Course Name

COMP8967-1-R-2023F | Internship Project I

Document Type

User Manual

Professor

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Group Number : Group Name

19 : Data Doobies

Team - Members	Student ID
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Harbhajan Singh	110100089
Karan Vishavjit	110099867
Dhrumil Limbad	110097066
Ajwad Maahi	110096720

Submitted On

December 8th , 2023

Business Name

Climate Neutral

Business Report Submission:

PART A:

Business Problem: explain the business problem with a captivating statement (can write the same short story that you used for the presentation). (10 points)

Title Referenced to relate our Problem - From Boardrooms to Planet Rooms: Rethinking Decision Dynamics

Fig.: Board Meeting Room

Fig.: Planet Room

Imagine a world where every decision, big or small, made by businesses and local governments not only considers economic gains but also takes into account its impact on the environment and society. Unfortunately, we live in a reality where the urgency of climate change often takes a back seat in decision-making processes. That's the problem we're tackling.

The climate emergency is upon us, and traditional decision-making often neglects its impact. Businesses and governments lack accessible tools to evaluate their choices comprehensively balancing environmental, economic, and social factors. The consequence? Suboptimal decisions that contribute to the climate crisis.

Our team developed a solution that dives deep into the analysis of factors contributing to climate change and, more importantly, the actionable steps we can take to address this urgent global challenge.

Final Sprint details: (20 points)

a. Work Completed: Provide a detailed list of tasks, activities, or features that were completed during the final sprint.
b. Work Not Completed: If there are tasks that were not completed, explain the reasons and any mitigation strategies.
c. Contribution by each member.

a. Work Completed Dring final sprint – 6 (Sprint Duration Nov 13, 2023 – Nov 26, 2023)

Below data is taken from Jira Tool - https://ip19.atlassian.net/jira/software/projects/SCRUM/boards/1

