

## CENG-322 TEAM PROJECT




Team Name: greenOpsProject Name: Smart Building

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*Please negotiate, sign, scan and include as the first section in your Deliverable 1.*

Please note that if cheating is discovered in a group assignment each member will be charged with a cheating offense regardless of their involvement in the offense. Each member will receive the appropriate sanction based on their individual academic honesty history.

Please ensure that you understand the importance of academic honesty. Each member of the group is responsible to ensure the academic integrity of all of the submitted work, not just their own part. Placing your name on a submission indicates that you take responsibility for its content.

Team Member Names (Please Print)	Signatures	Student ID
Project Leader:  <b>Mofifoluwa Leke-Akinrowo</b>		<b>N01343651</b>
<b>Andrew Fraser</b>		<b>N01309442</b>
<b>Bibek Dhakal</b>		<b>N01419953</b>

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For further information read Academic Honesty Policy on <https://humber.ca/legal-and-risk-management/policies/search-by-students.html>.

By signing this contract, we acknowledge having read the Humber Academic Honesty Policy as per the link below.

<https://academic-regulations.humber.ca/2018-2019/17.0-ACADEMIC-MISCONDUCT>

## Responsibilities of the Project Leader include:

- Assigning tasks to other team members, including self, in a fair and equitable manner.
- Ensuring work is completed with accuracy, completeness and timeliness.
- Planning for task completion to ensure timelines are met
- Any other duties as deemed necessary for project completion

## What we will do if . . .

Scenario	Accepted initials	We agree to do the following
Team member does not deliver component on time due to severe illness or extreme personal problem	<i>A.F.</i>  <b>MLA</b>  B.D	a) Team absorbs workload temporarily ____  b) Team seeks advice from professor ____  c) Team shifts target date if possible <input checked="" type="checkbox"/>  d) Other:
Team member cannot deliver component on time due to lack of ability	<i>A.F.</i>	a) Team reassigns component ____

Scenario	Accepted initials	We agree to do the following
	<i>A.F.</i>  <b>MLA</b>  B.D	b) Team helps member ____  c) Team member must ask professor for reference material <input type="checkbox"/> ____  d) <del>Other:</del>
Team member does not deliver component on time due to lack of effort	<i>A.F.</i>  <b>MLA</b>  B.D	a) Team absorbs workload ____  b) Team "fires" team member by not permitting his/her name on submission ____  c) <del>Other:</del>
	<b>MLA</b>  B.D	<b>Seek guidance from professor</b>
Team member does not attend team meeting	<i>A.F.</i>  <b>MLA</b>  B.D	a) Team proceeds without him/her and will assign work to the absent member ____  b) Team doesn't proceed and records team member's absence <input type="checkbox"/> ____  c) Team proceeds for that meeting but "fires" member after ____ occurrences ____

Scenario	Accepted initials	We agree to do the following
An unforeseen constraint occurs after the deliverable has been allocated and scheduled (a surprise test or assignment)	<i>A.F.</i>  <b>MLA</b>	a) Team meets and reschedules deliverable <input checked="" type="checkbox"/>  b) Team will cope with constraint ____  c) Other:
Team cannot achieve consensus leaving one member feeling "railroaded", "ignored", or "frustrated" with a decision which affects all parties	<i>A.F.</i>  <b>MLA</b>  <b>B.D</b>	a) Team agrees to abide by majority vote <input checked="" type="checkbox"/>  b) Team flips coin ____  c) Other:
Team members do not share expectations for grade desired	<i>A.F.</i>  <b>MLA</b>  <b>B.D</b>	a) Team will elect one person as "standards-bearer" who has the right to ask that work be redone ____  b) Team votes on each submission's quality ____  c) Team will ask for individual marking and will identify sections by author <input checked="" type="checkbox"/>  d) Other:

