



**Nanyang[®]
Marché**

Nanyang Marché

E020

Smart Mobile APP Group B

Isaac Tay Peng Bin	Ke Tangxin
Chai Jia Zhe	Lim Zhi Wei
Stanley Wong Qi Ren	Jake Chang Jie
Rithikha Vivekanantham	Khairunnisa Ranam

TABLE OF CONTENTS

01

Introduction

02

Problems

03

Solutions

04

Design Structure

05

Technical

06

Future
improvement

07

Business Plan

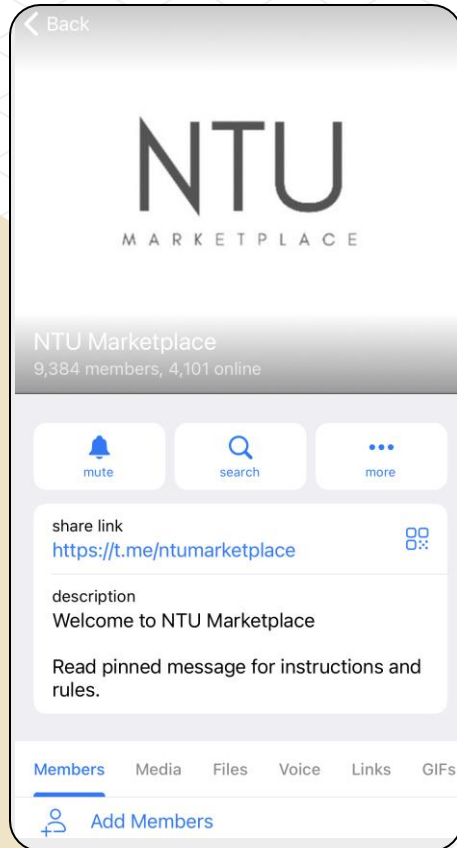
01

Introduction

Introduce our project and app briefly.



Inspiration and Objective



NTU Marketplace

Our App: Nanyang Marché



- An app for NTU students and faculty members to buy/sell items
- Improve on the existing solution ---- "NTU Marketplace"
- Convenient communication
- Reduce spam and improve community spirit



02

Problems

What are the current problems we faced?

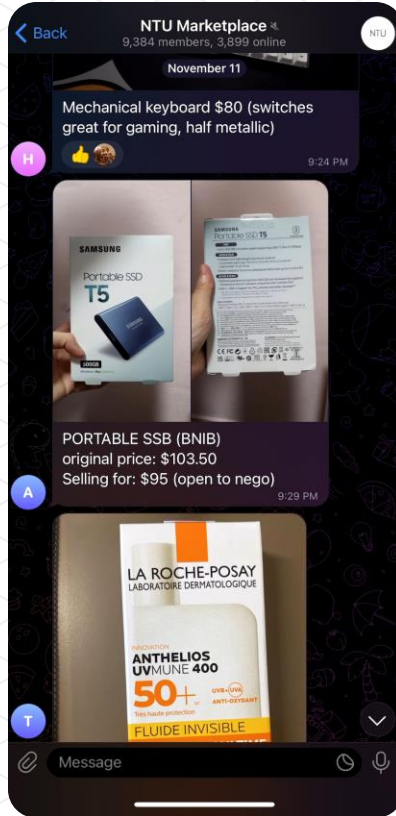


NTU
MARKETPLACE

Telegram



Poor UI



- Disorganized
- Messages pushed away quickly

Spam & Abuse



- Anyone can post unwanted messages, no moderation.

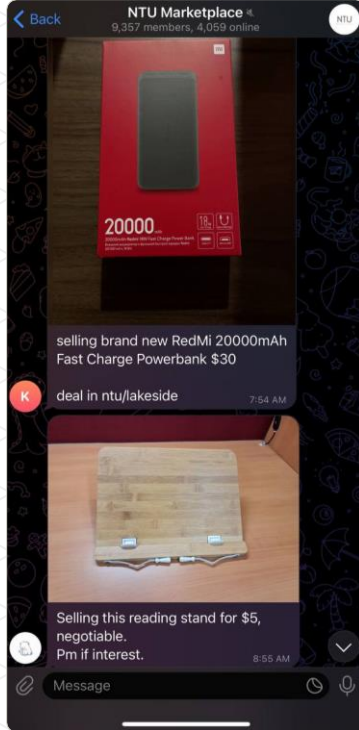
03

Solutions

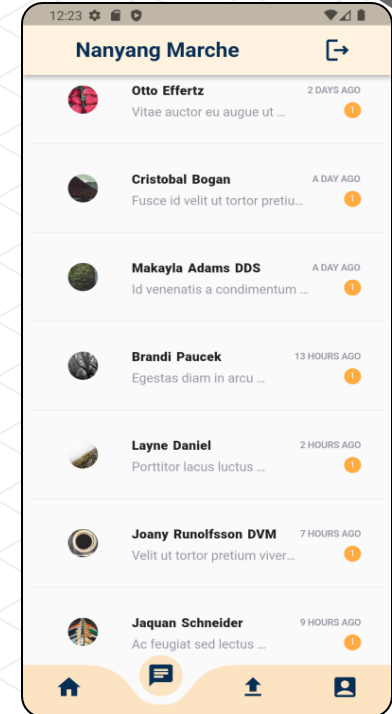
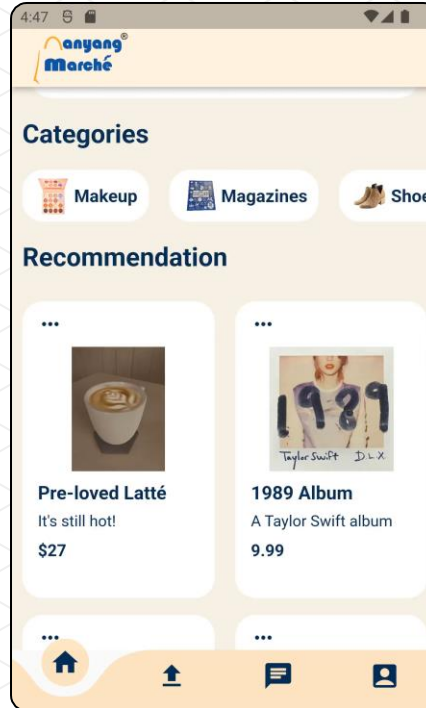
How to enhance user experience?