Issue Type - Status

Task – Done

Project key – SCRUM

Project name - Project type

My Scrum Project – software

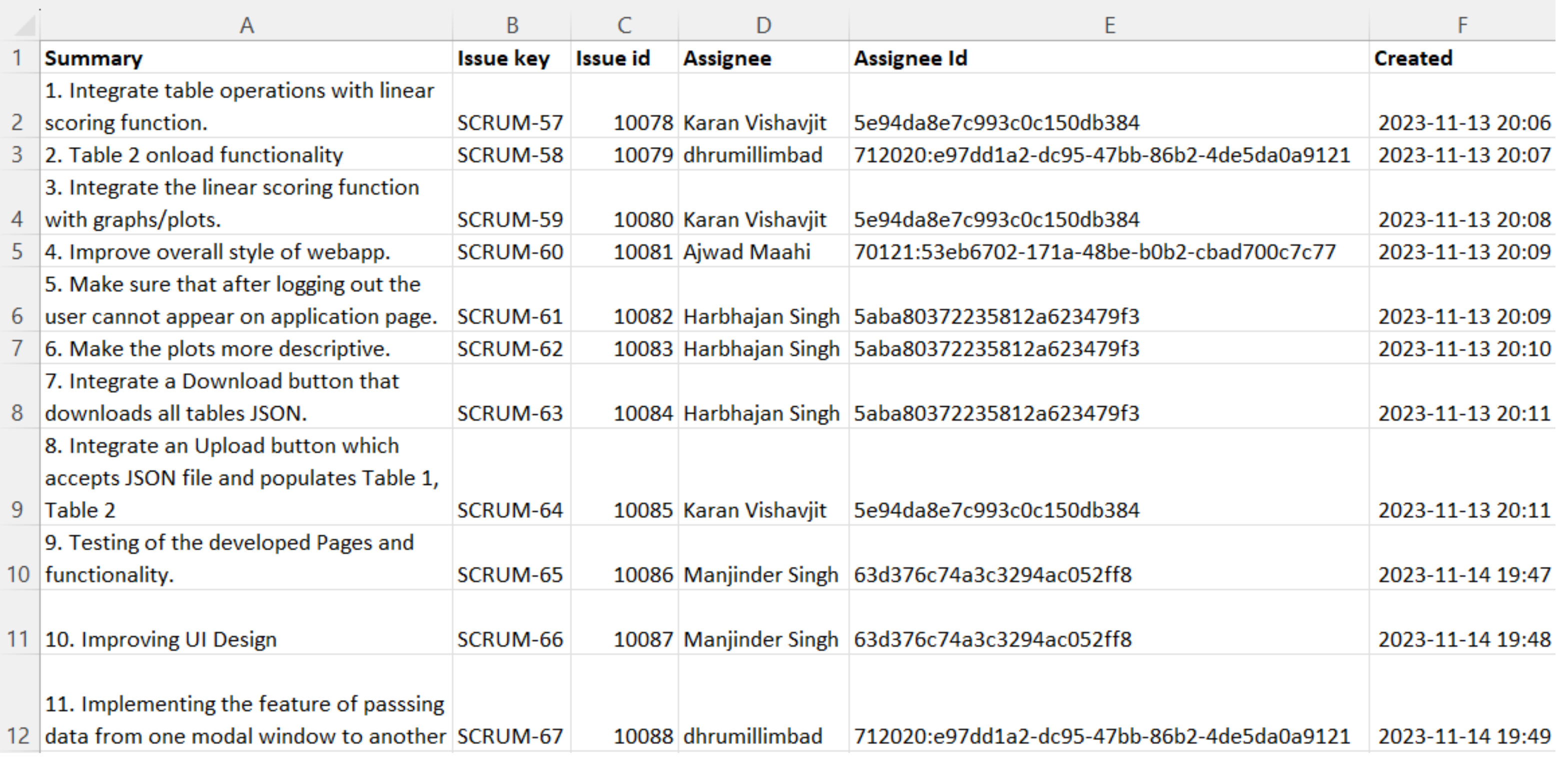
Priority - Medium

Resolution – Done

Sprint - SCRUM Sprint 6

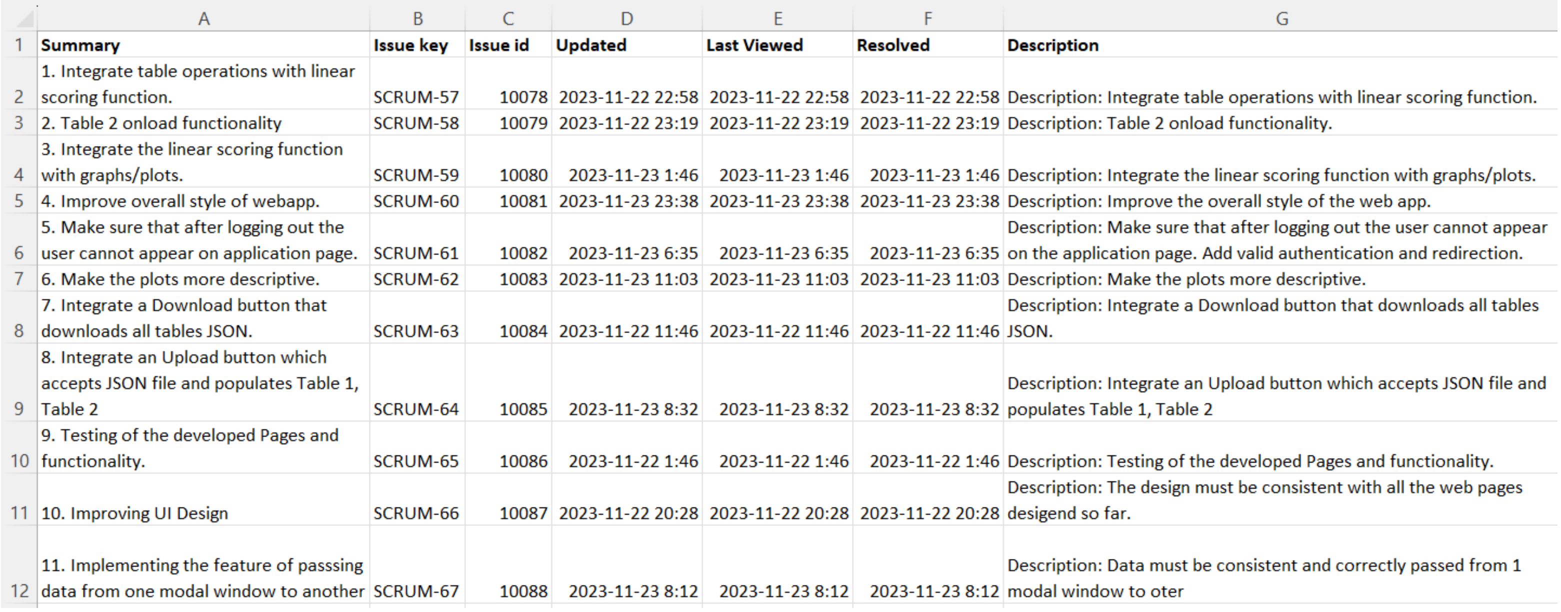
Custom field (Story point estimate) - 2

Status Category - Done



	A	B	C	D	E	F
1	**Summary**	**Issue key**	**Issue id**	**Assignee**	**Assignee Id**	**Created**
2	1. Integrate table operations with linear scoring function.	SCRUM-57	10078	Karan Vishavjit	5e94da8e7c993c0c150db384	2023-11-13 20:06
3	2. Table 2 onload functionality	SCRUM-58	10079	dhrumillimbad	712020:e97dd1a2-dc95-47bb-86b2-4de5da0a9121	2023-11-13 20:07
4	3. Integrate the linear scoring function with graphs/plots.	SCRUM-59	10080	Karan Vishavjit	5e94da8e7c993c0c150db384	2023-11-13 20:08
5	4. Improve overall style of webapp.	SCRUM-60	10081	Ajwad Maahi	70121:53eb6702-171a-48be-b0b2-cbad700c7c77	2023-11-13 20:09
6	5. Make sure that after logging out the user cannot appear on application page.	SCRUM-61	10082	Harbhajan Singh	5aba80372235812a623479f3	2023-11-13 20:09
7	6. Make the plots more descriptive.	SCRUM-62	10083	Harbhajan Singh	5aba80372235812a623479f3	2023-11-13 20:10
8	7. Integrate a Download button that downloads all tables JSON.	SCRUM-63	10084	Harbhajan Singh	5aba80372235812a623479f3	2023-11-13 20:11
9	8. Integrate an Upload button which accepts JSON file and populates Table 1, Table 2	SCRUM-64	10085	Karan Vishavjit	5e94da8e7c993c0c150db384	2023-11-13 20:11
10	9. Testing of the developed Pages and functionality.	SCRUM-65	10086	Manjinder Singh	63d376c74a3c3294ac052ff8	2023-11-14 19:47
11	10. Improving UI Design	SCRUM-66	10087	Manjinder Singh	63d376c74a3c3294ac052ff8	2023-11-14 19:48
12	11. Implementing the feature of passsing data from one modal window to another	SCRUM-67	10088	dhrumillimbad	712020:e97dd1a2-dc95-47bb-86b2-4de5da0a9121	2023-11-14 19:49

Screenshot 1: Sprint 6 Tasks



Summary	Issue key	Issue id	Updated	Last Viewed	Resolved	Description
1. Integrate table operations with linear scoring function.	SCRUM-57	10078	2023-11-22 22:58	2023-11-22 22:58	2023-11-22 22:58	Description: Integrate table operations with linear scoring function.
2. Table 2 onload functionality	SCRUM-58	10079	2023-11-22 23:19	2023-11-22 23:19	2023-11-22 23:19	Description: Table 2 onload functionality.
3. Integrate the linear scoring function with graphs/plots.	SCRUM-59	10080	2023-11-23 1:46	2023-11-23 1:46	2023-11-23 1:46	Description: Integrate the linear scoring function with graphs/plots.
4. Improve overall style of webapp.	SCRUM-60	10081	2023-11-23 23:38	2023-11-23 23:38	2023-11-23 23:38	Description: Improve the overall style of the web app.
5. Make sure that after logging out the user cannot appear on application page.	SCRUM-61	10082	2023-11-23 6:35	2023-11-23 6:35	2023-11-23 6:35	Description: Make sure that after logging out the user cannot appear on the application page. Add valid authentication and redirection.
6. Make the plots more descriptive.	SCRUM-62	10083	2023-11-23 11:03	2023-11-23 11:03	2023-11-23 11:03	Description: Make the plots more descriptive.
7. Integrate a Download button that downloads all tables JSON.	SCRUM-63	10084	2023-11-22 11:46	2023-11-22 11:46	2023-11-22 11:46	Description: Integrate a Download button that downloads all tables JSON.
8. Integrate an Upload button which accepts JSON file and populates Table 1, Table 2	SCRUM-64	10085	2023-11-23 8:32	2023-11-23 8:32	2023-11-23 8:32	Description: Integrate an Upload button which accepts JSON file and populates Table 1, Table 2
9. Testing of the developed Pages and functionality.	SCRUM-65	10086	2023-11-22 1:46	2023-11-22 1:46	2023-11-22 1:46	Description: Testing of the developed Pages and functionality.
10. Improving UI Design	SCRUM-66	10087	2023-11-22 20:28	2023-11-22 20:28	2023-11-22 20:28	Description: The design must be consistent with all the web pages desigend so far.
11. Implementing the feature of passsing data from one modal window to another	SCRUM-67	10088	2023-11-23 8:12	2023-11-23 8:12	2023-11-23 8:12	Description: Data must be consistent and correctly passed from 1 modal window to oter

Screenshot 2: Sprint 6 Tasks with more details

b. **Work not Completed** – N/A, as the team completed all the development work as per client's requirements along with additional features like optimized solution design for saving results, extra web page(s) development like Contact Us, About Us, Interactive Home Page for delivering complete web site.

c. **Contribution by each time member –** Please refer to screenshot number 1 and 2 for detailed reference of the contribution by all the team members. The table clearly shows the tasks worked on by the teammates with additional details. For verification purpose, Jira link (https://ip19.atlassian.net/jira/software/projects/SCRUM/boards/1) can be visited.

Challenges and Issues: (10 points)

a. Challenges Faced: Discuss any challenges, roadblocks, or unexpected issues encountered during the final sprint.

b. Mitigation Strategies: Explain how challenges were addressed or mitigated to keep the project on track.

a. **Challenges Faced:**

Well, the team faced a few issues during the final sprint as most of the work was done before sprint 6 which was presented to Dr. Kalyani after sprint 4. The main motive of Sprint 6 is the integration part and the development of additional features.

➔ **Integration of Linear function and Modal Window Feature:** During integration of calculation part and passing to the modal window, there were issues with the function implementation as the data was not getting passed from one modal window to another, then the function is modified and optimized to reduce the load time.

➔ **Styling Consistency:** On common styling, header and footer applying the UI Pages design was disturbed because of normal usage of tags without div tag. So, UI design implementation was done only after putting the HTML code in proper div tags for page division.

➔ **Plots Loading:** Earlier the team was working on individual modules but once we started integration, then there were several issues and plots loading as per data was one of them. Once the user was passing data then click of submit, plots were not generating. Then after 2-3 days of debugging, the issue was with the function call. Even though the function name was exactly the same but still it was not calling due to a minor space issue.

b. **Mitigation Strategies:**

➔ **Integration of Linear function and Modal Window Feature:** To handle this issue, we were trying to store data in local storage to pass to the next page so that values can be loaded. In this approach, we have used the inspect element to debug the code and see the passed values if it's going through accurately and we also used print statements for better debugging practices.

➔ **Styling Consistency:** To resolve this conflict, we had used common file for styling throughout all the web pages. Reworked on few pages to be consistent with the styling.

- ➔ **Plots Loading:** While integrating plots for visualization, the parent div that stores the content of the plot was considering a default browser CSS styling. It took us a considerable amount of time to resolve this issue as the plots are based on SVG and it ruled out the parent CSS. To resolve this issue, we targeted the SVG wrapper div and gave it styling. In all such scenarios one should consider adjusting the height/width of the wrapper.

Lessons Learned by each member throughout the project: (10 points)

a. Best Practices: Share any best practices or lessons learned from the project with each member of the team.
b. Improvement Areas: Reflect on areas for improvement or skills that, if enhanced, could have positively influenced the project's progress.

Name	Best Practices	Improvement Areas
Manjinder Singh	➔ Maintaining progress on GitHub repository to keep in line with the team. ➔ Collaboration through Microsoft Teams, One Drive and Microsoft Outlook. ➔ Consistently checking progress every week with GA Ms. Nahid and with the stakeholder Kyle during Teams connects.	➔ Documentation skills can be made better ➔ Prior Planning can be done in advance before the sprint start will significantly save time.
Harbhajan Singh	➔ Maintained all the JIRA processes as a Scrum Master to support team for the project development. ➔ Pushed all codes as a developer to Git to collaborate with the team. ➔ With the help of client call, we implemented all the feedback given by the client. ➔ Learned JavaScript, HTML, and CSS for the development of this project.	➔ Mockup of the project should be designed in a detailed way. ➔ Clients should be flexible to accept the new technologies or skills.
Karan Vishwajit	➔ When working on the same functionality everyone must check out their own branch and when completed merge all branches. ➔ Integrated the front end with the JavaScript logic given by client fulfilling all expectations set by the client. ➔ From security point of view, not updating password manually in database and using firebase to trigger a password reset mail to registered user only. ➔ Due to the lightweight Json format, we used it was very easy to generate graph and that also made the results more compatible from integration point of view.	➔ Merging everyone's code into one branch is not easy and takes so much time, so it's better to define a coding standard and follow that. ➔ It is better to design and fix front end elements first so that minimal changes are required when writing backend logic. ➔ Even when testing functionality try to put in actual working emails so that we don’t have to create so many accounts afterwards. ➔ Review the documentation of graph generating library to get familiar with in what format data is expected so that Json can be created accordingly.