Scenario	Accepted initials	We agree to do the following
Team member behaves in an unprofessional manner by being rude or uncooperative	<p><i>A.F.</i></p> <hr/> <p><b>MLA</b></p> <p><b>B.D</b></p>	<p>a) Team attempts to resolve the issue by airing the problem at team meeting ____</p> <p>b) Team requests meeting with professor to problem-solve <input type="checkbox"/></p> <p>c) Team ignores behaviour ____</p> <p>d) Team agrees to avoid use of all vocabulary inappropriate to the business setting ____</p>
Team member assumes or requests that his/her name be signed to a submission but has not participated in production of the deliverable	<p><i>A.F.</i></p> <p><b>MLA</b></p> <p><b>B.D</b></p>	<p>a) Team agrees that this is cheating and is unethical <input type="checkbox"/></p> <p>b) Friends are friends and should help each other ____</p> <p>c) Team will submit with signature but will advise professor who will take action ____</p>
There is a dominant team member who is content to make all decisions on the team's behalf leaving some team members feeling like subordinates rather than equal members	<p><i>A.F.</i></p> <p><b>MLA</b></p> <p><b>B.D</b></p>	<p>a) Team will actively solicit consensus on all decisions which affect project direction by asking for each member's decision and vote <input type="checkbox"/></p> <p>b) Team will express subordination feelings and attempt to resolve issue ____</p>

Scenario	Accepted initials	We agree to do the following
	<i>A.F.</i>	c) Other:
Team has a member who refuses to participate in decision making but complains to others that s/he wasn't consulted	<i>A.F.</i>  <b>MLA</b>  <b>B.D</b>	a) Team forces decision sharing by routinely voting on all issues <input checked="" type="checkbox"/> b) Team routinely checks with each other about perceived roles ____ c) Team discusses the matter at team meeting ____

**Deliverable 1****GreenOps****Smart Building**

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

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## **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.