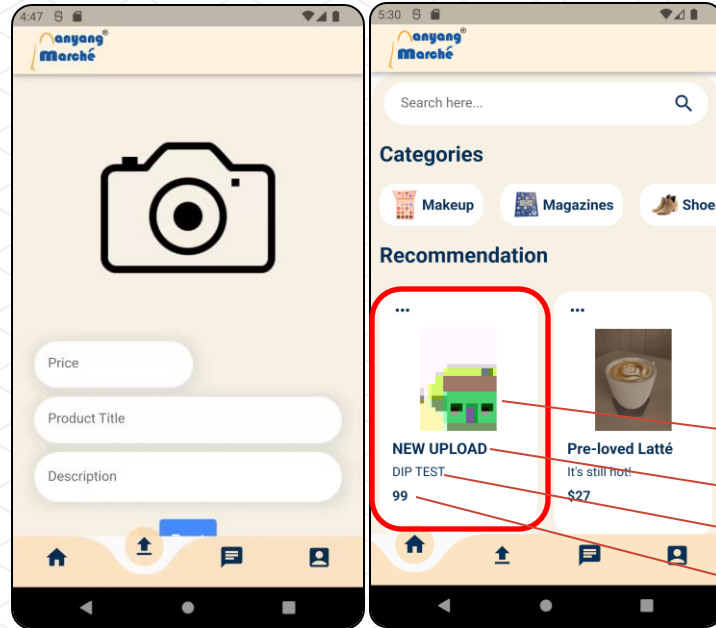
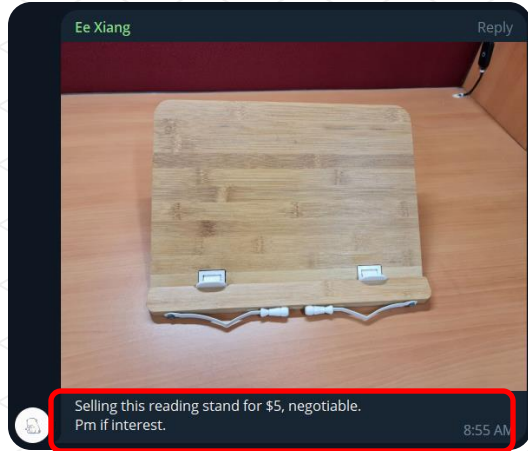
Telegram group vs Our App



VS



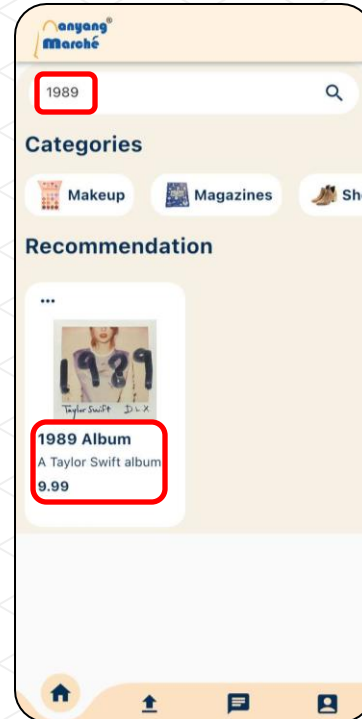
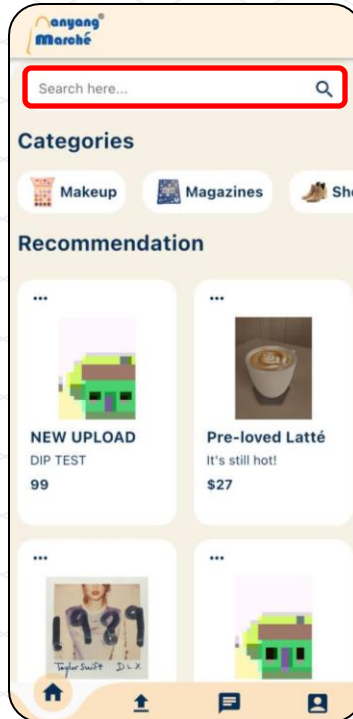
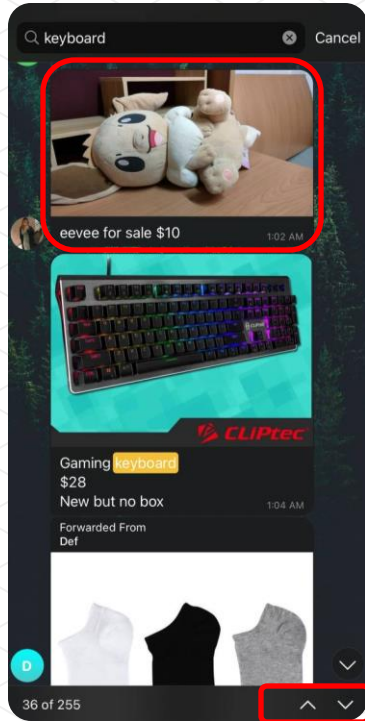
Product Listing



