Deliverable 2

CENG-322 TEAM PROJECT

Team Name: Hermes Logistics

Project Name: PetasosExpress

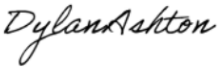
Team Number: 1

Team Members:

- Illia Myrza Popov (n01421791) - Distance and GPS sensors
- Ahmad Aljawish (n01375348) - Balance Sensor
- William Margalik (n01479878) - Motor Sensor
- Dylan Ashton (n01442206) - Proximity Sensor

Content: Page:

Members Info and Participation:

Name	ID	Signature	Effort
Illia Popov	n01421791		100%
Ahmad Aljawish	n01375348		100%
Dylan Ashton	n01442206		100%
William Margalik	n01479878		100%

Project Scope:

The technical scope of the project encompasses the development of an Android application for a Delivery Robot service. The project's plan includes creating a prototype of the app that allows users to place orders for items to be picked up and delivered by a robot. The project's completion criteria will be met when the app is fully functional and provides the following key features:

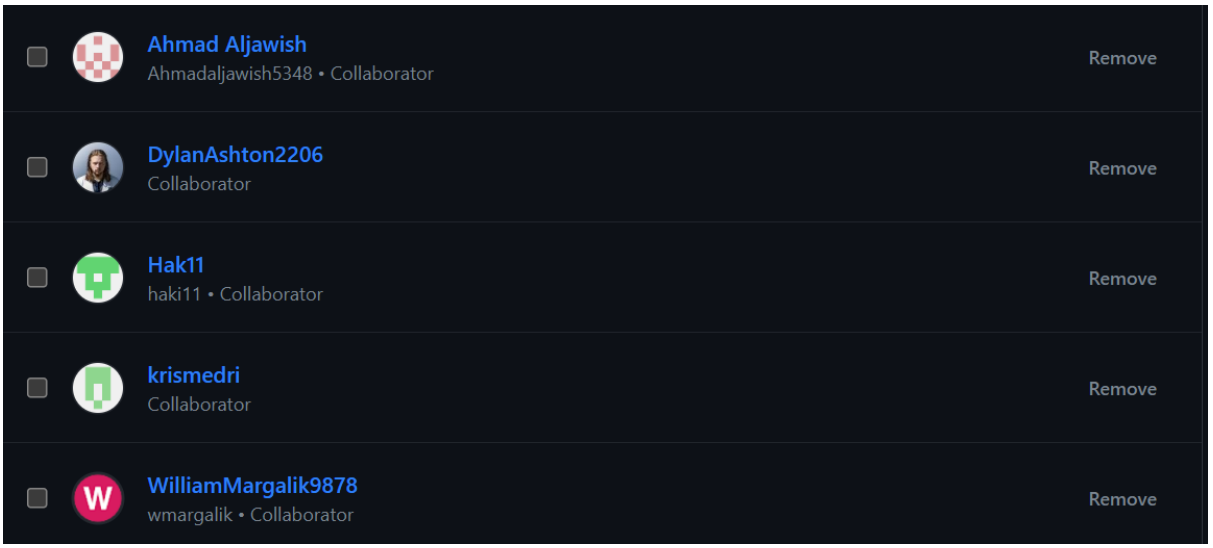
- Users can place orders for pickup and delivery.
- Users can track the robot's real-time location (GPS sensor).
- Users can access and view sensor data from the robot, including Distance Sensor, Proximity Sensor, Balance Sensor, and Motors sensor.
- The app is integrated with Firebase for database functionality.
- The app supports both English and French languages.
- All screens and components are designed with responsive layouts.

GitHub Repository Links:

GitHub Repository: https://github.com/IlliaPopov1791/PetasosExpress

GitHub Invitation Confirmation:

Repository Invites of Software Project and Hardware Production professors, and all team members (Taken by IlliaPopov1791):



GitHub Strategy:

Our GitHub strategy focuses on effective collaboration, version control, and a streamlined development process. It consists of a few components:

1. Repository Structure: We've set up a well-organized repository structure with clear naming conventions. This structure makes it easy for team members to find and contribute to specific aspects of the project.

2. Branching Strategy: We follow a branching strategy that focuses on keeping work in a `main` branch for stable code. As we have a small team of developers (each focusing on different files) it is possible for us to avoid creating various branches that overcomplicate the project management by making sure that all members of the team pull before they commit and push.

