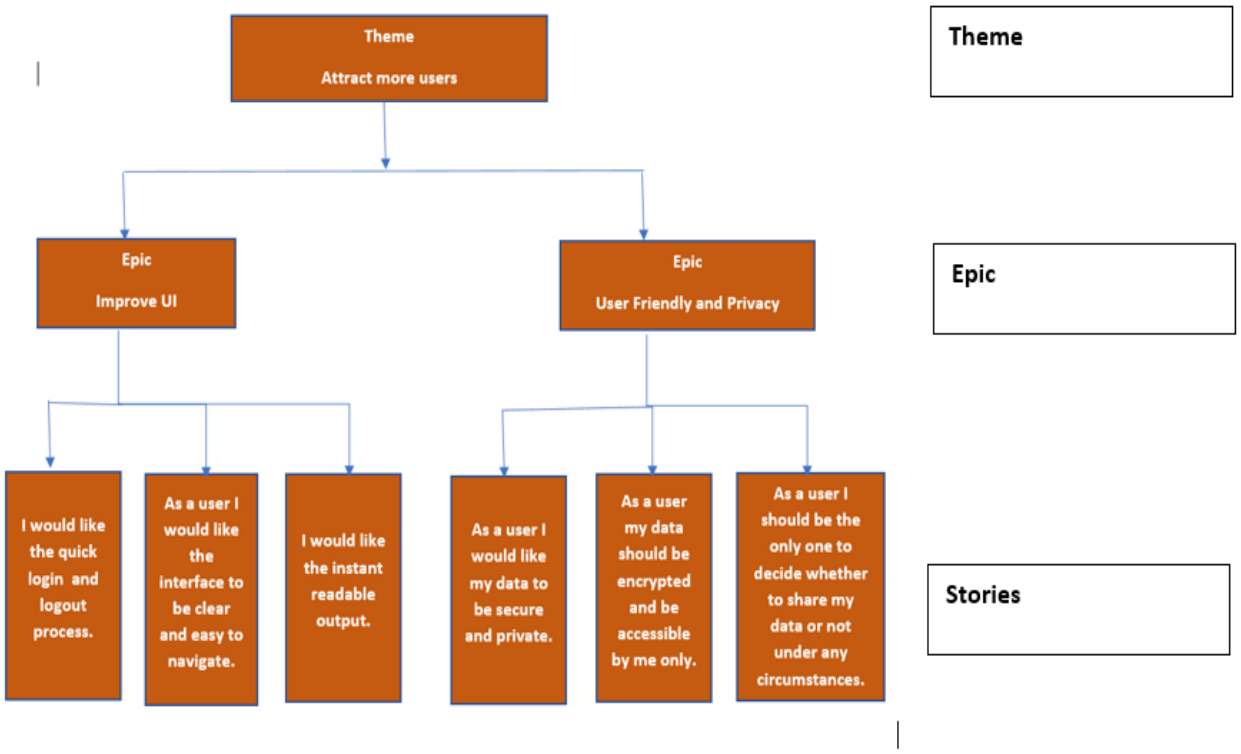
1.5 Read/Write from DB

Database is hosted on cloud on firebase. Screen to display data such as temperature, pressure and electricity rate. Different sensors are used to write the data to database collected from environment and client application will make an API call to fetch data from database and display them in proper user interface format.

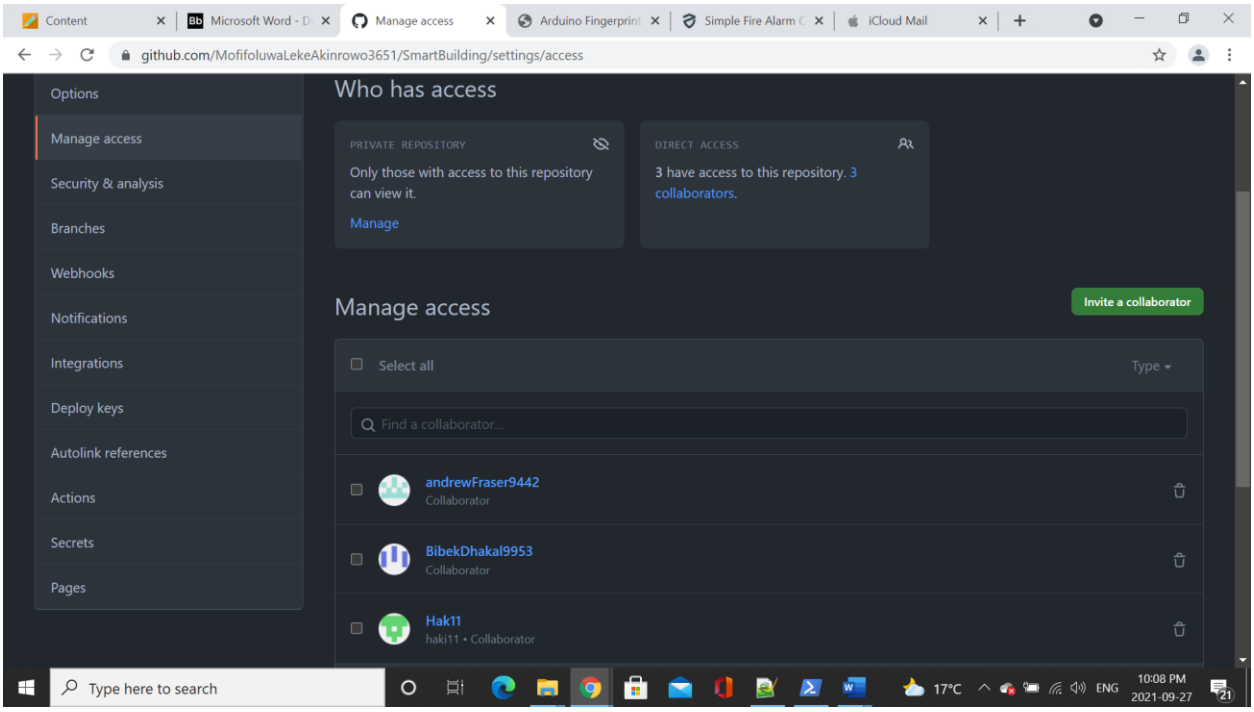
2. Project Scope

The technical scope for this project is to be able to successfully build the user interface and link it to the hardware device that will read necessary data from its environment and write it to the database. The project will be considered complete when the user obtains access to real data provided by the database and is able to have full control over the devices connected in the app.

3. Theme



Invitation Screenshot:



Github Link: https://github.com/MofifoluwaLekeAkinrowo3651/SmartBuilding