- Standardized view

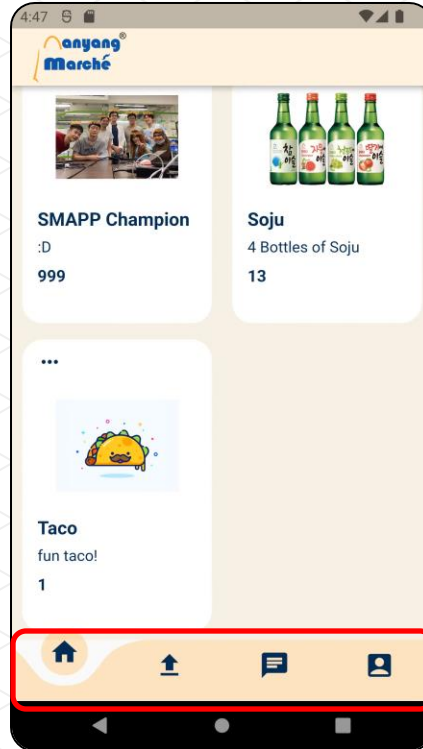
Image
Name/Title
Description
Price

Search Function



- Only show relevant results

Navigation Bar




- Navigation for essential functions


Authentication: Signing Up


4:48

Marché

Sign up now!
Create your account

 dip

 dip@mail.com

 dip123


q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123 , .

Sign Up

4:47

**anyang[®]
Marché**

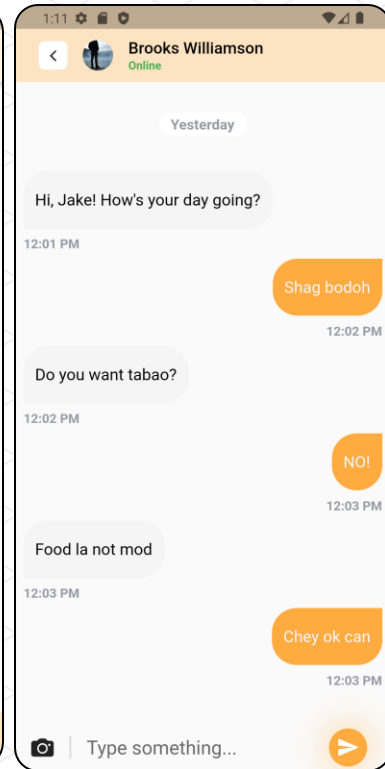
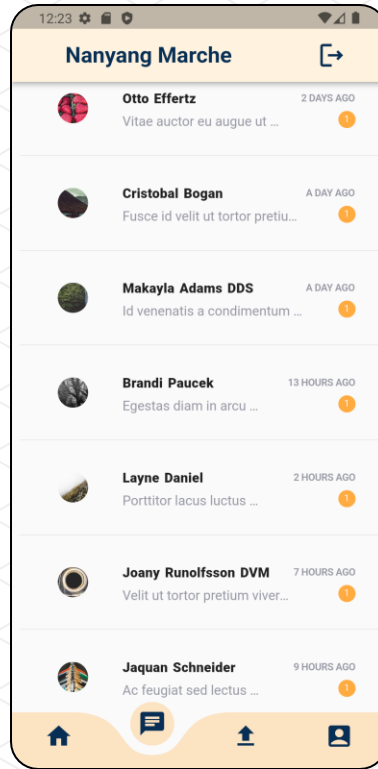
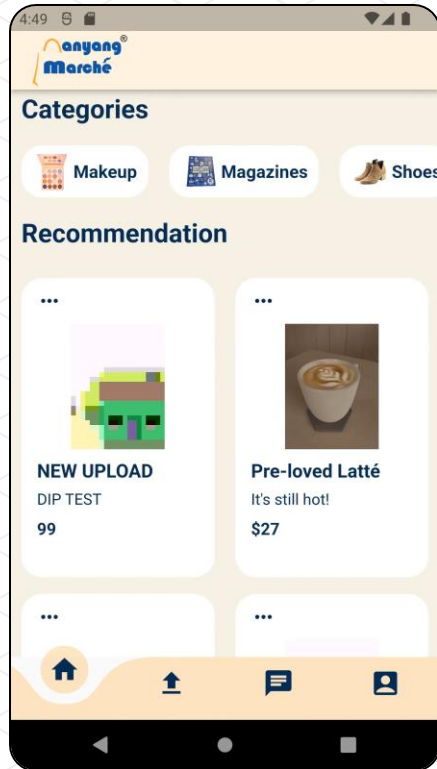
Welcome
Login in to your account

 Email

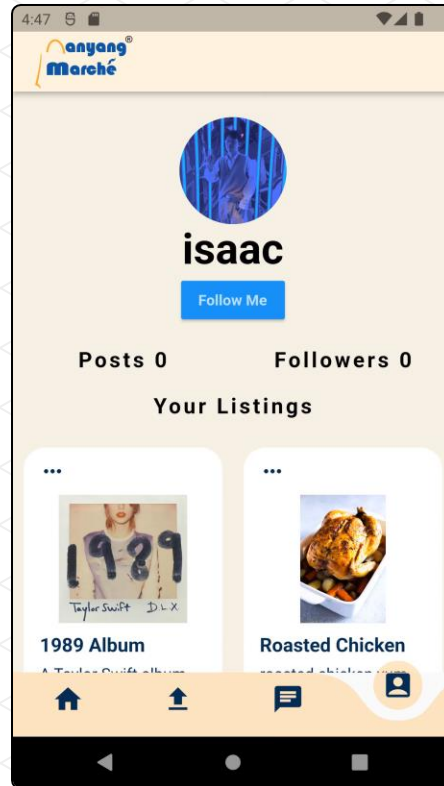
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123 , .