3. Issue Tracking: GitHub Issues are used for tracking tasks, bugs, and feature requests. We encourage team members to create detailed issues, assign them, and link them to relevant PRs. This keeps everyone aligned on project goals and progress.

4. Feedback handling: Making use of pull requests for code review, criticism, and integrating updates into the main branch

Agile Management Details (For this deliverable):

Theme 1: User Interface Development:

Epic 2: User Interface Design

Story 1: Creating an UI for General Purpose Screens:

- Task 1: Creation of Login Screen UI (edit fields from usernameand password, button to login);
- Task 2: Development of the Setting Screen UI (Should have at least 4 features);
- Task 3: Home Fragment UI development;
- Task 4: Splash Screen design fixes from feedback;

Story 2: Creating an UI for Sensor Screens:

- Task 1: Creating GPS sensor Screen UI (must include map to track the robot);
- Task 2: Developing Distance Sensor Screen UI;
- Task 3: Designing the Proximity Sensor Screen UI;
- Task 4: Develop a detailed design for Balance Sensor Screen;
- Task 5: Create design for motors' sensor screen;

Story 3: Creating a landscape version of Screens UI:

- Task 1: Transferring Distance Sensor Screen UI to landscape format;
- Task 2: Redesign the UI of Proximity Sensor Screen for landscape;
- Task 3: Develop a detailed design for Balance Sensor Screen;
- Task 4: Create design for motors' sensor screen;
- Task 5: Develop Landscape version of Home screen;
- Task 6: Transfer Setting screen design to Landscape format;
- Task 7: Creating Landscape variation of the Login Screen;
- Task 8: Develop Splash Screen for Landscape orientation;

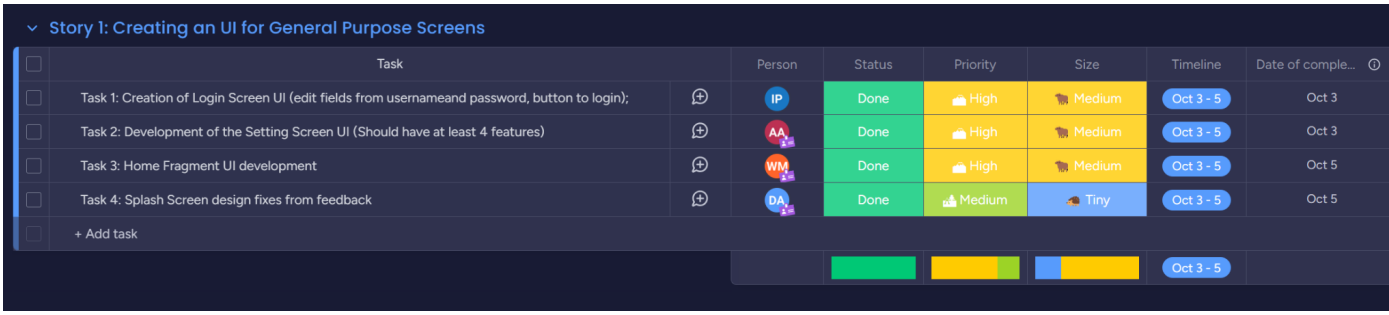
Story 4: Introducing a Firebase to the project and implementing authentication with its help:

- Task 1: Creating a Firebase Project and binding the Application to it.
- Task 2: Implement login screen functionality using FireBase Authentication database.
- Task 3: Designing a Registration Screen UI;
- Task 4: Implement registration process using FireBase.

Story 5: Implementation of additional top menu options:

- Task 1: Adding the help option to the top menu to contact a call centre(requires permission).
- Task 2: Implement runtime permission for the Call Centre functionality;
- Task 3: Adding the settings option that opens the settings screen.
- Task 4: Adding the location option that opens the GPS sensor screen.

