

# IOT – VR/AR Visualized Space

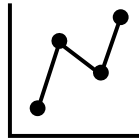
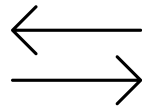
MIND LAB TRANSLATORS UG – T2 2021

# Project: Vision Space

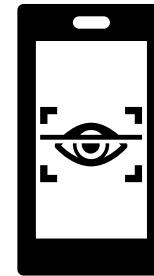
AN APPLICATION DESIGNED FOR  
DESIGNERS/ARCHITECTS

# What is Vision Space

# Project Overview



Using eye tracking technologies,  
display how a 3D space is  
traversed/viewed by its users



To Develop a mobile application which  
works off the collected data to produce  
visuals to assist designers on how people  
interact within an environment space



Adobe XD



Google Firebase



Android Studio

# Project Tech Stack

# Iteration 2 Deliverables

Contacted the Project Owner to present the planned deliverables for iteration 2

Finalising all mock up designs for each planned page

Validating user data (Verifying user has created an account)

Setting up backend code ready to accept functionality for future iterations

Adding all the designed pages from Adobe XD to XML files into Android Studio

# Iteration 2 Aim + Backlog

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## Iteration 2 Aim/Goals:

To be able to implement all planned designed pages into the project alongside setting up the backend code to accept functionality to come in future iterations/trimesters

Finalising Mock up designs for each planned page

Preparing backend code for functionality implementation

- Setting
- Session Selection (Data hub)
- Session Playback
- User Profile Page

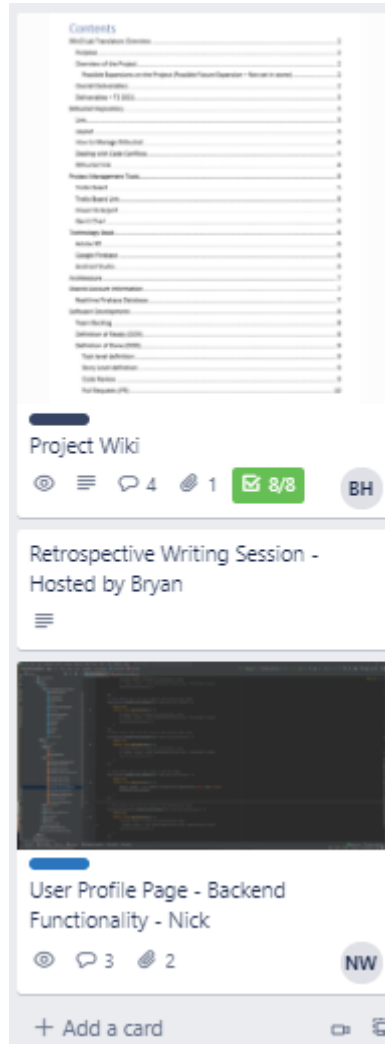
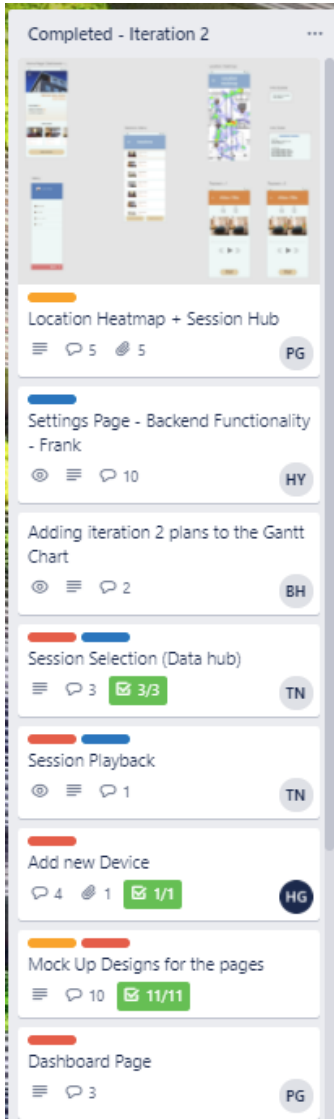
Adding Final Pages from Adobe XD to XML Files in Android Studio

- Session Selection
- Session playback
- Add new Device
- Dashboard Re-design (Previous plan wasn't possible to implement)
- Location Heatmap
- Device Connect
- Edit Profile Page