Login

Chat



Profile page



- View personal listings

04

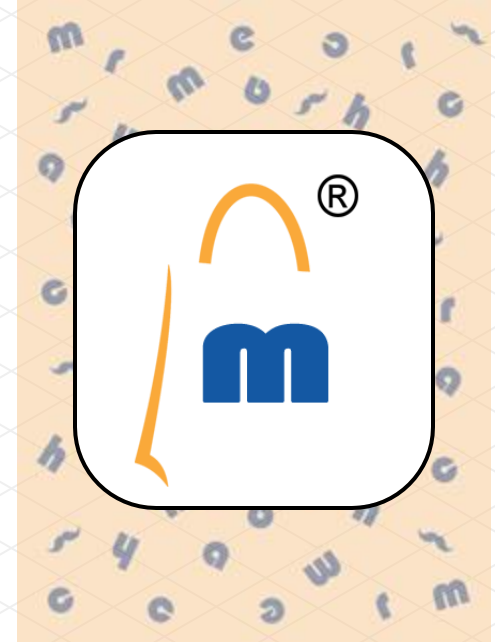
Design Structure



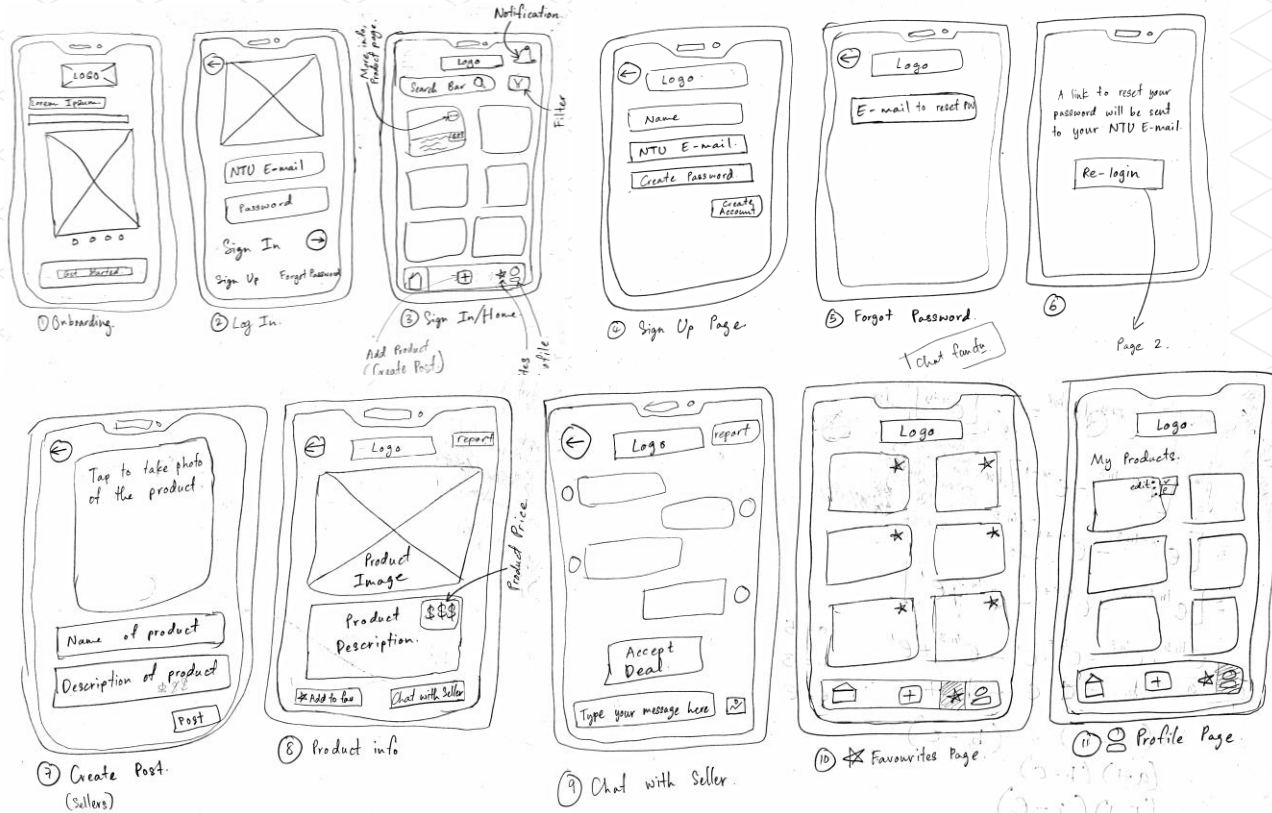
Logo and Background



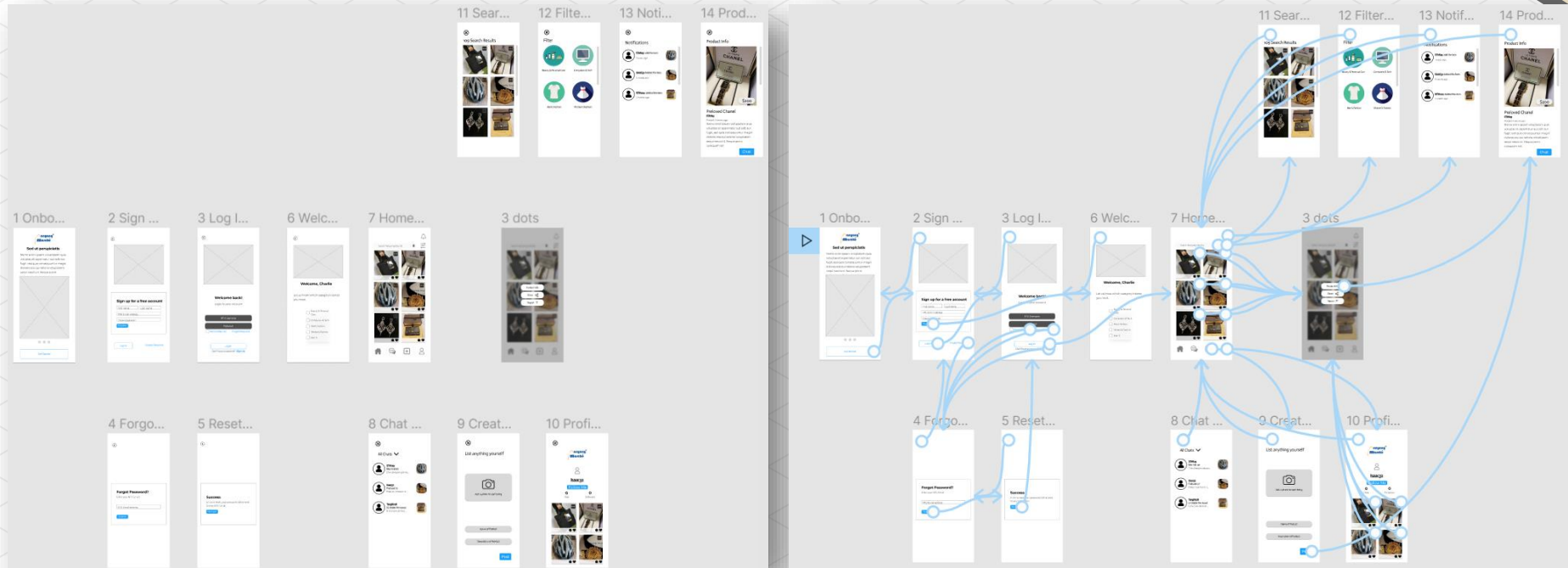
NTU Mascot: Leon



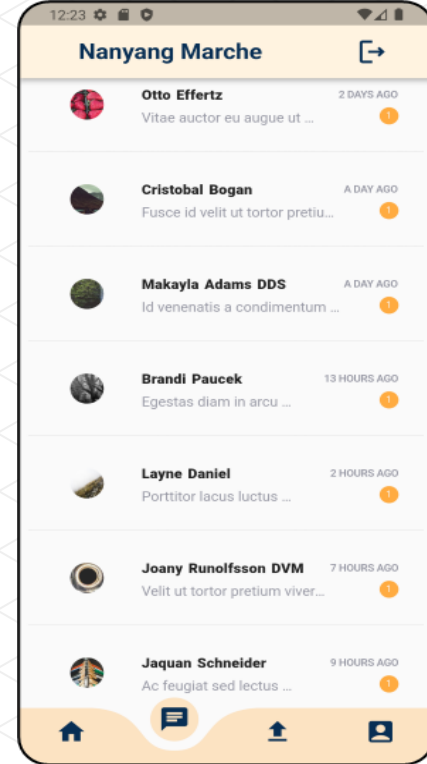
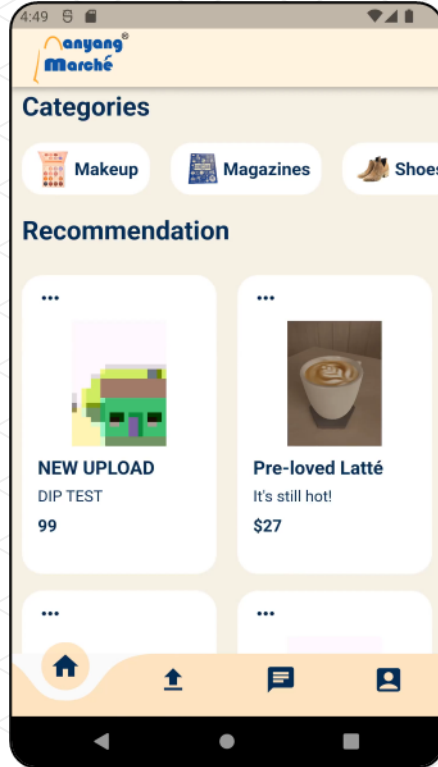
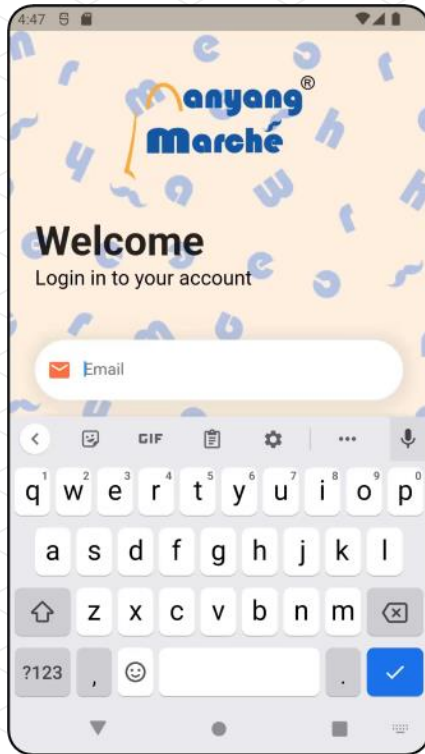
First drafting



Figma



Final Design



05

Technical



Why Flutter?



- Cross-platform
- Ease of learning
- Performance



FlutterFire CLI

2 Install and run the FlutterFire CLI

From any directory, run this command:

```
$ dart pub global activate flutterfire_cli
```



Then, at the root of your Flutter project directory, run this command:

```
$ flutterfire configure --project=nanyang-marche
```



This automatically registers your per-platform apps with Firebase and adds a `lib/firebase_options.dart` configuration file to your Flutter project.