Dhrumil Limbad	➔ Maintaining GitHub code. ➔ Created and organized sprint tasks. ➔ Technical lead in the project, supervising the progress and code maintenance. ➔ Designed the application with vanilla JavaScript and employed table API for the application. ➔ Suggested an improved idea to the business for blazing fast performance and made the entire application client-side. ➔ Used Monolith architecture to build this application.	➔ Need to improve and practice documentation. ➔ Good UX by providing animations. ➔ Follow a design pattern when building the application.
Ajwad Maahi	➔ I am learning some advanced features of JavaScript like session Storage and local Storage. ➔ Use raw HTML, CSS and JavaScript to make bigger components like Modal, Slider and to validate forms. ➔ Basic Authentication system using Firebase ➔ Consistently collaborating with team members through Microsoft Teams and One Drive ➔ Regularly checking the updates of projects in GitHub and tracing out about the updated or missing tasks.	➔ Need to learn ways to create better mockup designs for the webpage and its dashboard. ➔ Need to follow modern design trends to create an interactive and user-friendly webpage and dashboard page layout.

User Manual: (50 points)
Create a comprehensive manual detailing the step-by-step process to operate and manage the implemented product autonomously. Ensure that it enables users to handle the product seamlessly without external involvement. Include any relevant information necessary for a business to comprehend and effectively utilize your product.
GitHub Repository Link: Provide the link that is accessible by business.

User Manual for the
Multi-Objective Decision Making (MODM) Application

Motive of the Application - Solution that dives deep into the analysis of factors contributing to climate change and, more importantly, the actionable steps we can take to address this urgent global challenge.

Tech Stack Used:

1. HTML 5 Markdown
2. Pure CSS styling
3. Vanilla JavaScript

Screenshot 1: Tech Stack Used

Key Features:

1. Authentication using Firebase
2. Interactive User Interface to take input from User.
3. Visualize through graphs based on the user input based on scenarios.
4. User results are saved and retrieved from local storage.
5. User results can be printed through window - print function that runs when a print button is clicked.
6. Users can save their work through text/Json file which stores inputs as tab-separated variables.

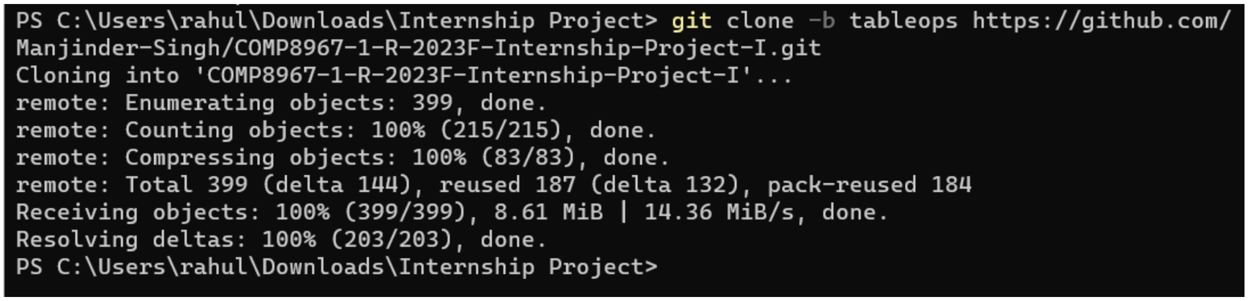
Walkthrough of the MODM Application:

Here are the steps that one must follow to fully install and utilize the application:

Step 1:

Clone/Download the repo from GitHub (branch name with Latest Code: tableops) with the command on the Command Prompt -

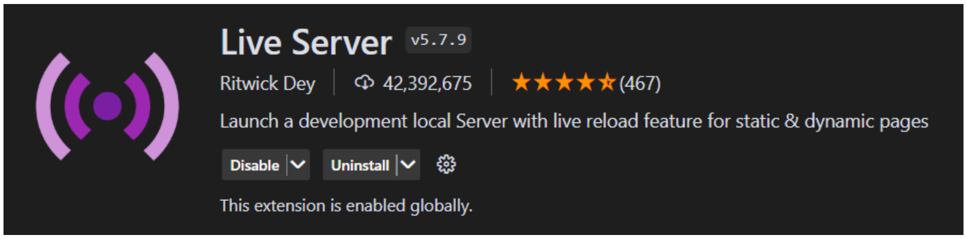
```
git clone -b tableops https://github.com/Manjinder-Singh/COMP8967-1-R-2023F-Internship-Project-I.git
```



```
PS C:\Users\rahul\Downloads\Internship Project> git clone -b tableops https://github.com/
Manjinder-Singh/COMP8967-1-R-2023F-Internship-Project-I.git
Cloning into 'COMP8967-1-R-2023F-Internship-Project-I'...
remote: Enumerating objects: 399, done.
remote: Counting objects: 100% (215/215), done.
remote: Compressing objects: 100% (83/83), done.
remote: Total 399 (delta 144), reused 187 (delta 132), pack-reused 184
Receiving objects: 100% (399/399), 8.61 MiB | 14.36 MiB/s, done.
Resolving deltas: 100% (203/203), done.
PS C:\Users\rahul\Downloads\Internship Project>
```

Step 2:

The main page to interact with the application is called: ‘tableops_updated_download.html’. Make sure that you are connected to the internet because we have firebase authentication that is running on a CDN. Please make sure that you serve the project on a localserver. If you using VS Code to build further then you may consider installing Live Server extension which will help you serve your project to localhost.



Live Server v5.7.9

Ritwick Dey | 42,392,675 | ★★★★☆(467)

Launch a development local Server with live reload feature for static & dynamic pages

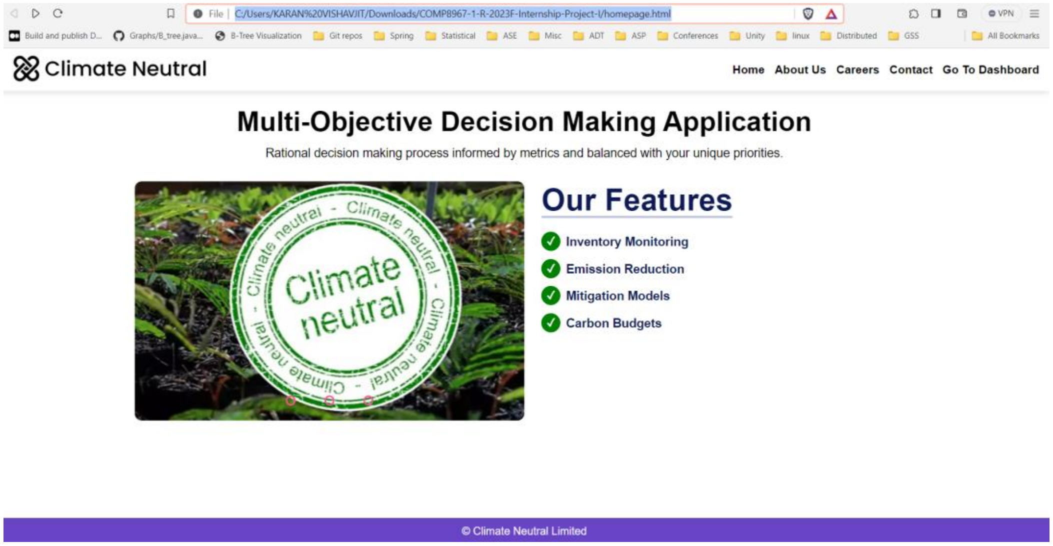
This extension is enabled globally.

Double click or open the file “tableops_updated_download.html” in any browser of your choice.

Below is the path of homepage.htm in our system user can go to dashboard from home page after login it will be different in your browser.

Note: only loggedIn users will be able to access the dashboard directly, it is advisable to start from the home page so user can login and then visit the dashboard.

file:///C:/Users/Downloads/COMP8967-1-R-2023F-Internship-Project-I/homepage.html



C:/Users/KARAN%20VISHAVJIT/Downloads/COMP8967-1-R-2023F-Internship-Project-I/homepage.html

Multi-Objective Decision Making Application

Rational decision making process informed by metrics and balanced with your unique priorities.