Creation of the Project Wiki

Creating a Menu Overlay (Slide out menu)

Validation checks for data stored in the Database



# T2 – Iteration 2 Completed Tasks





# Work Done By Each Team

# UI/UX Design Team



Finished Adobe  
XD mock-ups



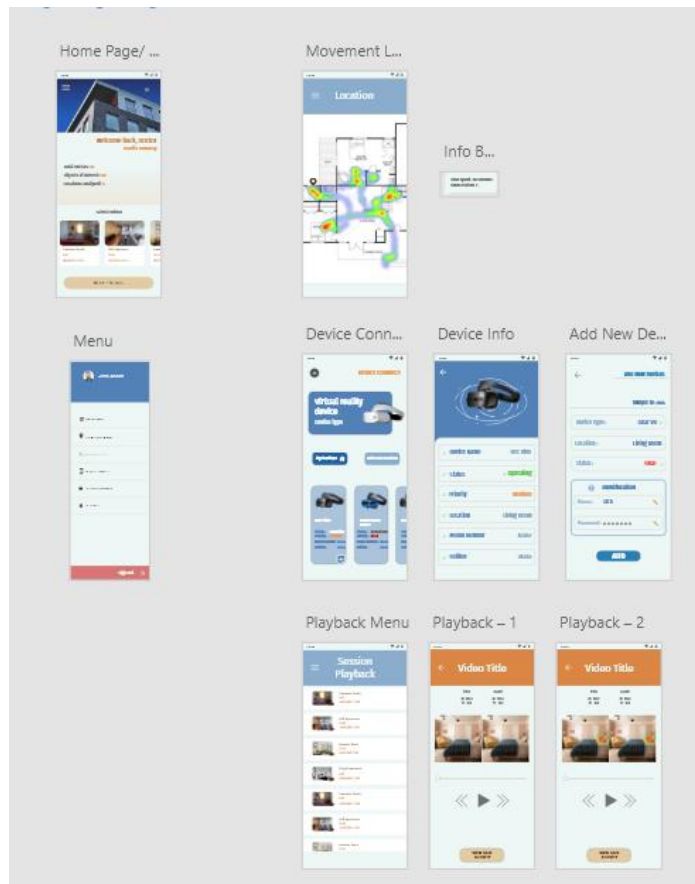
Android studio  
Implementation

Adobe XD link to be provided in chat for panel to explore at their leisure

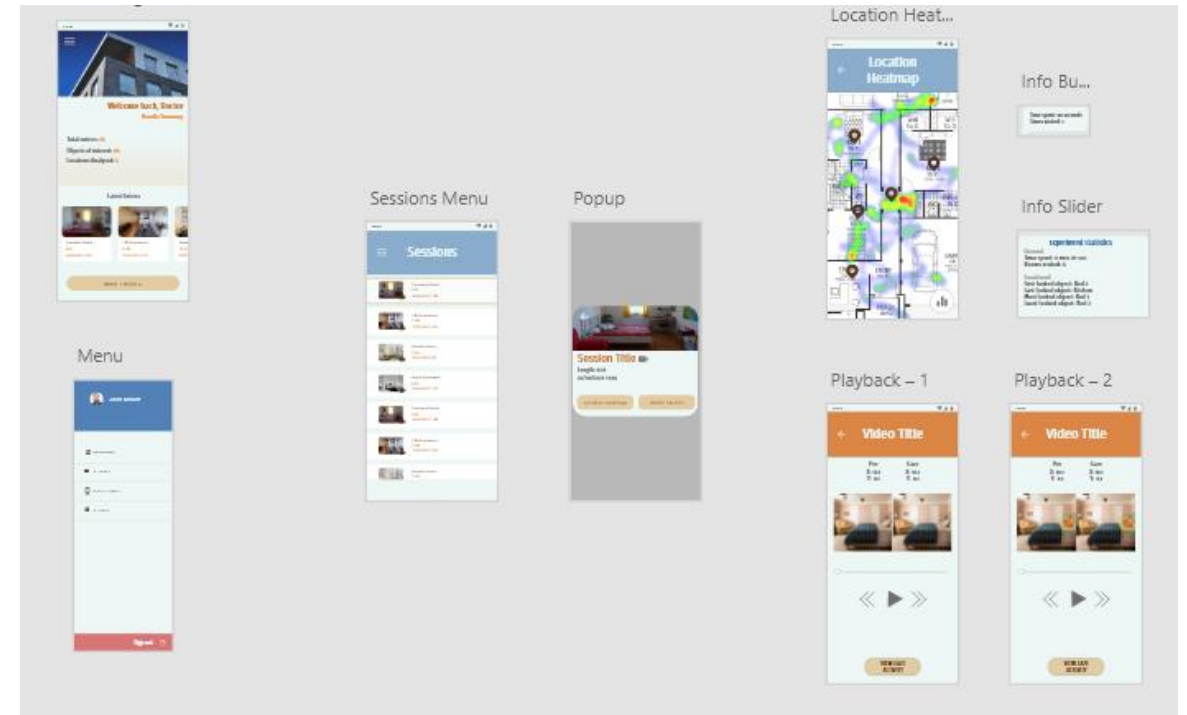
<https://xd.adobe.com/view/cc72126b-bca3-4f76-8d32-5f78a57465bc-9921/>