Monday Screenshots:



Story 1: Creating an UI for General Purpose Screens

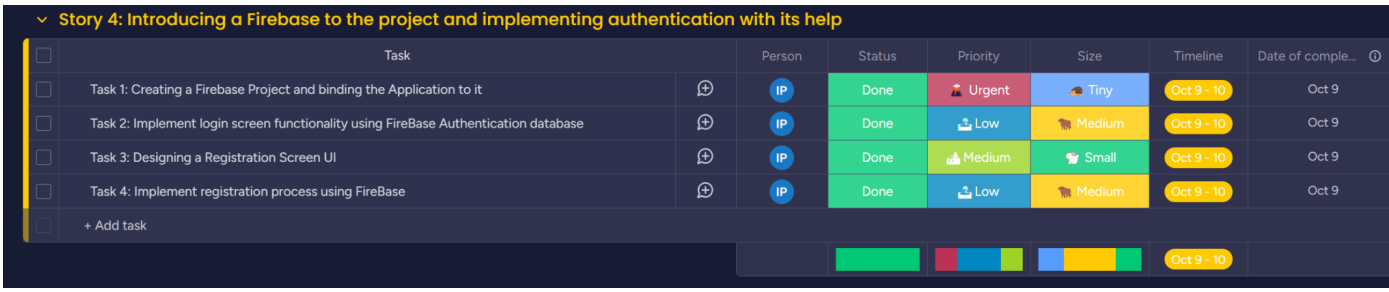
Task	Person	Status	Priority	Size	Timeline	Date of comple...
Task 1: Creation of Login Screen UI (edit fields from usernameand password, button to login);	IP	Done	High	Medium	Oct 3 - 5	Oct 3
Task 2: Development of the Setting Screen UI (Should have at least 4 features)	AA	Done	High	Medium	Oct 3 - 5	Oct 3
Task 3: Home Fragment UI development	WM	Done	High	Medium	Oct 3 - 5	Oct 5
Task 4: Splash Screen design fixes from feedback	DA	Done	Medium	Tiny	Oct 3 - 5	Oct 5
+ Add task						
					Oct 3 - 5	

Story 2: Creating an UI for Sensor Screens

Task	Person	Status	Priority	Size	Timeline	Date of comple...
Task 1: Creating GPS sensor Screen UI (must include map to track the robot)	IP	Done	Medium	Medium	Oct 5 - 6	Oct 6
Task 2: Developing Distance Sensor Screen UI	IP	Done	High	Medium	Oct 5 - 6	Oct 5
Task 3: Designing the Proximity Sensor Screen UI	DA	Done	High	Medium	Oct 5 - 6	Oct 5
Task 4: Develop a detailed design for Balance Sensor Screen	AA	Done	High	Medium	Oct 5 - 6	Oct 5
Task 5: Create design for motors' sensor screen	WM	Done	High	Medium	Oct 5 - 6	Oct 6
+ Add task						
					Oct 5 - 6	

Story 3: Creating a landscape version of Screens UI

Task	Person	Status	Priority	Size	Timeline	Date of comple...
Task 1: Transferring Distance Sensor Screen UI to landscape format	IP	Done	Low	Small	Oct 6 - 9	Oct 9
Task 2: Redesign the UI of Proximity Sensor Screen for landscape	DA	Done	Low	Small	Oct 6 - 9	Oct 6
Task 3: Develop a detailed design for Balance Sensor Screen	AA	Done	Low	Small	Oct 6 - 9	Oct 9
Task 4: Create design for motors' sensor landscape screen	WM	Done	Low	Small	Oct 6 - 9	Oct 9
Task 5: Develop Landscape version of Home screen	WM	Done	High	Small	Oct 6 - 9	Oct 9
Task 6: Transfer Setting screen design to Landscape format	AA	Done	Medium	Small	Oct 6 - 9	Oct 9
Task 7: Creating Landscape variation of the Login Screen	DA	Done	High	Small	Oct 6 - 9	Oct 9
Task 8: Develop Splash Screen for Landscape orientation	DA	Done	High	Small	Oct 6 - 9	Oct 9
+ Add task						
					Oct 6 - 9	



Story 4: Introducing a Firebase to the project and implementing authentication with its help

Task	Person	Status	Priority	Size	Timeline	Date of comple...
Task 1: Creating a Firebase Project and binding the Application to it	IP	Done	Urgent	Tiny	Oct 9 - 10	Oct 9
Task 2: Implement login screen functionality using FireBase Authentication database	IP	Done	Low	Medium	Oct 9 - 10	Oct 9
Task 3: Designing a Registration Screen UI	IP	Done	Medium	Small	Oct 9 - 10	Oct 9
Task 4: Implement registration process using FireBase	IP	Done	Low	Medium	Oct 9 - 10	Oct 9
+ Add task						
					Oct 9 - 10	