Our Features

- ✓ Inventory Monitoring
- ✓ Emission Reduction
- ✓ Mitigation Models
- ✓ Carbon Budgets

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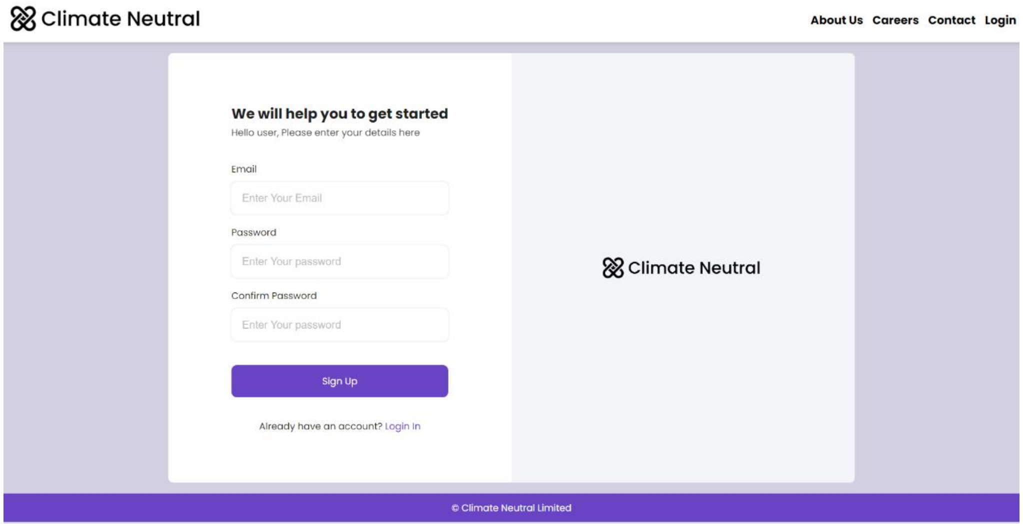
On the above page click on “Go To Dashboard” will take you to the login page if user is not “logged in” else User will be redirected to Dashboard.

file:///C:/Users/USER/Downloads/COMP8967-1-R-2023F-Internship-Project-I/login.html

As we are doing session monitoring, user can only visit dashboard if the user is “logged in” else user will always be redirected to the login page and the session will remain active until the user logouts, close the browser or explicitly clears the session.

Step 3:



We will help you to get started

Hello user, Please enter your details here

Email: Enter Your Email

Password: Enter Your password

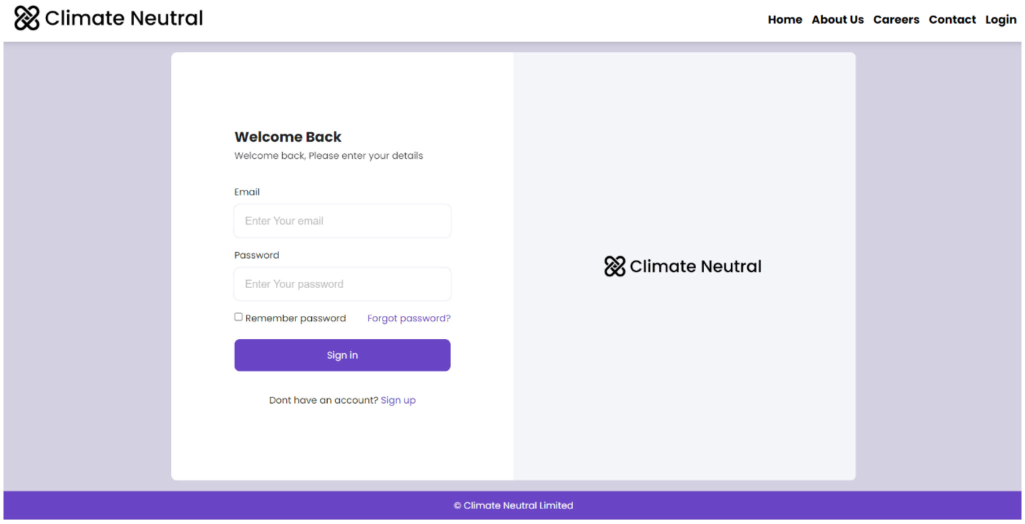
Confirm Password: Enter Your password

Already have an account? Login In

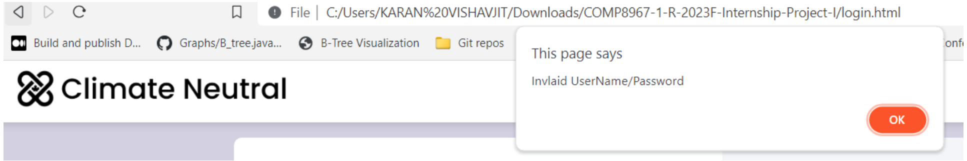
© Climate Neutral Limited

Screenshot 2: Sign Up Page (With Firebase Authentication)

Register to the application, enter username and password and retype password to confirm, upon successful completion, email in the form of username and password (encrypted) will be stored in firebase authentication (explained at the bottom of manual) project.



Screenshot 3: Sign In Page (With Firebase Authentication)


File | C:/Users/KARAN%20VISHAVJIT/Downloads/COMP8967-1-R-2023F-Internship-Project-I/login.html
Build and publish D...
Graphs/B_tree.java...
B-Tree Visualization
Git repos
Climate Neutral
OK

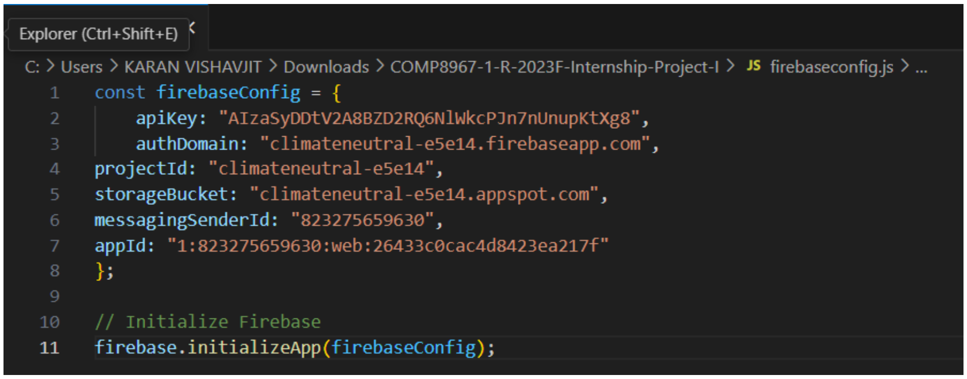
This page says

Invlaid UserName/Password

Screenshot 3: User can log in with their registered email address and password. If the credentials match, then the user will be directed to the dashboard page. If not, then the user will get an error message saying Invalid username/password.

Once logged in you will see your email on the navbar. You cannot return to login or signup page unless you are logged out. We have firebase as database, we are only storing user email and encrypted password. You can configure firebase with your API key by making changes in 'firebaseconfig.js' file.

Current Configuration in use:


Explorer (Ctrl+Shift+E)
C: > Users > KARAN VISHAVJIT > Downloads > COMP8967-1-R-2023F-Internship-Project-I > JS firebaseconfig.js > ...

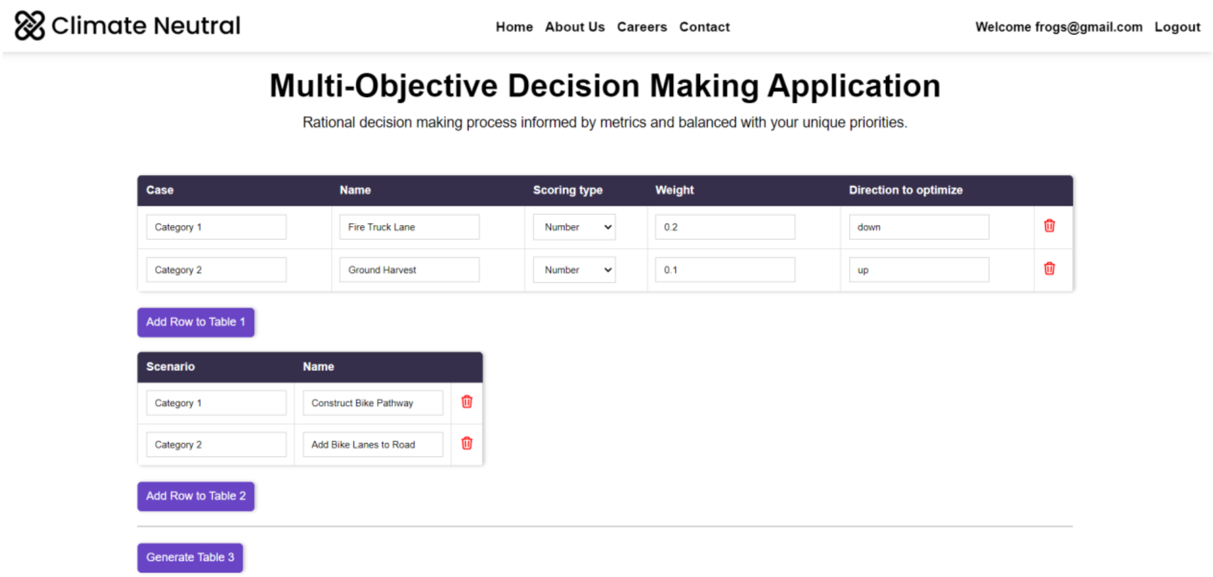
```javascript
const firebaseConfig = {
    apiKey: "AIzaSyDDtV2A8BZD2RQ6NlWkcPJn7nUnupKtXg8",
    authDomain: "climateneutral-e5e14.firebaseapp.com",
projectId: "climateneutral-e5e14",
storageBucket: "climateneutral-e5e14.appspot.com",
messagingSenderId: "823275659630",
appId: "1:823275659630:web:26433c0cac4d8423ea217f"
};

// Initialize Firebase
firebase.initializeApp(firebaseConfig);
```

One you signup into firebase and create project you will be able to see configuration like above.