# UI/UX Design Team

Session menu restructure  
(With updated Location Heatmap)



Adobe XD Project Before

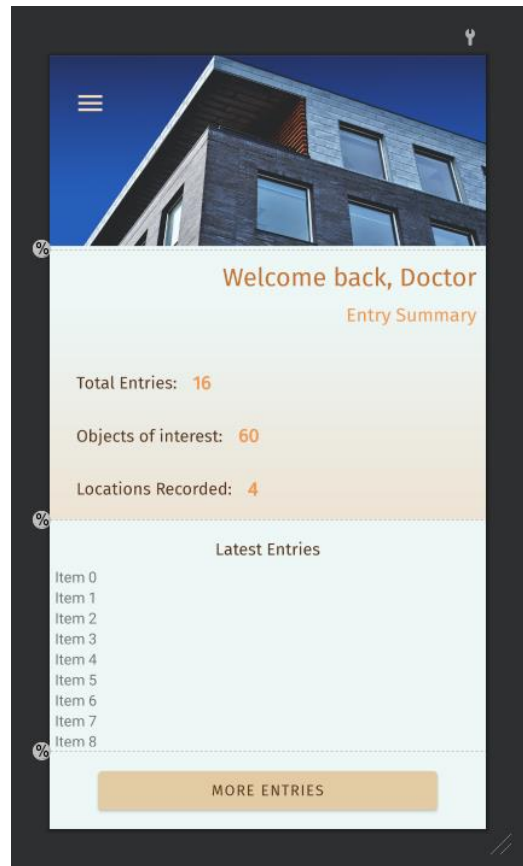


Adobe XD Project Now

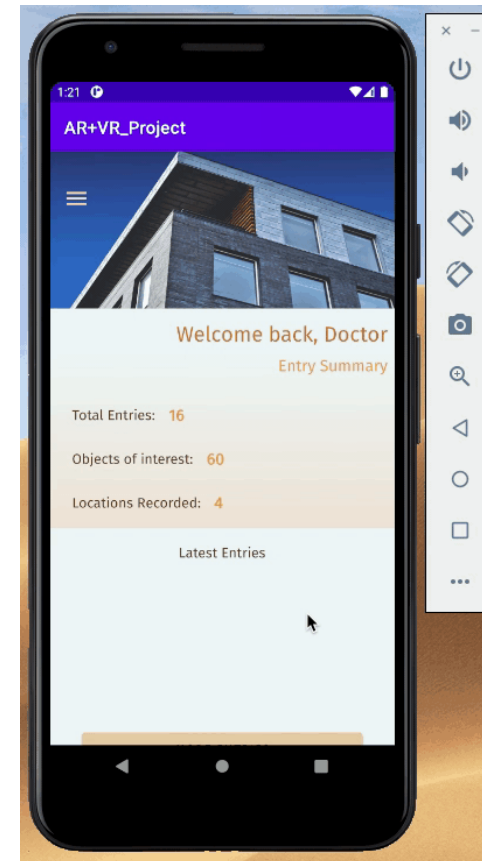


# UI/UX Design Team

Android Studio layouts



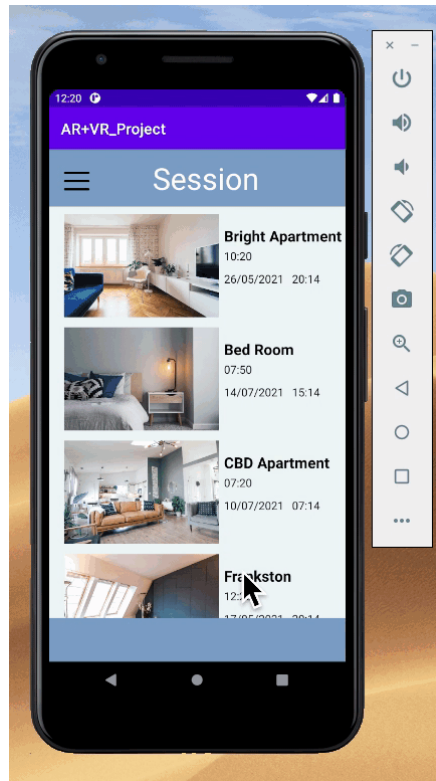
Dashboard



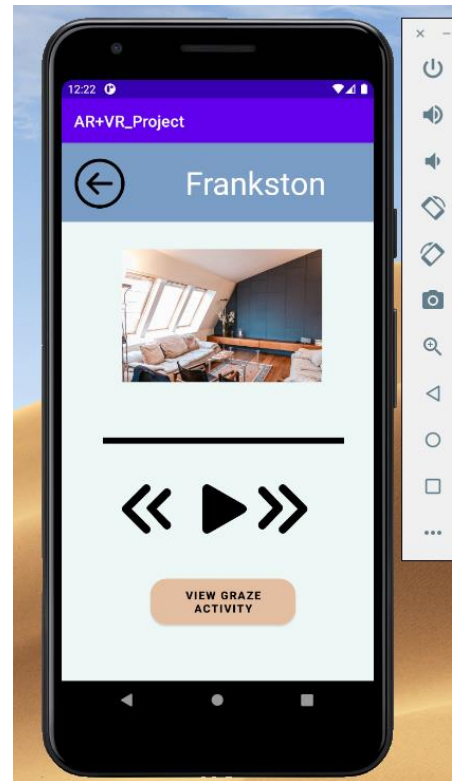
Menu overlay

# UI/UX Design Team

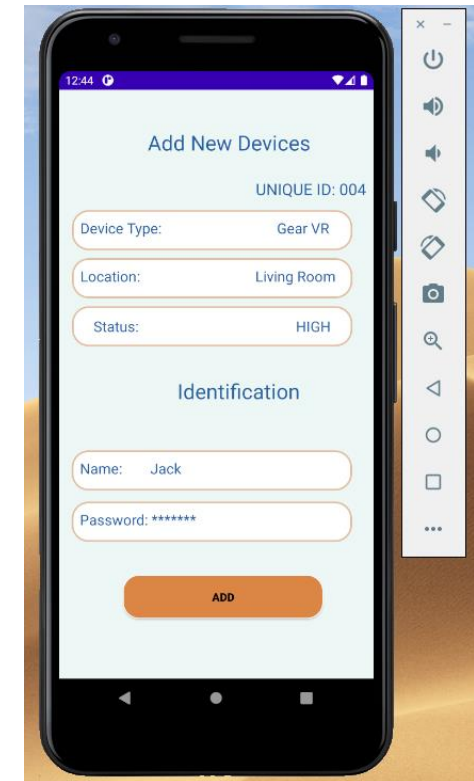
Android Studio layouts



Session Selection



Session Playback



Add Device

# UI/UX Design Team

Android Studio layouts