Story 5: Implementation of additional top menu options

Task	Person	Status	Priority	Size	Timeline	Date of comple...
Task 1: Adding the help option to the top menu to contact a call canter(requires permission)	AA	Done	Medium	Tiny	Oct 9 - 10	Oct 9
Task 2: Implement runtime permission for the Call Centre functionality	AA	Done	Medium	Small	Oct 9 - 10	Oct 9
Task 3: Adding the settings option that opens the settings screen	AA	Done	Medium	Tiny	Oct 9 - 10	Oct 9
Task 4: Adding the location option that opens the GPS sensor screen	AA	Done	Medium	Tiny	Oct 9 - 10	Oct 10
+ Add task						
					Oct 9 - 10	

Definition of Done (DoD):

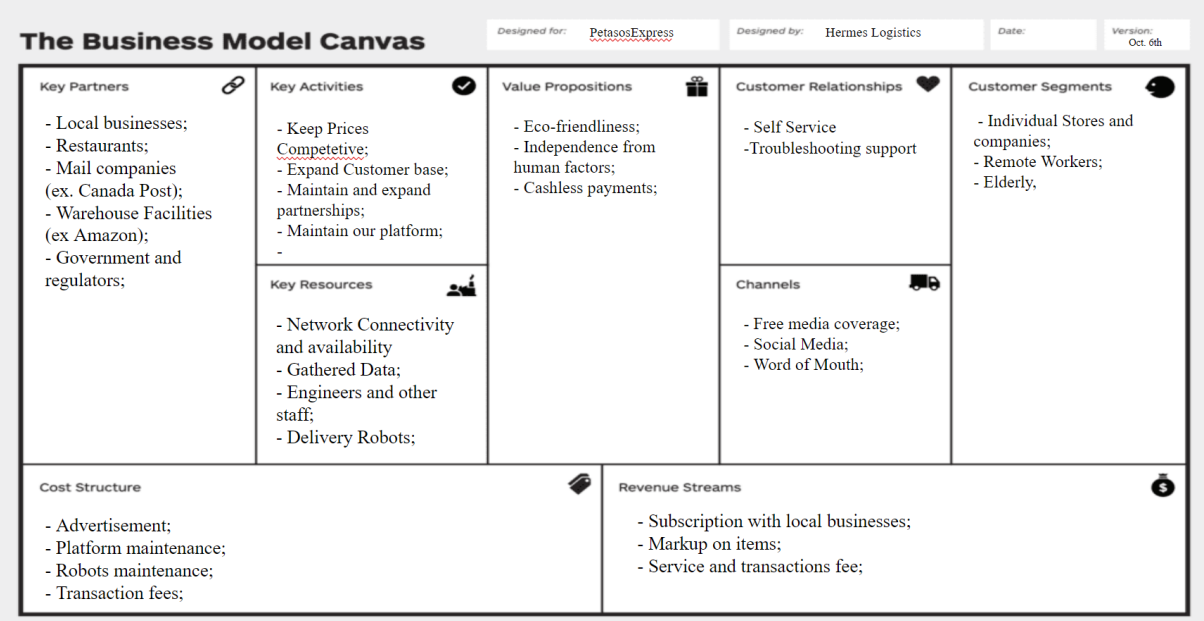
For Task:

When the task goal is reached (UI design finished, functionality implemented) and changes are committed and pushed to the master branch.