[Previous](#)

[Next](#)

Cloud Firestore

This screenshot shows the Cloud Firestore console interface. The breadcrumb navigation at the top indicates the path: `users > PaYyZDoBxZVC...`. The main content area is divided into three panels. The left panel shows the 'users' collection, with a red box highlighting the '+ Start collection' button and the 'users' collection name. The middle panel shows the 'Add document' button and a list of documents, with a red box highlighting the document ID 'PaYyZDoBxZVCqTttBrqYFCzhY7E2'. The right panel shows the 'Start collection' button and a list of fields, with a red box highlighting the 'products' collection name and the 'Add field' button. The fields listed are: email: "izxckg@gmail.com", name: "Isaac", and user_id: "PaYyZDoBxZVCqTttBrqYFCzhY7E2".

Home > users > PaYyZDoBxZVC... More in Google Cloud

nanyang-marche users PaYyZDoBxZVCqTttBrqYFCzhY7E2

+ Start collection
users

+ Add document
67.IWoWRXixMCCymMXvZ.lkhWYi1M2
PaYyZDoBxZVCqTttBrqYFCzhY7E2
Ue8VeQ5I4UdQGCIWLcagdNJ4f8A3
Y3oByC8eMqbQ1u0PWu0fy1ohn5V2
tkJcn6316dTWZtvgsNV6zaAkqhE2

+ Start collection
products

+ Add field
email: "izxckg@gmail.com"
name: "Isaac"
user_id: "PaYyZDoBxZVCqTttBrqYFCzhY7E2"

This screenshot shows the Cloud Firestore console interface. The breadcrumb navigation at the top indicates the path: `users > PaYyZDoBxZVC... > products > 2022-10-26 18:5...`. The main content area is divided into three panels. The left panel shows the 'products' collection, with a red box highlighting the '+ Start collection' button and the 'products' collection name. The middle panel shows the 'Add document' button and a list of documents, with a red box highlighting the document ID '2022-10-26 18:51:13.269839'. The right panel shows the 'Start collection' button and a list of fields, with a red box highlighting the 'Add field' button. The fields listed are: imgURL: "assets/images/PaYyZDoBxZVCqTttBrqYFCzhY7E2/2022-10-26 18:51:13.269839", pro_desc: "productDesc", pro_name: "test", pro_price: "65", and product_id: "2022-10-26 18:51:13.269839".

Home > users > PaYyZDoBxZVC... > products > 2022-10-26 18:5... More in Google Cloud

PaYyZDoBxZVCqTttBrqYFCzhY7E2 products 2022-10-26 18:51:13.269839

+ Start collection
products

+ Add document
2022-10-26 18:51:13.269839
2022-10-26 19:20:56.789667
2022-10-31 08:02:37.363270
taco00000.png

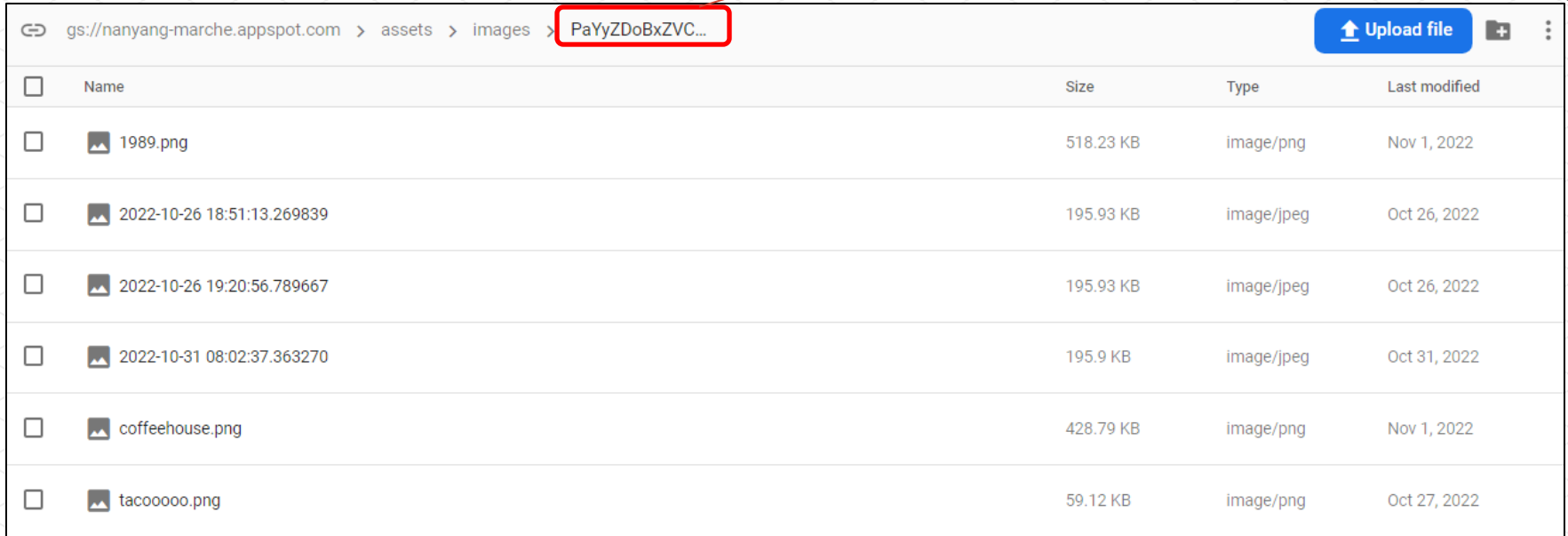
+ Start collection

+ Add field
imgURL: "assets/images/PaYyZDoBxZVCqTttBrqYFCzhY7E2/2022-10-26 18:51:13.269839"
pro_desc: "productDesc"
pro_name: "test"
pro_price: "65"
product_id: "2022-10-26 18:51:13.269839"

+ Add field
email: "izxckg@gmail.com"
name: "Isaac"
user_id: "PaYyZDoBxZVCqTttBrqYFCzhY7E2"







Image Cloud Storage

User ID



gs://nanyang-marche.appspot.com > assets > images > PaYyZDoBxZVC...