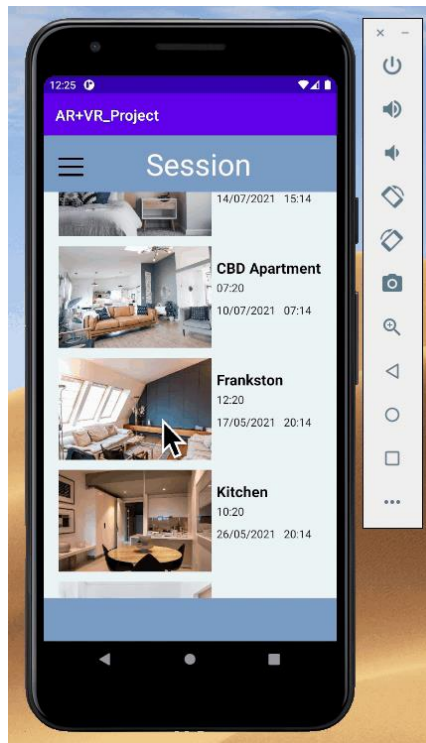


Profile page



Device Connect

# Software Team



Link between Session Selection and Session Playback

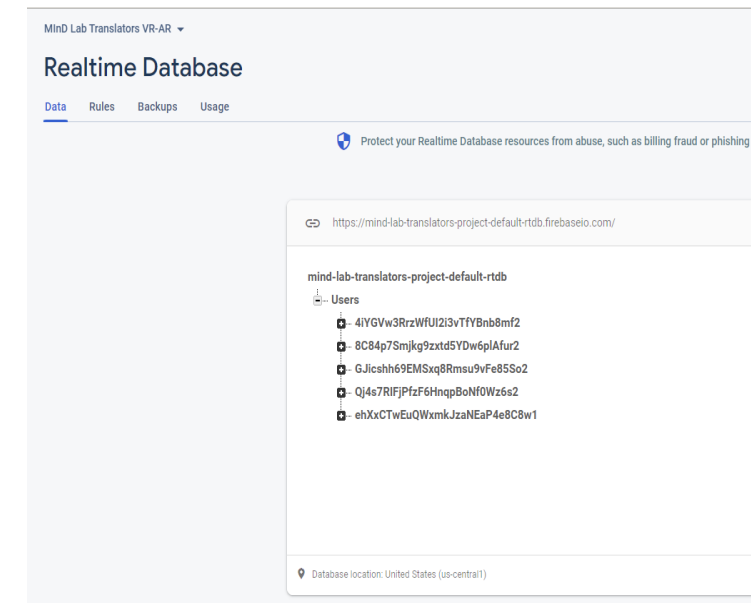
```
Me_button.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //using Intent to going to Me.class
        Intent intent = new Intent(Settings.this, Me.class);
        startActivity(intent);
    }
});

General_button.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //using Intent to going to General.class
        Intent intent = new Intent(Settings.this, General.class);