Note: Firebase project setup steps at the end of this document.

Step 4:



Multi-Objective Decision Making Application

Rational decision making process informed by metrics and balanced with your unique priorities.

Case	Name	Scoring type	Weight	Direction to optimize
Category 1	Fire Truck Lane	Number	0.2	down
Category 2	Ground Harvest	Number	0.1	up

Scenario	Name
Category 1	Construct Bike Pathway
Category 2	Add Bike Lanes to Road

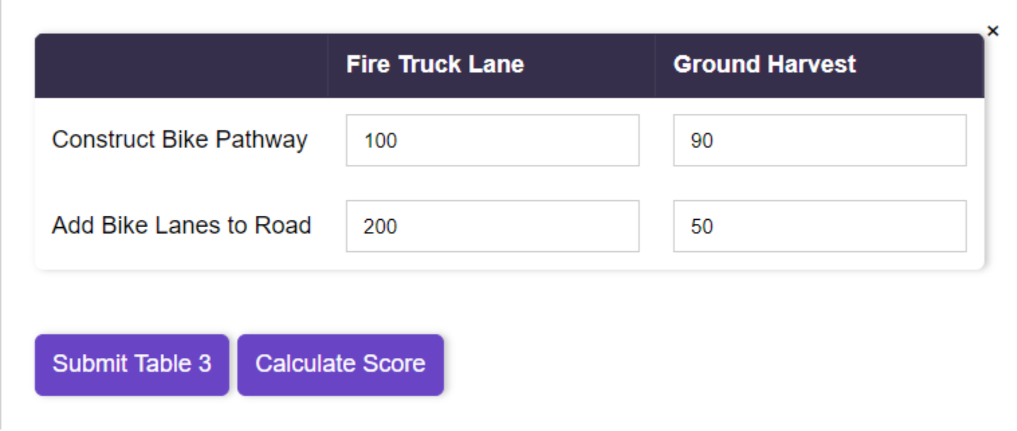
Screenshot 4: Intuitive User Interface to Input Cases and Scenarios

Start entering your data into table 1 and table 2. You can add or delete a row in the table. In table 1 the sum of 'Weight' cannot exceed 1. If the weight exceeds 1 then an alert will pop up. Please make sure that there are at least two scenarios in Table 2. Once you are done entering data into table 1 and 2 you can then proceed to generate table 3. The table data remains persistent even on hard page refresh.

In **Screenshot 4**, In Table 1 and Table 2 - user can **add rows** to the table for **adding more case(s), delete case(s)** as per requirement and then **form is validated** so that weight assigned must not exceed the limit of 1.

Once the user fills in and clicks on Generate Table 3, then **Category and Scenarios** are displayed on the headers and left pane shown in **Screenshot 6** and then user can proceed to enter values corresponding to those scenarios and cases to visualize.

Step 5:



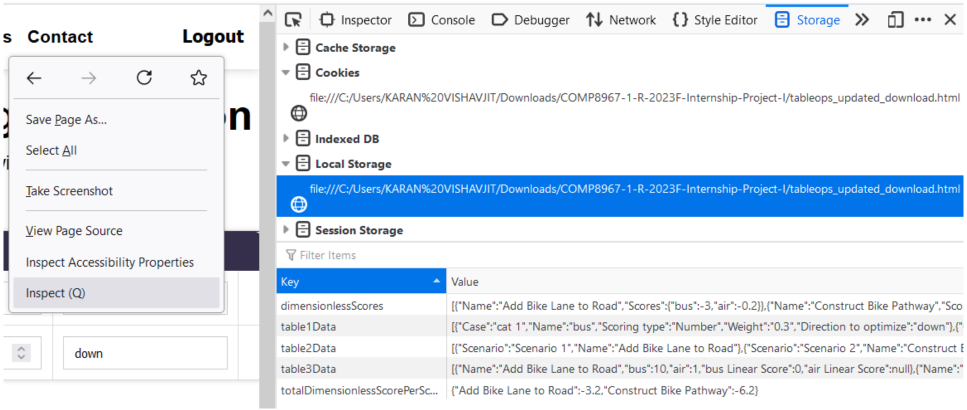
	Fire Truck Lane	Ground Harvest
Construct Bike Pathway	100	90
Add Bike Lanes to Road	200	50

Screenshot 5: Table 3 generated from Table 1 and Table 2 Input

Once user fill in data as shown in **Screenshot 5**, and then click on **Calculate Score** then various mathematics formula at the backend will execute and based on these **different visualization charts will appear on screen** with weights and **scenario will be recommended**.

The user has flexibility to **save the form data in a file** and using that same file, user can **auto fill in the form** and visualize the data which **saves the user's time**.

Upon generating table 3 you will see a modal window. The table in the window will be constructed based on the input that you provide in table 1 and 2. You must press ‘Submit Table 3’ and then ‘Calculate Score’ because the program first stores the values to localstorage and then calculates the value. The reason why we are saving to localstorage is because we want the data while downloading the json.

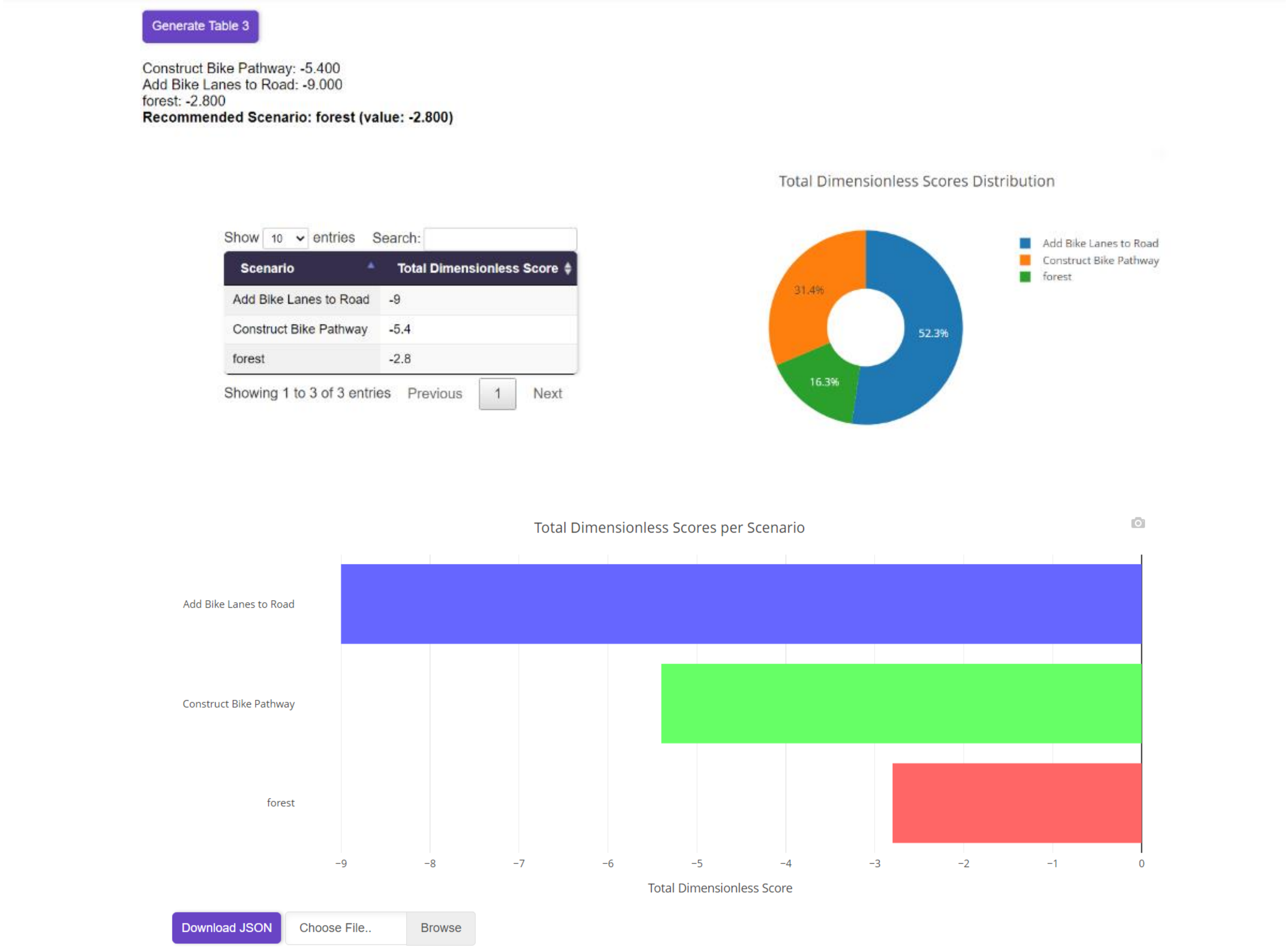

s Contact
Logout
Save Page As...
Select All
Take Screenshot
View Page Source
Inspect Accessibility Properties
Inspect (Q)
down
Inspector
Console
Debugger
Network
Style Editor
Storage
Cache Storage
Cookies
file:///C:/Users/KARAN%20VISHAVJIT/Downloads/COMP8967-1-R-2023F-Internship-Project-I/tableops_updated_download.html
Indexed DB
Local Storage
file:///C:/Users/KARAN%20VISHAVJIT/Downloads/COMP8967-1-R-2023F-Internship-Project-I/tableops_updated_download.html
Session Storage
Filter Items