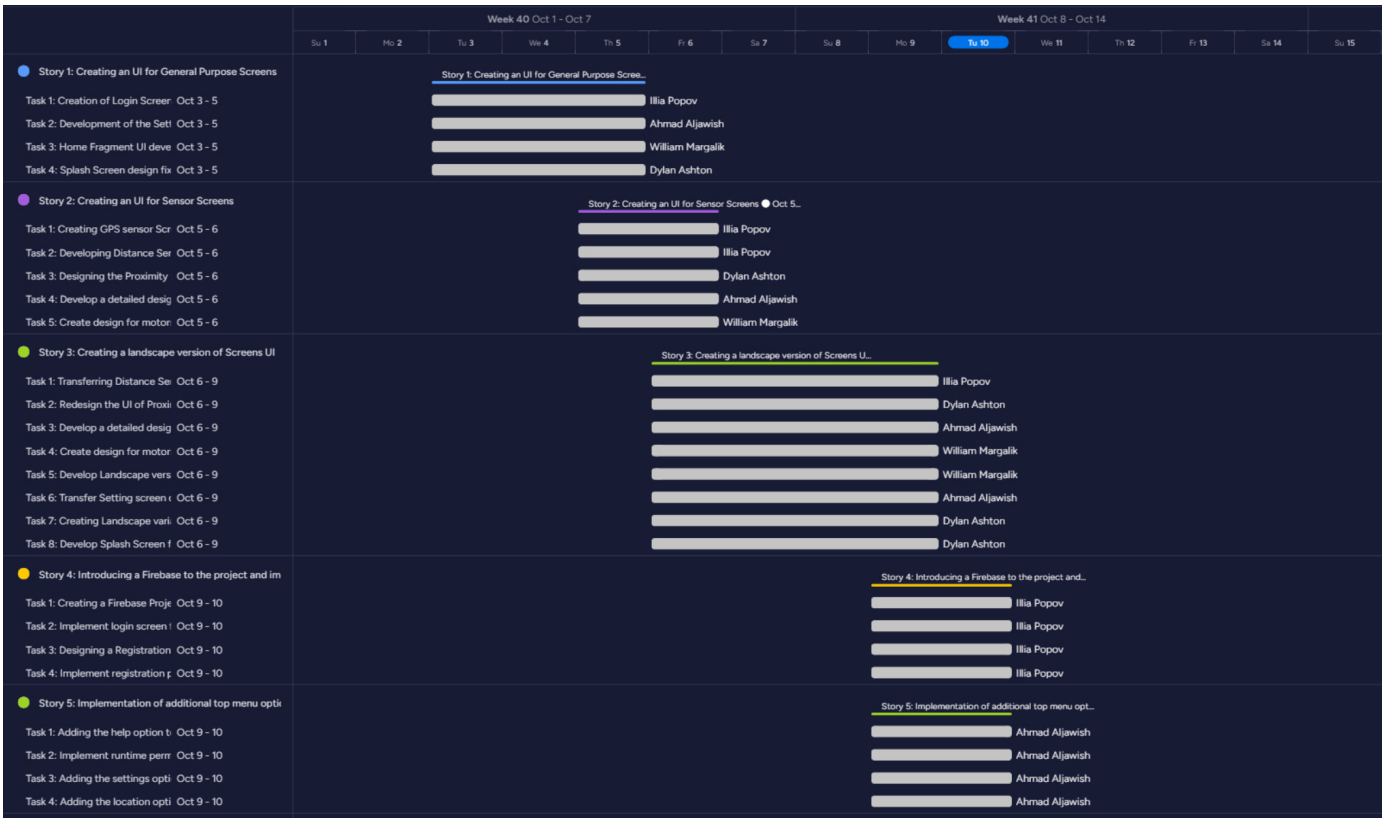
For Project:

For our Delivery Robot, the Definition of Done (DoD) signifies the successful implementation of features such as efficient order handling, accurate navigation, and safe package delivery. It encompasses code development according to established coding standards, the completion of unit tests with satisfactory results, and the incorporation of vital functionalities. To ensure robust system performance, comprehensive integration and system testing procedures are executed. The DoD also includes rigorous code reviews to maintain quality standards, address any issues, and update both the code and technical documentation as needed. Security measures are taken into account, and performance optimization is considered a vital aspect. We conduct user acceptability testing to validate the system thoroughly, taking into account user feedback for enhanced satisfaction. The protection of existing functionality is assured through regression testing. In the case of our Delivery Robot, stakeholder evaluation and approval are essential for validating and endorsing its delivery and operational capabilities.

Business Model Canvas:

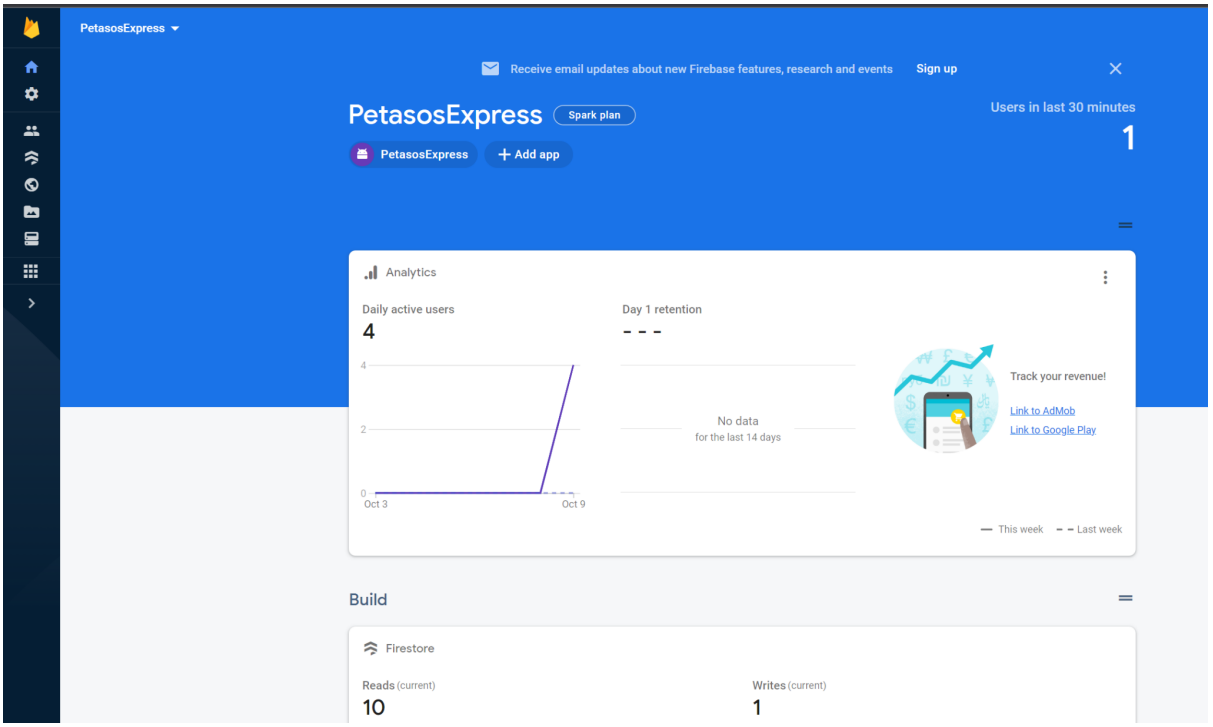


Gantt Chart of tasks:

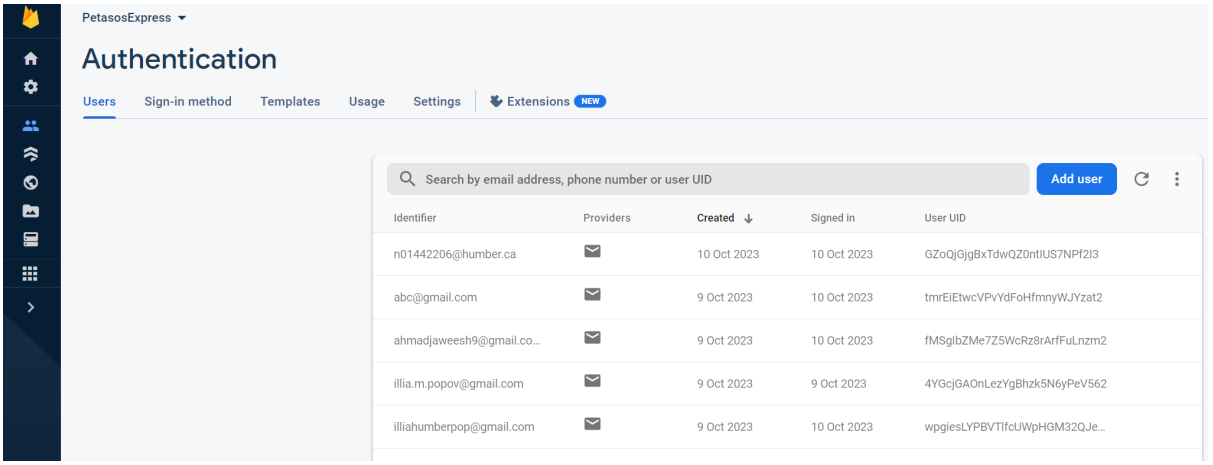


FireBase Database Confirmation:

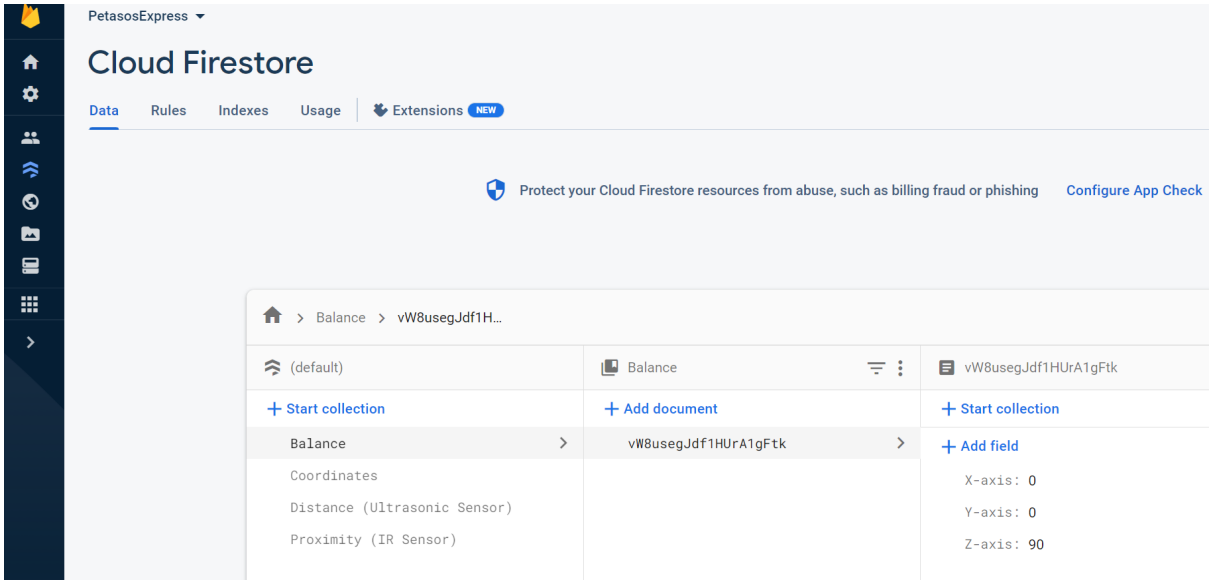
Project Confirmation:



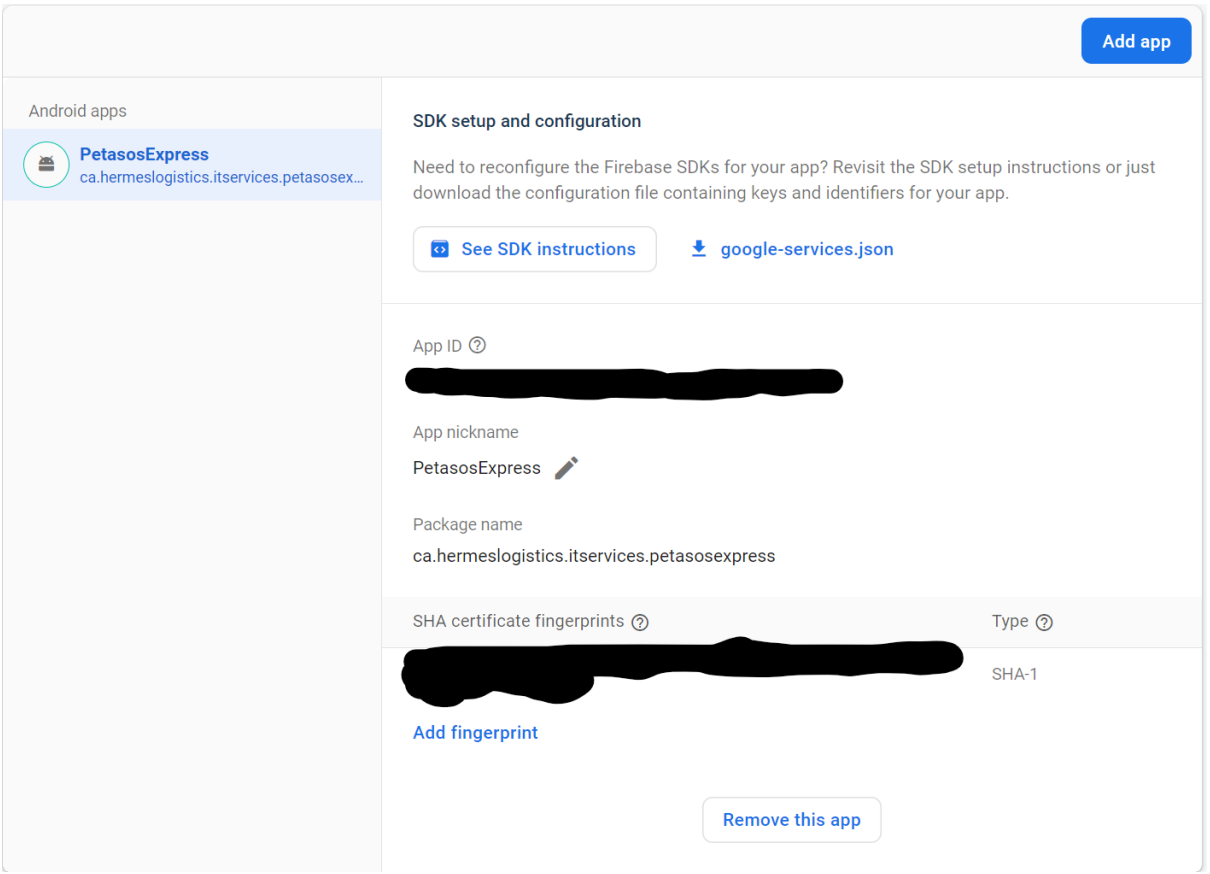
Authentication Database:



FireStore Database (Will be used for simulation instead of real time databases for now):



App Info (SHA-1 and Apple ID are hidden for security):



▪ We opted for Firebase as our database due to its impressive real-time data synchronisation capabilities (For Sensor data reading) and a possibility to use FireStore to simulate data (while we don’t have access to our sensors).

▪ The seamless integration of our Android app with Firebase ensures the smooth transfer of data between the application and the database.

▪ Thanks to Firebase's scalable architecture, the database can handle the increasing number of users and the constant flow of data from sensors and smart bins.

▪ Firebase's robust database capabilities empower us to efficiently store and retrieve customer reviews, ultimately enhancing the user experience.

Progress Since Deliverable 1:

- The design for most screens’ UI was finished;
- All screens UI got a landscape version;
- Setting Screen was added with partial functionality (Portrait Lock and Night/Day themes);
- FireBase was binded to the App (consistent dataflow with database);
- Login and Registration screens were added to the app with functional Authentication;
- Additional Top Menu options implemented;

Daily Standup:

Date	Discussions
03 Oct 2023	**Story 1:** Creating a UI for General Purpose Screens **Illia:** Worked on the creation of login screen UI **Ahmad**: Worked on the development of the setting screen UI **William:** Worked on home screen UI **Dylan:** Started developing and editing splash screen design after team feedback
04 Oct 2023	**Story 2:** Creating a UI for Sensor Screens **Illia:** Created gps screen UI /developed distance sensor UI **Ahmad:** Developed a detailed design for balance sensor **William:** Created design for motors UI **Dylan:** Developed the proximity sensor UI
05 Oct 2023	**Story 3:** Creating a landscape version of Screens UI **Illia:** Worked on the landscape design of distance sensor **Ahmad:** Made a detail design for balance sensor and worked on the landscape design for setting screen **William:** Updated the UI for home screen and motor sensor **Dylan:** Fixed bug preventing build and tweaked proximity sensor UI
06 Oct, 2023	**Story 4:** Introducing a Firebase to the project and implementing authentication with its help **Illia:** Created a firebase project and binded the application to it - Implemented the login screen functionality using firebase authentication **Ahmad:** Implemented runtime permission for the call centre functionality **William:** Brainstormed ideas for the presentation slides **Dylan:** Researched values needed for my sensor in database
09 Oct 2023	**Story 5:** Implementation of additional top menu options **Illia:** Designed a UI for the registration screen and implemented registration process using firebase **Ahmad:** Added the help option to the top menu to contact the call centre and added the setting option that opens the setting screen and added an option that takes the user to the gps sensor **William:** Removed all potential hardcoded text and remade the UI for the home Screen **Dylan:** Worked on business model canvas and made various landscape screens
10 Oct 2023	**Business model, stories/tasks, and DoD –** Completed **Illia:** Written a report, transferred Agile plan to Monday.com, wrote Gannt chart. **Ahmad:** Worked on the deliverable 2 pdf and made sure the menu functionality was properly working and edited the presentation design **William:** Configured landscape design for home and motor sensor, as well as created and finalised the presentation slides **Dylan:** Made changes based on feedback from deliverable 1