        startActivity(intent);
    }
});

Account_button.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //using Intent to going to Account.class
        Intent intent = new Intent(Settings.this, Account.class);
        startActivity(intent);
    }
});

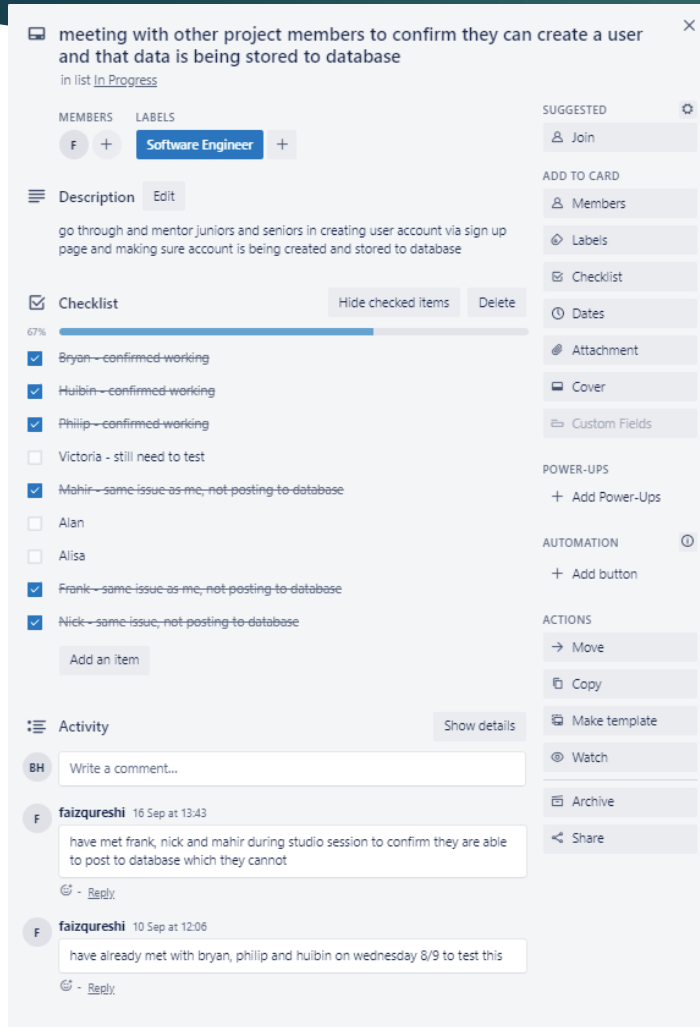
Privacy_button.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        //using Intent to going to Privacy.class
        Intent intent = new Intent(Settings.this, Privacy.class);
        startActivity(intent);
    }
});
});
```