Key	Value
dimensionlessScores	[{"Name":"Add Bike Lane to Road","Scores":{"bus":-3,"air":-0.2}},{"Name":"Construct Bike Pathway","Sco
table1Data	[{"Case":"cat 1","Name":"bus","Scoring type":"Number","Weight":"0.3","Direction to optimize":"down"},{"
table2Data	[{"Scenario":"Scenario 1","Name":"Add Bike Lane to Road"},{"Scenario":"Scenario 2","Name":"Construct B
table3Data	[{"Name":"Add Bike Lane to Road","bus":10,"air":1,"bus Linear Score":0,"air Linear Score":null},{"Name":"
totalDimensionlessScorePerSc...	{"Add Bike Lane to Road":-3.2,"Construct Bike Pathway":-6.2}

Screenshot 5.1: Local Storage Data for Table 1, 2 and 3

To access local storage right anywhere, then click inspect and the local storage data will be user storage or application depending on the browser.

Step 6:



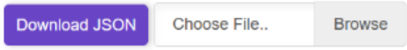
Construct Bike Pathway: -5.400
Add Bike Lanes to Road: -9.000
forest: -2.800
Recommended Scenario: forest (value: -2.800)

Scenario	Total Dimensionless Score
Add Bike Lanes to Road	-9
Construct Bike Pathway	-5.4
forest	-2.8

Screenshot 6: Visualize Data, Recommend Scenarios/Cases based on Input and Provides option to user Download the filled data and plots.

Upon clicking ‘Calculate Score’ you will be able to see the results with recommended scenario. The results are in a table and two charts. The user can download a PNG of the resultant graph.

Step 7:

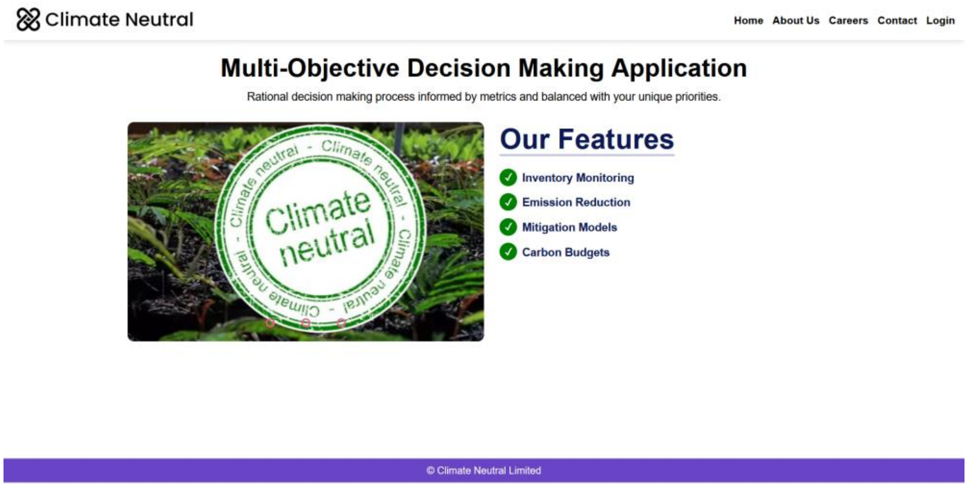


Screenshot 7: Download the table data in JSON format and upload the data to fill the tables automatically.

You can download the JSON file which contains all the data of input tables. Then you can choose to upload that JSON file which will load all the data to the application. This saves time and the user need not input data from scratch. When you load the data make sure to check the input table by editing values or adding/deleing a column to see if it is working or not. No matter if you load data or not you will always need to submit and then calculate table 3.

Additional Features:

To design a complete web site, we have designed and implemented a few more pages like Homepage, Careers, About Us, Contact Pages to design a complete web site.



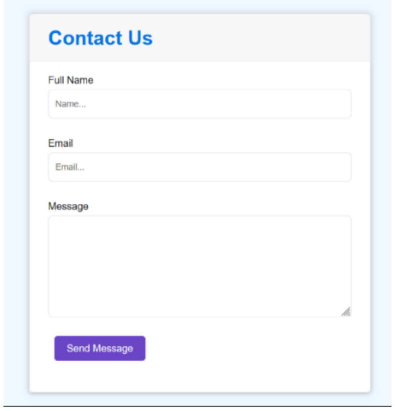
Multi-Objective Decision Making Application

Rational decision making process informed by metrics and balanced with your unique priorities.

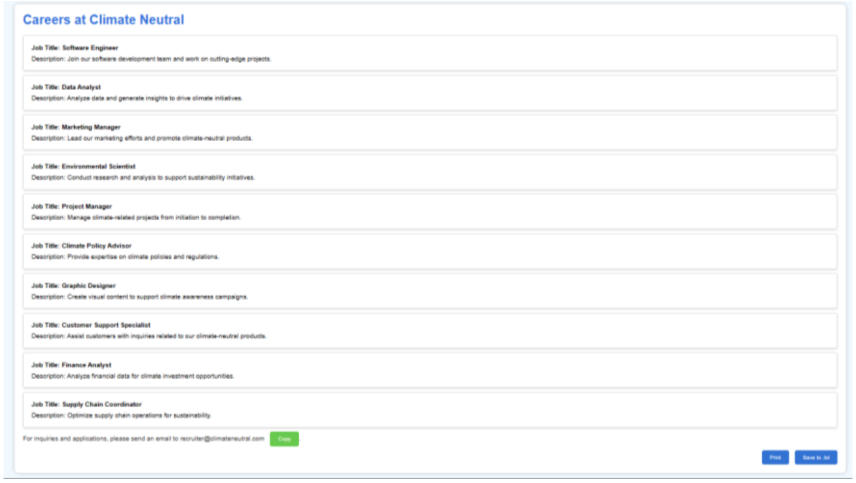
Our Features

- ✓ Inventory Monitoring
- ✓ Emission Reduction
- ✓ Mitigation Models
- ✓ Carbon Budgets

Screenshot 8: Homepage



Screenshot 9: Contact Us Web Page to send an email to the Climate Neutral team



Careers at Climate Neutral

Job Title: Software Engineer
Description: Join our software development team and work on cutting-edge projects.

Job Title: Data Analyst
Description: Analyze data and generate insights to drive climate initiatives.

Job Title: Marketing Manager
Description: Lead our marketing efforts and promote climate-neutral products.

Job Title: Environmental Scientist
Description: Conduct research and analysis to support sustainability initiatives.

Job Title: Project Manager
Description: Manage climate-related projects from initiation to completion.

Job Title: Climate Policy Advisor
Description: Provide expertise on climate policies and regulations.

Job Title: Graphic Designer
Description: Create visual content to support climate awareness campaigns.

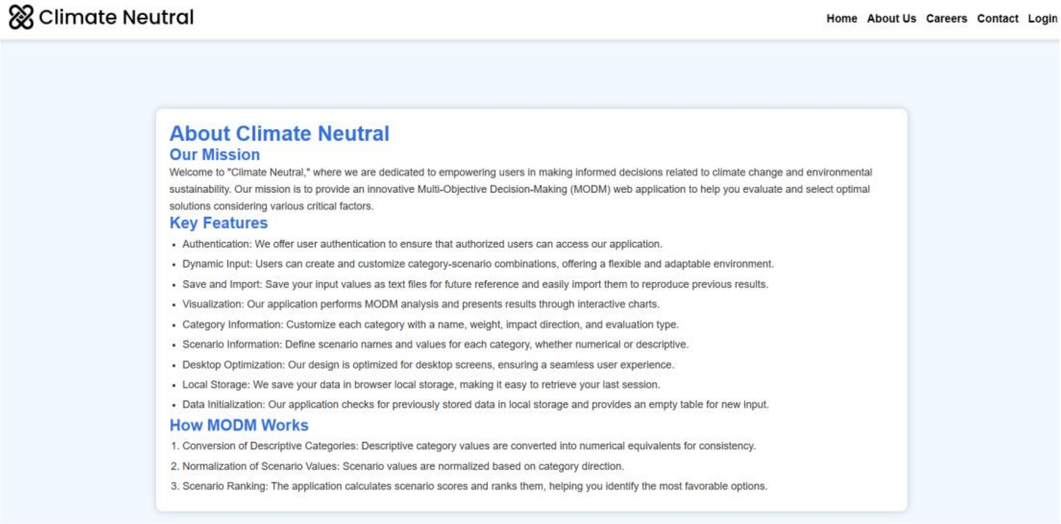
Job Title: Customer Support Specialist
Description: Assist customers with inquiries related to our climate-neutral products.