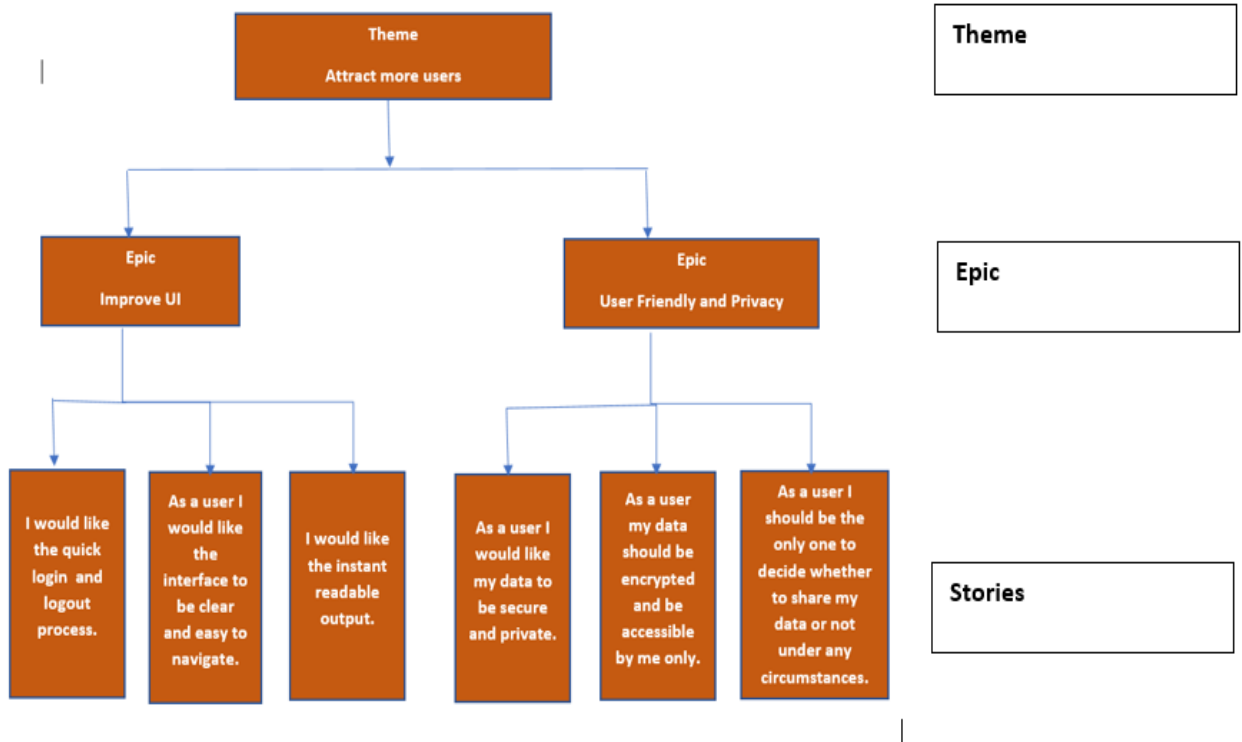
### **1.5 Read/Write from DB**

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.

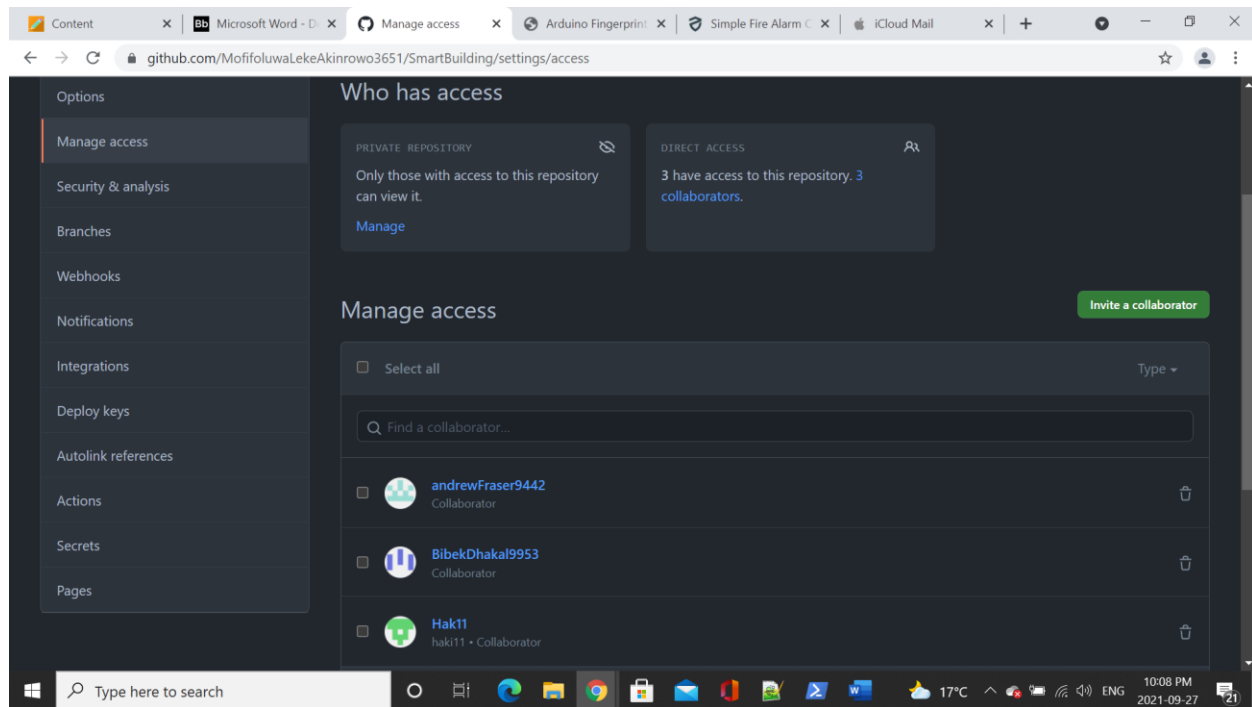
## 2. Project Scope

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>