Preparing backend code for functionality in future iterations



Data Validation for the Sign in Process

# Software Team – Data validation



The main challenges we faced in the Data Validation task were:

- Connectivity issues with some students not being able to post to the google database.
- Data validations for the sign in and sign-up page causing app crashes and bugs.
- Hardware issues with code running on one computer and not working on others



# Trello Board

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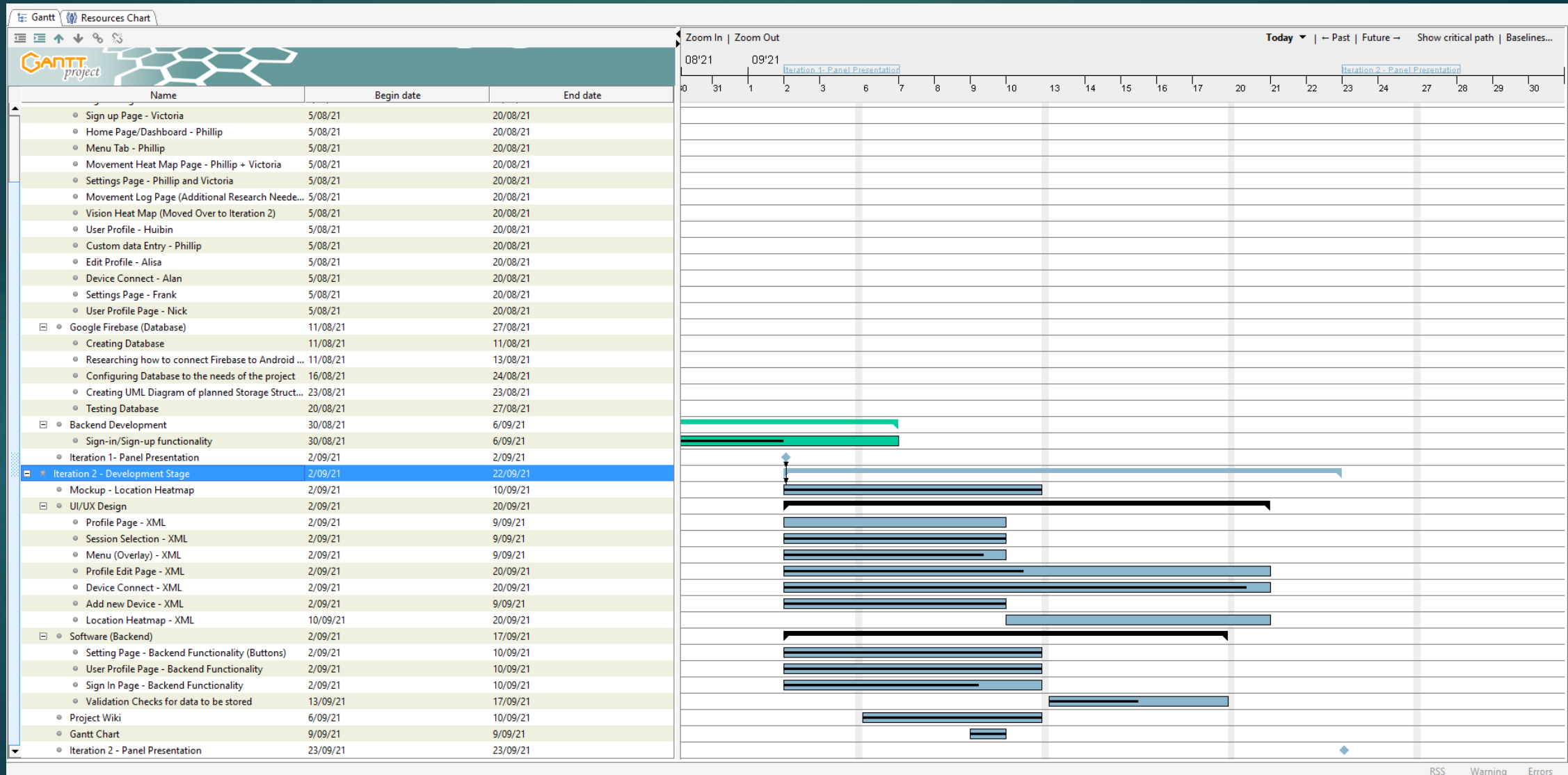
This screenshot displays a Trello board for a project named "Mind Lab Translators - VR/AR Trello". The board is organized into several columns representing different stages of the project workflow:

- Product Vision:** Contains cards describing the project goals, such as "To be able to use both Virtual Reality and a Mobile Application that allows designers to visualise people's engagement through space." and "Mobile Application - Click For More Details".
- Product Backlog:** Lists tasks to be completed, including "password reset design xml page", "password reset backend java code", "Implement Adobe XD Pages into Android Studio", "Page Functionality - (Backend code)", "Mobile phone data collection", "Displaying Phone activity data to application", "Converting Data collected into human readable graphs/information", "VR/AR Data Collection", "Displaying Eye tracking data", "Displaying Movement Data", and "Creating Terms and Conditions and talking about what/why data is being collected".
- Iteration 2 Backlog:** Shows tasks for the current iteration, such as "User testing on Adobe XD Mock Up" and "Consent Form For User testing Purposes".
- In Progress:** Contains cards for tasks currently being worked on, including "Location Heatmap", "meeting with other project members to confirm they can create a user and that data is being stored to database", "Device Connect", and "Profile Edit Page".
- Waiting on Approval:** Lists tasks pending approval, such as "Validation Checks for data being stored to Google Firebase" and "Backend code functionality for Sign In Page".
- Completed - Iteration 2:** Shows tasks completed in the current iteration, including "Add new Device", "Mock Up Designs for the pages", and "Dashboard Page".
- Completed - Iteration 1:** Lists tasks completed in the previous iteration, such as "Home Page/Dashboard", "User Profile Page - Nick", "Adobe XD Transition Animations", "Sign In Page", "Sign Up/Create Account Page", "Home Page/Dashboard", "Menu Tab", "Settings", "User Profile", "Session Playback", "Edit Profile", and "Device Connect".
- Completed - Iteration 0:** Shows tasks completed in the previous iteration, including "Finalizing last project".

The board also features a sidebar on the left with a search bar, a "Jump to..." dropdown, and a "Product Vision" section. The top of the board displays the board name, visibility settings (Public), and a list of board members (BH, AN, B, D, +11). The bottom of the board shows a "Automation" section and a "Show menu" button.