Job Title: Finance Analyst
Description: Analyze financial data for climate investment opportunities.

Job Title: Supply Chain Coordinator
Description: Optimize supply chain operations for sustainability.

For inquiries and applications, please send an email to recruiter@climateneutral.com

Screenshot 10: Careers Web Page (user can copy recruiters email id, print job listings and saving to a file)



About Climate Neutral

Our Mission

Welcome to "Climate Neutral," where we are dedicated to empowering users in making informed decisions related to climate change and environmental sustainability. Our mission is to provide an innovative Multi-Objective Decision-Making (MODM) web application to help you evaluate and select optimal solutions considering various critical factors.

Key Features

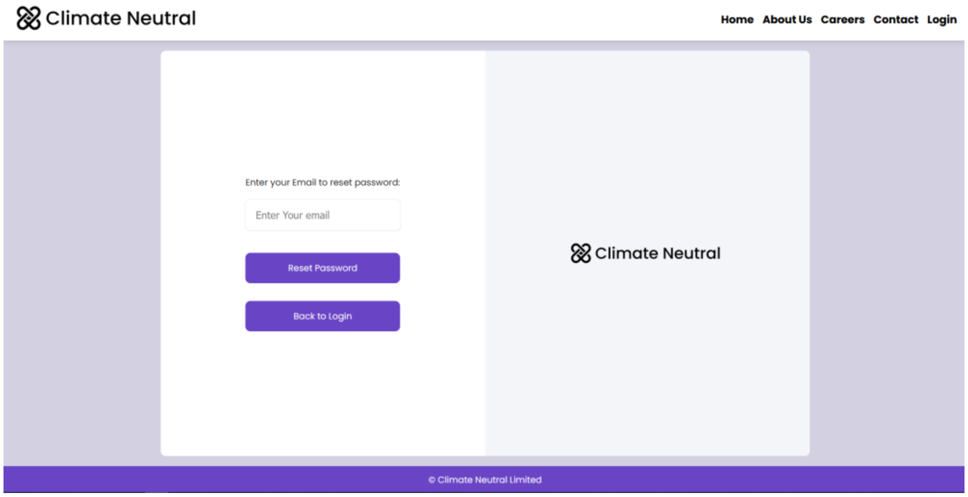
- Authentication: We offer user authentication to ensure that authorized users can access our application.
- Dynamic Input: Users can create and customize category-scenario combinations, offering a flexible and adaptable environment.
- Save and Import: Save your input values as text files for future reference and easily import them to reproduce previous results.
- Visualization: Our application performs MODM analysis and presents results through interactive charts.
- Category Information: Customize each category with a name, weight, impact direction, and evaluation type.
- Scenario Information: Define scenario names and values for each category, whether numerical or descriptive.
- Desktop Optimization: Our design is optimized for desktop screens, ensuring a seamless user experience.
- Local Storage: We save your data in browser local storage, making it easy to retrieve your last session.
- Data Initialization: Our application checks for previously stored data in local storage and provides an empty table for new input.

How MODM Works

1. Conversion of Descriptive Categories: Descriptive category values are converted into numerical equivalents for consistency.
2. Normalization of Scenario Values: Scenario values are normalized based on category direction.
3. Scenario Ranking: The application calculates scenario scores and ranks them, helping you identify the most favorable options.

Screenshot 11: Information Page about Climate Neutral

Screenshot 11: The About Us page highlights the missions of 'Climate Neutral'. It also explains the key features of the system in a brief manner. Then it explains how the overall system works. The main purpose of this page is to allow users to understand how to use the web application and what goal the system tends to achieve.



Enter your Email to reset password:

Screenshot 12: Forgot password page

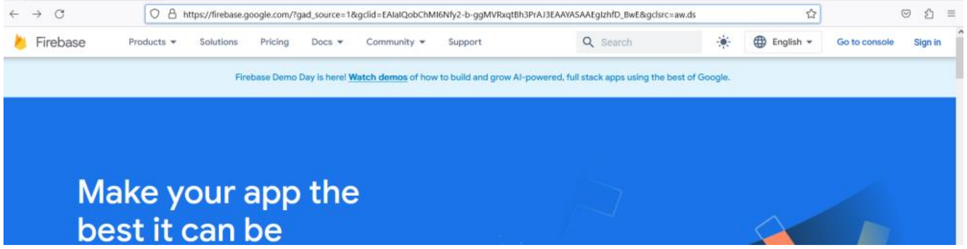
Screenshot 12: In case user forgets the password, we have given the option to reset it, it is not a manual process it is done via firebase, user only has to type in their email address and an email with the password reset link will be sent the registered user address following that link user can reset the password.

Note: Only registered users will receive a password reset link

Firebase Project Setup:

Go to Firebase homepage and click sign in with google account:

https://firebase.google.com/?gad_source=1&gclid=EAIaIQobChMI6Nfy2-b-ggMVRxqtBh3PrAJ3EAAYASAAEgIzhfD_BwE&gclsrc=aw.ds

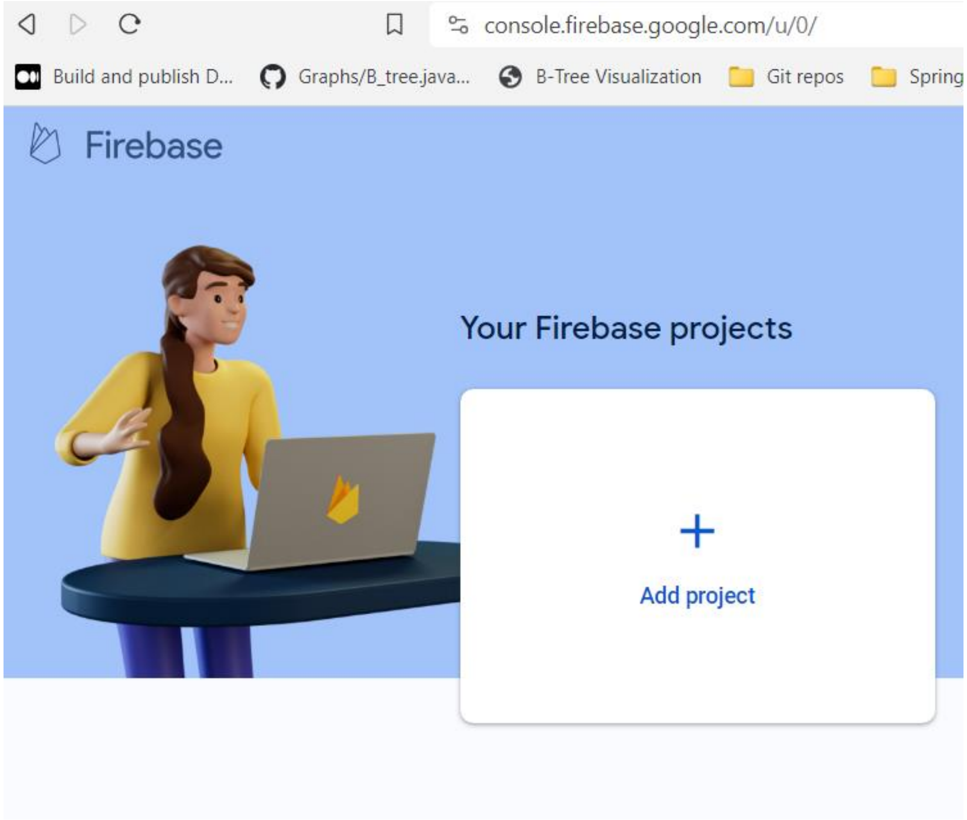


https://firebase.google.com/?gad_source=1&gclid=EAIaIQobChMI6Nfy2-b-ggMVRxqtBh3PrAJ3EAAYASAAEgIzhfD_BwE&gclsrc=aw.ds

Firebase Demo Day is here! Watch demos of how to build and grow AI-powered, full stack apps using the best of Google.