Upload file

<input type="checkbox"/>	Name	Size	Type	Last modified
<input type="checkbox"/>	 1989.png	518.23 KB	image/png	Nov 1, 2022
<input type="checkbox"/>	 2022-10-26 18:51:13.269839	195.93 KB	image/jpeg	Oct 26, 2022
<input type="checkbox"/>	 2022-10-26 19:20:56.789667	195.93 KB	image/jpeg	Oct 26, 2022
<input type="checkbox"/>	 2022-10-31 08:02:37.363270	195.9 KB	image/jpeg	Oct 31, 2022
<input type="checkbox"/>	 coffeehouse.png	428.79 KB	image/png	Nov 1, 2022
<input type="checkbox"/>	 tacooooo.png	59.12 KB	image/png	Oct 27, 2022

Messages

The screenshot displays the Firestore console interface. The breadcrumb navigation at the top shows the path: `messages > oBcTWr1cnlhCu...`. The left sidebar shows the database structure with a collection `messages` highlighted under the path `chatapp-89243`. The main panel shows a document with the ID `oBcTWr1cnlhCua5tzVCW9Jk2RbI3_H012qG01tkTG0FFn2yHg0pUrtGs2`. The document's content is as follows:

```
{
  "lastMessage": {
    "content": "hey",
    "idFrom": "oBcTWr1cnlhCua5tzVCW9Jk2RbI3",
    "idTo": "H012qG01tkTG0FFn2yHg0pUrtGs2",
    "read": false,
    "timestamp": "1591923444625"
  },
  "users": [
    {
      "id": 0,
      "name": "oBcTWr1cnlhCua5tzVCW9Jk2RbI3"
    },
    {
      "id": 1,
      "name": "H012qG01tkTG0FFn2yHg0pUrtGs2"
    }
  ]
}
```

06

Future Improvements



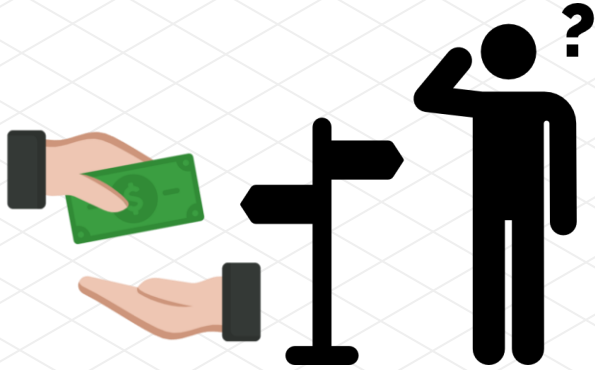
"Looking for" Forum



Looking for help?

Items which are unavailable
on the marketplace

Quality of Life Features



Meet-up?