# Iteration 2 - Gantt Chart

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# Team Contribution

Team Member	Junior /Senior	Major Contribution	Hours Recorded
Bryan Hew - HD	Senior	<ul style="list-style-type: none"><li>- Planned out and delegated tasks to commence in iteration 2</li><li>- Hosted all the studio sessions</li><li>- Conducted Code Review for the Squad to ensure that all code is up to a professional standard including comments and following proper coding conventions</li><li>- Updated Gantt Chart to accommodate tasks planned for iteration 2 alongside their expected completion date</li><li>- Troubleshooting code with squad members with their tasks</li><li>- Working alongside Faiz in sorting out his task of data validation and attempting to work around hardware issues.</li></ul>	134 Hours
Mahir Abrar - D	Senior	<ul style="list-style-type: none"><li>- Collaborative work with the design team for new page creations</li><li>- Designed and implemented navigation menu page in Android Studio</li><li>- Troubleshooting code with senior team members.</li><li>- Regular discussions with Seniors for the progression of the project</li><li>- Mentored the juniors to guide them to their assigned task completion</li></ul>	104 Hours
Phillip Georgoudakis - HD	Senior	<ul style="list-style-type: none"><li>- App planning and mockup managing in Adobe XD and Android Studio</li><li>- Collaborated with Bryan to create tasks for everyone</li><li>- Assigned Design tasks to all the Design team</li><li>- Helped with Design pull request resolutions</li><li>- Took part in Junior mentoring sessions</li><li>- Created Dashboard page in Adobe XD</li><li>- Updated some pages in the Adobe XD file</li></ul>	108 Hours
Faiz Qureshi - D	Senior	<ul style="list-style-type: none"><li>- Worked alongside Bryan to monitor and resolve issues related to users not being able to post new data into google firebase</li><li>-Created the backend code for the sign in page</li><li>- created validations to check all fields match database and are not empty for sign in and sign-up pages</li><li>-Mentored and upskilled juniors in setting up Android Studio and guiding them with assigned tasks after initial feedback from code reviews along with troubleshooting technical issues with Android Studio</li></ul>	105.5hrs
HUIBIN GAO - C	Senior	<ul style="list-style-type: none"><li>-Planning and mockup managing in Adobe XD with Phillip and Victoria</li><li>-Created user profile mockup page</li><li>-Discussed with Phillip and Victoria about next step design job.</li><li>-Created Add new device layout page in Android Studio</li><li>-Assigned Design tasks to all the design team</li><li>-Will do the user test after Iteration 2 presentation</li></ul>	110 Hours
Victoria Nguyen - D	Senior	<ul style="list-style-type: none"><li>- Created Session selection/ Session playback in both back-end and front-end code.</li><li>- Collaborated with design team when created new functionality</li><li>- Mentoring juniors/ senior and assisting junior about their current task and helping fix issues with their code.</li><li>- Discussing and meeting with design team member about design features of the app.</li></ul>	133 Hours

# Team Contribution

Team Member	Junior /Senior	Major Contribution	Hours Recorded
Zifeng Wang (Nick) - C	Junior	<ul style="list-style-type: none"><li>- modify the User Profile page layout in android studio</li><li>- Created the backend code for the User Profile page</li><li>- Tested all the new code of the User Profile page to make sure they are all working properly</li><li>- Meeting with Frank and Bryan to fix the code error</li></ul>	83.17 Hours
Haoyang Yu (Frank) - C	Junior	<ul style="list-style-type: none"><li>- Redo the setting page layout in android studio</li><li>- Created the backend code for the setting page</li><li>- Tested all the button in the setting page to make sure all the button link to the right page and working properly.</li><li>- Helped team members fix the code</li><li>- Will finish create the Location Heatmap soon</li></ul>	85.5 Hours
Zekun Liu (Alan) - C	Junior	<ul style="list-style-type: none"><li>- Change and update the device file page layout in Android studio</li><li>-Working on creating backend code on the test equipment page</li><li>-Video with Victoria and Bryan to discuss and help fix code errors</li><li>-Help team members explain and solve some code problems.</li></ul>	99.33Hours
Boyang Wang (Alisa) - P	Junior	<ul style="list-style-type: none"><li>- Modify the Edit Profile page layout in andriod studio</li><li>- Fix the problem of upload the pages</li><li>- Submit the pull request</li><li>- Meeting thith Victoria and Alan with my bitbukt and fix the error of Andiod studio</li><li>- Set the buttons in the interface and layout them to make them look reasonable</li></ul>	71Hours

# Discussion with HD Students

The following slides have been created by the HD achieving students themselves

Planning out tasks on Trello and Delegating tasks to each member of the squad.



Communicating between all stakeholders in the project including the Project Owner, Academic Mentors and Presenting in the Panel Presentations

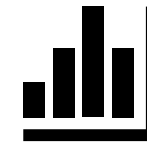
(Raising Concerns, Getting Feedback, Checking up on Members)



Completing code Reviews to ensure that code is readable to the project owner and that code does not hinder the progress of other tasks.



Updating the Squad using Project Management tools like Power BI and Gantt Chart to visualise not only project progress but also individual progress



# Bryan Hew - HD

# Phillip Georgoudakis - HD

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Participated in mentoring sessions on Android Studio Layout



Worked to help assign tasks to the team.



Improved app structure on Adobe XD and created the Dashboard page on Android Studio