Make your app the best it can be

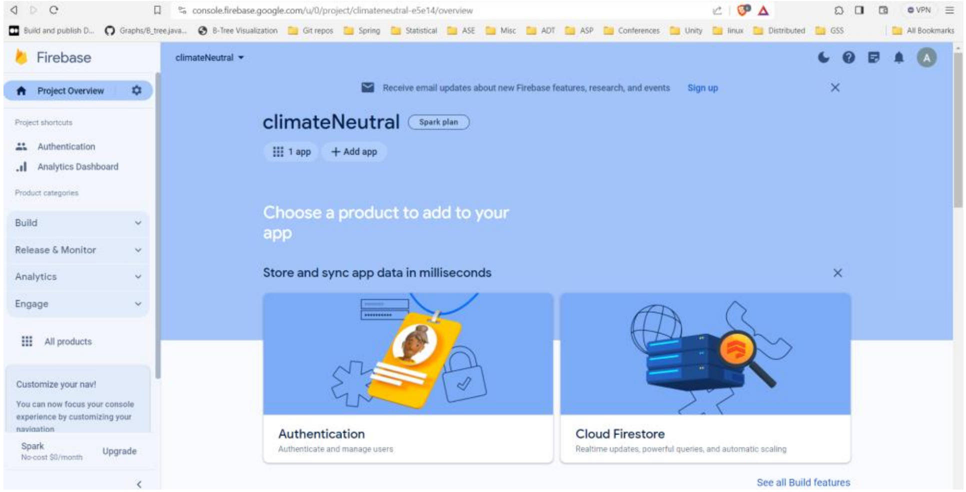
Click on + sign to add new project:



console.firebase.google.com/u/0/

Enter project name and follow steps to complete project setup:

After completing setup, it will take you to project overview page:



Receive email updates about new Firebase features, research, and events

climateNeutral

Choose a product to add to your app

Store and sync app data in milliseconds

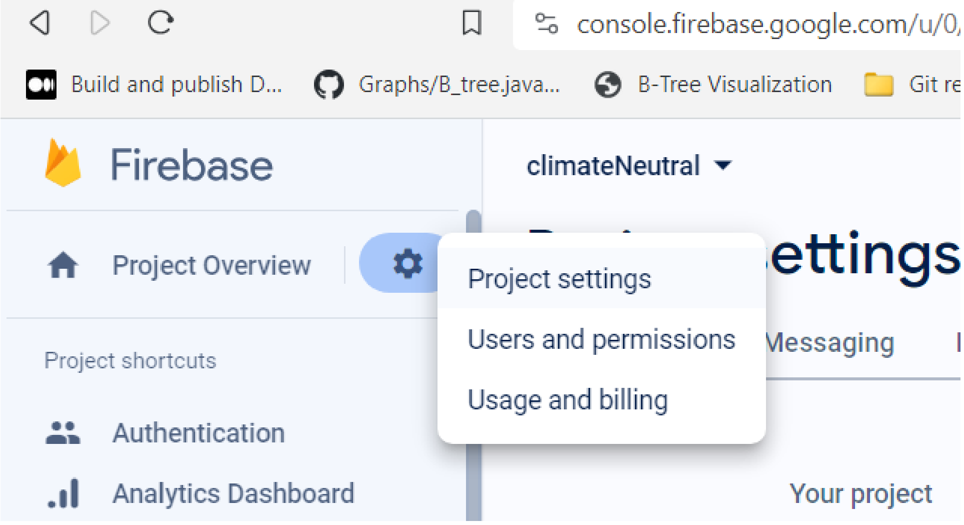
Authentication: Authenticate and manage users

Cloud Firestore: Realtime updates, powerful queries, and automatic scaling

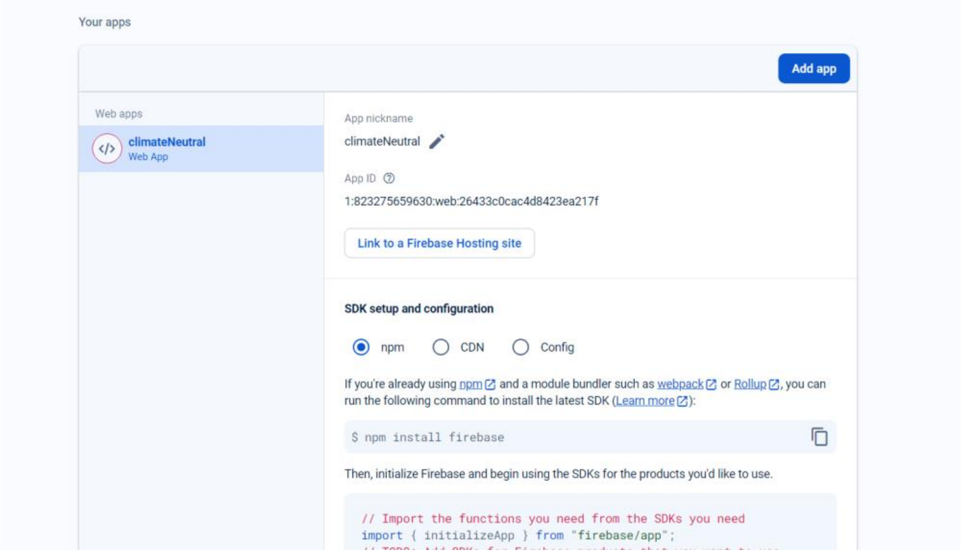
Customize your nav!

You can now focus your console experience by customizing your navigation

Click on gear and go to project settings:



Under your Apps you will find all your project configurations:



App nickname

climateNeutral

App ID

1:823275659630:web:26433c0cac4d8423ea217f

SDK setup and configuration

● npm ○ CDN ○ Config

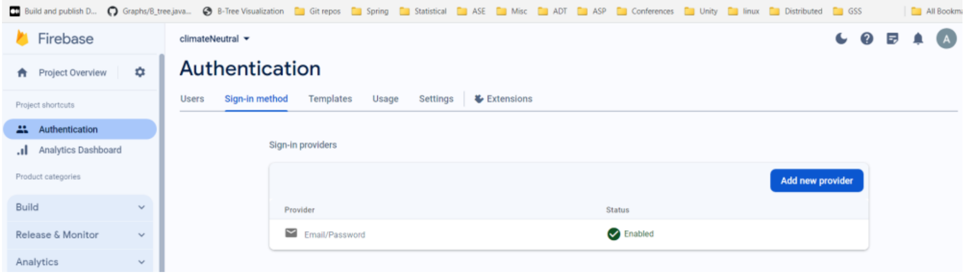
If you're already using npm and a module bundler such as webpack or Rollup, you can run the following command to install the latest SDK (Learn more):

```
$ npm install firebase
```

Then, initialize Firebase and begin using the SDKs for the products you'd like to use.

```
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
```

Go to Authentication and go to Sign in method and enable email and password:

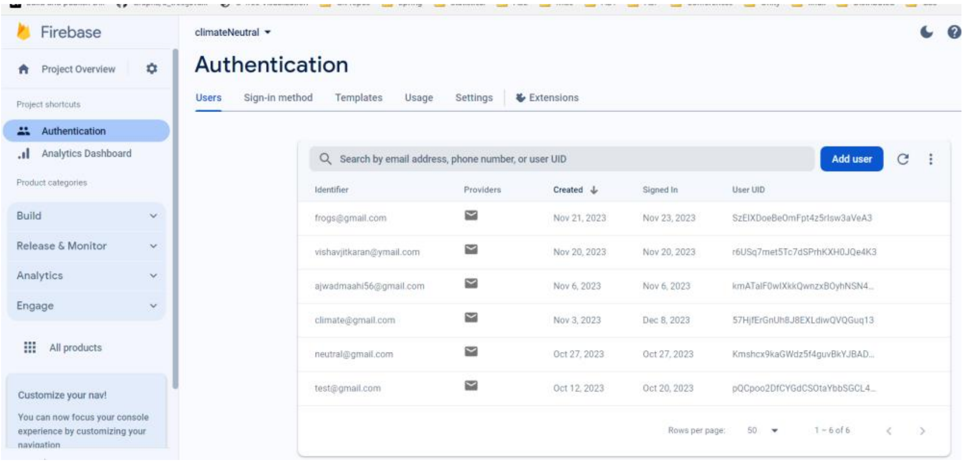


Authentication

Sign-in providers

Provider	Status
✉ Email/Password	✓ Enabled

Everything is all setup and now you can sign up with new users and liser of all registered users will be under Users Tab:



Authentication

Identifier	Providers	Created	Signed In	User UID
frogs@gmail.com	✉	Nov 21, 2023	Nov 23, 2023	SzElXDoeBeOmFpt4z5rlsw3aVeA3
vishavjitkaran@ymail.com	✉	Nov 20, 2023	Nov 20, 2023	r6USq7met5Tc7dSPrhKXH0JQe4K3
ajwadmaahi56@gmail.com	✉	Nov 6, 2023	Nov 6, 2023	kmATalF0wlXkkQwnzxBOyhNSN4...
climate@gmail.com	✉	Nov 3, 2023	Dec 8, 2023	57HjfErGnUh8J8EXLdiwQVQGuq13
neutral@gmail.com	✉	Oct 27, 2023	Oct 27, 2023	Kmshcx9kaGWdz5f4guvBkYJBAD...
test@gmail.com	✉	Oct 12, 2023	Oct 20, 2023	pQCpoo2DfCYGdCSOtaYbbSGCL4...

Rows per page: 50 1 – 6 of 6

GitHub Link: https://github.com/Manjinder-Singh/COMP8967-1-R-2023F-Internship-Project-I.git

Branch: 'tableops'

Note: This repository is kept private at the moment as the work done is a part of the client's requirements, so the team haven't kept this repository public.

In case any stakeholders from the climate neutral needs access, we are happy to provide. Please email to lnu8@uwindsor.ca

Also, the sole purpose of keeping the GitHub repository private is to ensure the work to be kept safer as it was a part of the client's work.