

## **Deliverable 2**

### **GreenOps**

### **Smart Building**




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Fraser(N01309442)**

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## 1. Project Description

Smart Building app is an integrated cloud based residential and commercial property management software system. It uses IoT sensors, raised floors and building automation to control everything: heating, air-conditioning, lighting, shading, and security. Our software is designed aiming to increase building efficiency and reduce operating expenses by saving time and money.

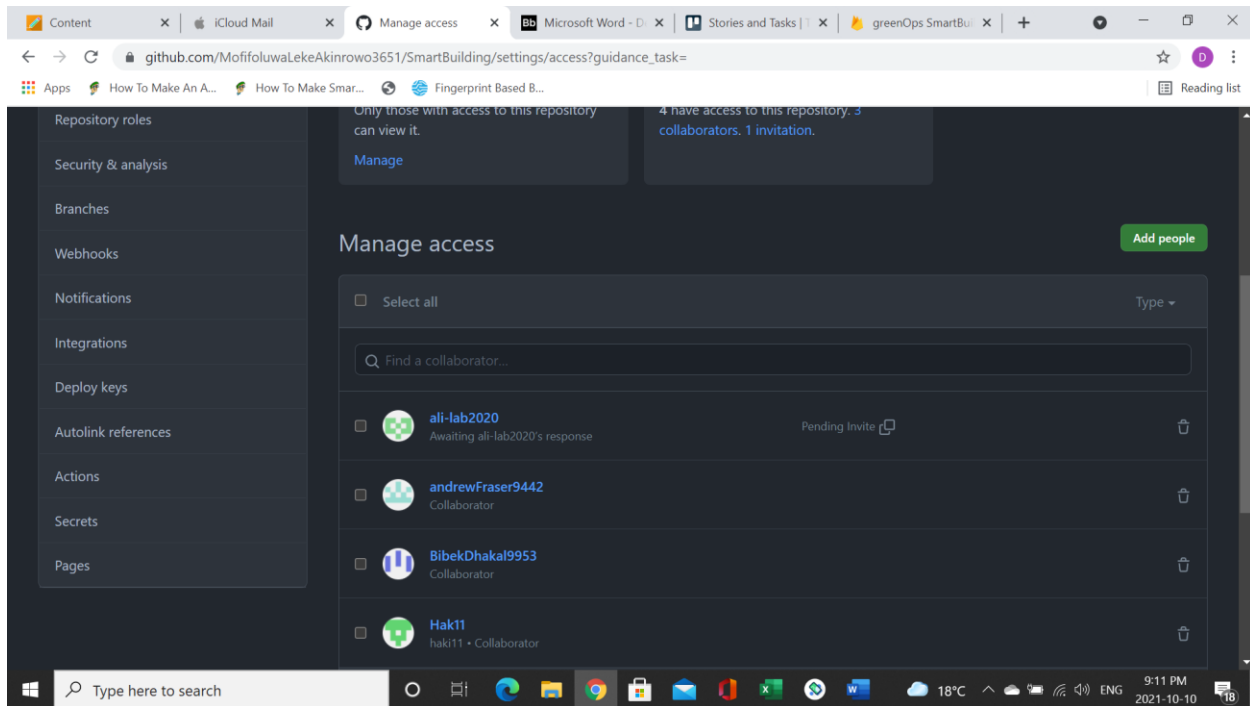
## 2. Members Info and Participation

Name	ID	Signature	Effort
Mofifoluwa Leke-Akinrowo	N01343651		50%
Bibek Dhakal	N01419953		25%
Andrew Fraser	N01309442		25%