- User authentication
- Securing backend connections

Other Recommendations



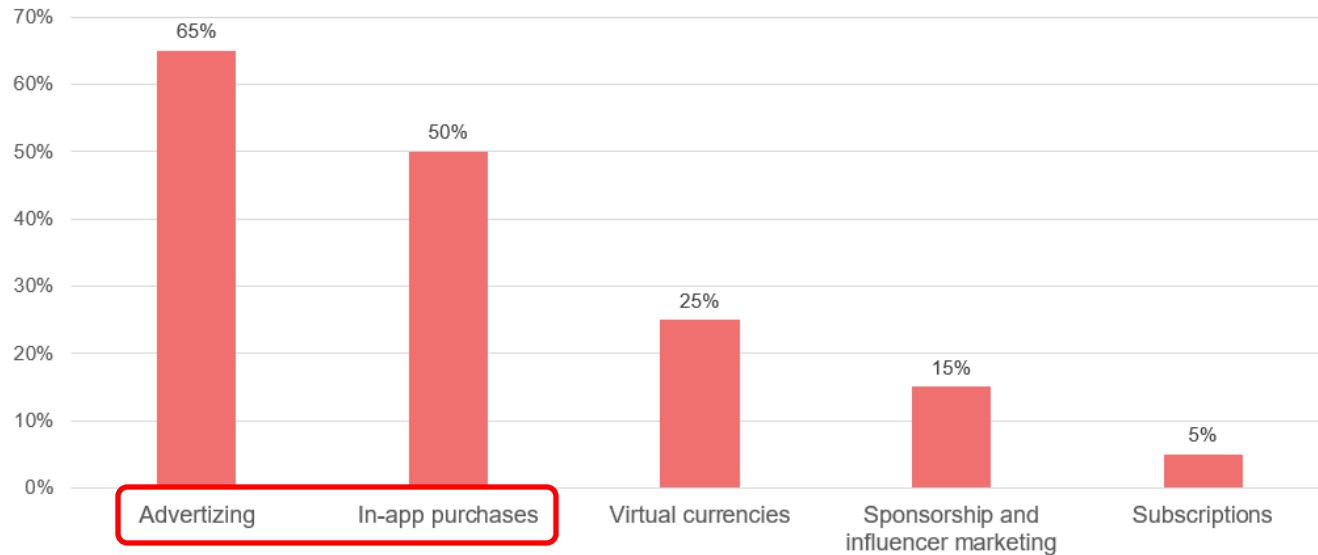
07

Business Plan

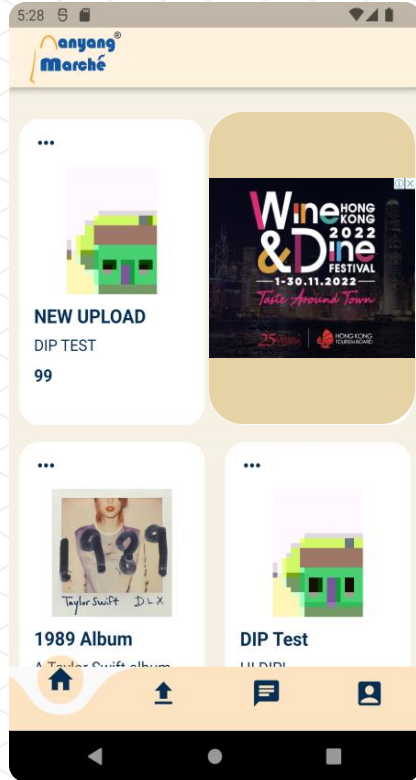


Advertising

Monetization methods used by popular apps



Native Advertising



Affiliate Marketing

- **Cost-per-mile (CPM) or Cost Per Impression (CPI)**

Receive the payment for every 1,000 views of the ad

- **Cost-per-click (CPC)**

Receive payment when the app users click on display ads

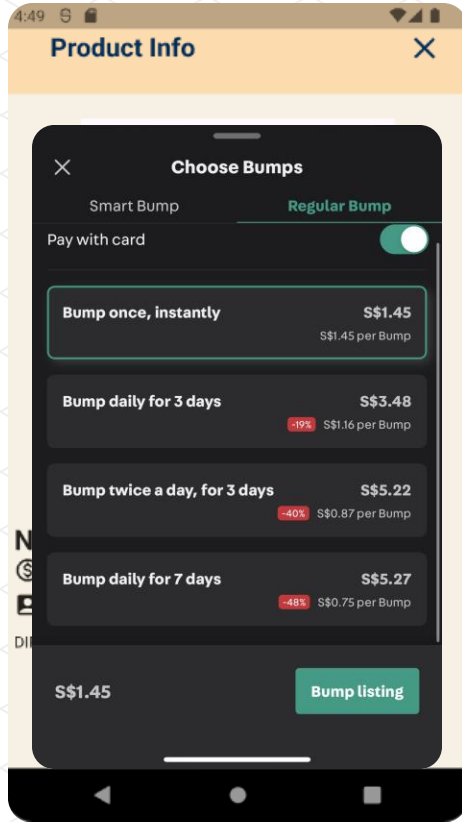
- **Cost-per-view (CPV)**

Charge advertisers for the number of ad views or the number of interactions

- **Cost-per-install (CPI)**

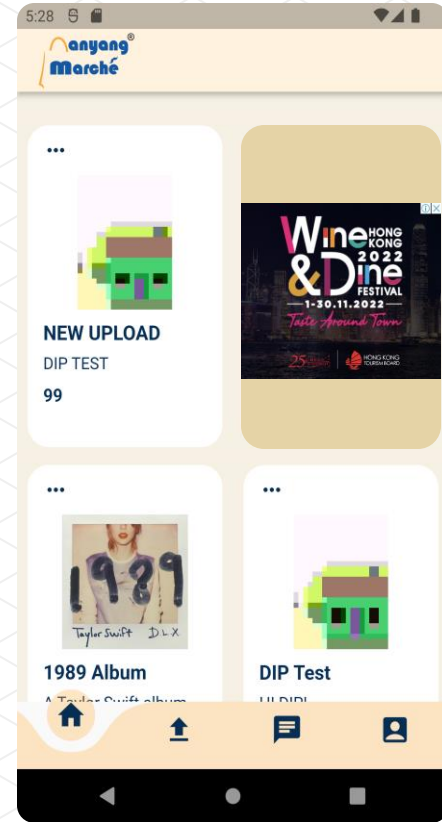
Get paid each time our app users install the app we promote

In App purchases



Consumable items

- Up User Listing



Non-consumable items

- Removing ads



THANKS



Q & A



08 Group Contribution

What is the history of online shopping?



Group Contribution

	Name	Project contributions
1	Isaac Tay Peng Bin	<ul style="list-style-type: none">• Group Leader• Come up with the name of the app• Built various features for the backend like uploading the pictures and text of each product• Setup the Firebase Schema and other functions like Authentication and Storage• Integrated frontend and backend by allowing the frontend to fetch data from the backend
2	Chai Jia Zhe	<ul style="list-style-type: none">• Treasurer• Proofreading of final report
3	Stanley Wong Qi Ren	<ul style="list-style-type: none">• Built the front-end pages like the onboarding page and profile page• Assisted the backend by giving the app access to the camera and gallery of the phone and setting up the Cloud Firestore Schema• Mentoring teammates on Git, Android Studio and Flutter• Debugging and reviewing the codebase• Introduced the tech stack and IDE
4	Rithikha Vivekanantham	<ul style="list-style-type: none">• Oversaw progress and worked on adding improvements in Figma by making it more aesthetically pleasing and interactive• Designed the initial hand drawn draft of the app• Front end coder for the onboarding page and details page

Group Contribution

	Name	Project contributions
5	Ke Tangxin	<ul style="list-style-type: none">• Set the app's tone in Figma, like colours, widgets• Be a front-end coder of login, sign up, upload and home pages etc.• Find some pictures and icons for the app• Integrate frontend and backend for login and sign-up pages
6	Lim Zhi Wei	<ul style="list-style-type: none">• Idea of bringing NTU Marketplace to an actual app• Sliding and responsive interface design in Figma• Final report and presentation slide format editor• Chat Functionality• Debugging
7	Jake Chang Jie	<ul style="list-style-type: none">• Chat Functionality and UI• Backend Research• Frontend and Backend Integration• Quality Assurance and Control• Debugging
8	Khairunnisa Ranam	<ul style="list-style-type: none">• Draw hand drawn draft of app• Design app's logo, icon & wallpaper• Figma wireframes & prototype• Find images and icons for Figma