### 3. Git Link

<https://github.com/MofifoluwaLekeAkinrowo3651/SmartBuilding>

## GitHub Invitation



## 4. Stories and Tasks

**Trello Board: Stories and Tasks**

**Columns:**

- Login Credentials**
  - Send Username and Password to server. (Oct 9 - Oct 11)
  - Encrypt the Password that the User has entered. (Oct 9 - Oct 11)
  - Check if Username/Password combination is valid. (Oct 9 - Oct 11)
  - If valid, the User is brought to the Main Menu. (Oct 9 - Oct 11)
- Splash Screen**
  - Find new image for business logo. (Oct 9 - Oct 11)
  - Change background color and implement new image. (Oct 9 - Oct 11)
  - Consider adding animation to splash screen load in. (Oct 9 - Oct 11)
  - Add transition from splash screen to login screen. (Oct 9 - Oct 11)
- Implement Menu**
  - Implement overflow menu with at least 4 options. (Oct 9 - Oct 11)
  - Implement function that requires runtime permissions. (Oct 9 - Oct 11)
  - Display snackbar if permission granted or denied. (Oct 9 - Oct 11)
  - Add image to menu on menu bar. (Oct 9 - Oct 11)
- Github Upload**
  - Add git repository link to pdf file. (Oct 11 - Oct 11)
  - Get Professor Ali Maki git username and invite. (Oct 11 - Oct 11)
  - Meet git commit requirements (5 min.). (Oct 11 - Oct 11)
  - Make sure all the work is merged and pushed into master branch in github. (Oct 11 - Oct 11)

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  - If invalid, display Error Message. (Oct 9 - Oct 11)
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  - Meet git commit requirements (5 min.). (Oct 11 - Oct 11)
  - Make sure all the work is merged and pushed into master branch in github. (Oct 11 - Oct 11)
  - Create a subfolder called deliverable2. (Oct 11 - Oct 11)
- Temp/Humid D Side) TBD**
  - Use Temp/Humid collect the atm
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## 5. Business Model Canvas

Business Model Canvas		Designed for: greenOps	Designed by: Mofifoluwa	Date: 07 OCT 2021	Version: 1
<b>Key Partners</b>  Our key partners include global corporations, local businesses, and residents.  <b>MOTIVATIONS FOR PARTNERSHIPS:</b> Development of "Smart Buildings" market, real-time control over building management system, energy management, and security.	<b>Key Activities</b>  Our key activities include connecting building systems and user-based control over energy expenses.  This will help reduce energy use and save on operation costs and comply with data protection.  <b>Key Resources</b>  This project will rely on the use of Smart Sensors (Temperature/Humidity, Motion and Proximity), Smart Lighting and Smart Security.  These resources will all be supplied by our team and funded by our client's one time payment for installation followed by a low subscription fee to our services.	<b>Value Propositions</b>  Our Smart Building is a workable solution of management over an enhanced digital environment that allows for Predictive Maintenance and Sustainable impact on environment.	<b>Customer Relationships</b>  We will be establishing an automated-service based with our relationships. Our customers will have access to automated services that will recognize individual needs based on their activity using our services.  <b>Channels</b>  Our channels of communication to reach our target audience and already existing customers include; Our custom website creating a community for our users highlighting the smart building features and quick fixes, Proper SEO (search engine optimization) and content marketing and most importantly Social Media.	<b>Customer Segments</b>  Our customer base is a segmented market as we will be catering to specific audiences based on their needs and priorities.  While we provide services for clients with different needs, our most profitable market are commercial corporations who seek effective management over their building.	

<b>Cost Structure</b> <p>Our project's most important priority and greatest cost is the cybersecurity and protection of our data and that of our users. With increased connectivity of smart devices comes a higher risk of cyber attacks.</p> <p>Our business is value driven as we aim to create an automated solution to make life easier for our clients and set affordable prices that match the value of our services..</p>			<b>Revenue Streams</b> <p>We have determined the value of our services with the consideration of what consumers are willing to pay, what it costs us to provide and maintain quality services, consumer research based on needs and necessary data, direct/indirect surveys and the market data of our targeted audience.</p> <p>We will be generating our revenue through a subscription-based system in which the subscription prices vary on the needs and usage of our client.</p>		

## 6. DB on Cloud

The screenshot displays the Firebase Realtime Database interface. On the left, the 'Build' menu is visible with options like Authentication, Firestore Database, Realtime Database (selected), Storage, Hosting, Functions, and Machine Learning. The main panel shows the 'Data' tab for the 'greenOps SmartBuilding' project. A warning banner at the top states: 'Protect your Realtime Database resources from abuse, such as billing fraud or phishing'. Below this, the URL bar shows 'https://greenops-smartbuilding-default-rtdb.firebaseio.com/'. The main content area displays 'greenops-smartbuilding-default-rtdb: 'Username: Password:'. The bottom of the sidebar shows 'Spark Free \$0/month' and an 'Upgrade' button.

Database receives login details from app.

[illegible]