



# Flight booking system

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# Introduction

- **Background**

Under the influence of the COVID-19 epidemic, overseas travel is strictly controlled. However, recently the restrictions on local entry into Hong Kong have been loosened to 0+3 days. To cope with this phenomenon and provide a high-quality, comfortable, and convenient travel experience.

- **About the application**

Our group decided to build a mobile app for inquiring and ordering flights to cover travel advice. Which could help users find the best flight options, covering multiple airlines, and providing the cheapest and best choices. Users can use the application to query the remaining seats and the airlines that provide services to meet their needs. Spending more willing to travel.

Welcome



**GoTravel**

Fly anywhere.

Start your journey

# Overall design

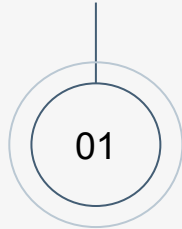
**Main function:** Booking flight tickets

**Target users:** Everyone

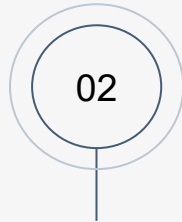
**Main user group:** Hong Kong people

## Development process

Requirement analysis



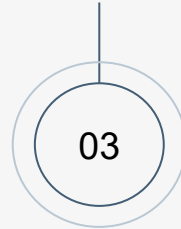
02



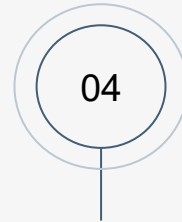
Preliminary & detailed design

Implementation

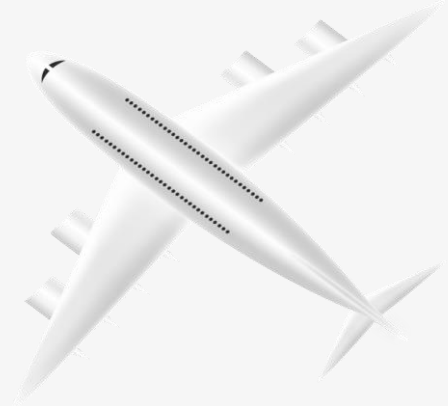
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04

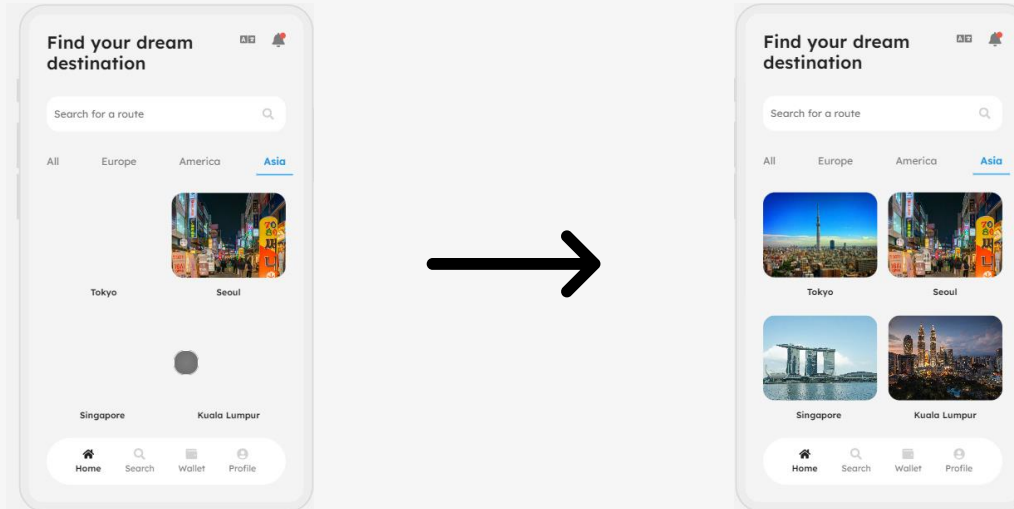


Evaluation



# Principles-Usability measures

- **Speed of performance**
  - According to the function used

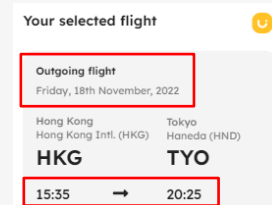
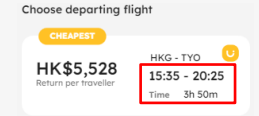
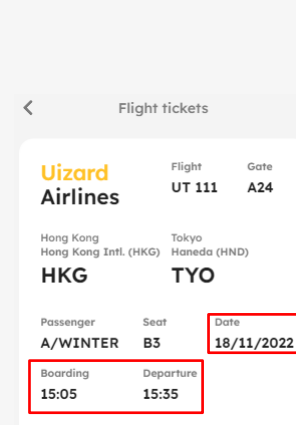
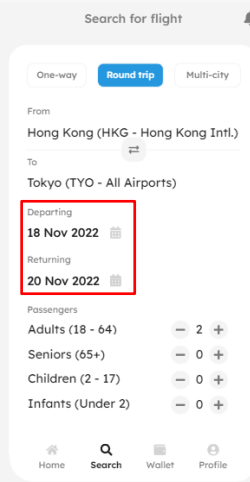
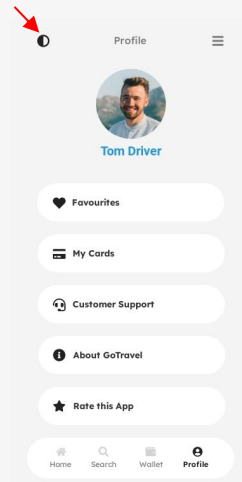
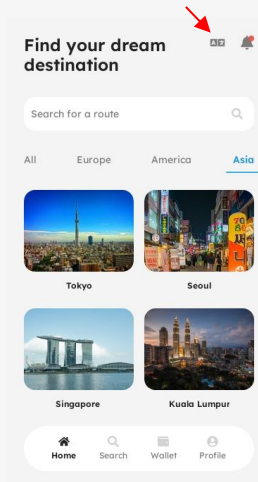


# Principles-Universal Usability Concerns

- **Cultural and international diversity:**

1. User can change language and theme mode in homepage and settings

2. Date and time formats are "DD Mon, YYYY", "DD/MM/YY" and 24-hour format



# Principles-Effective navigation interface

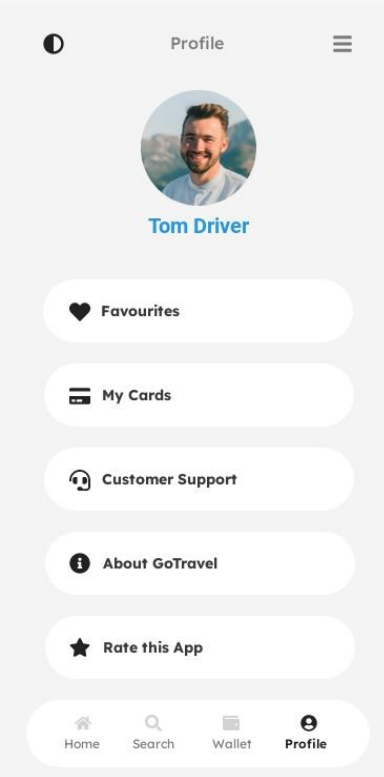
- **Shortcuts for frequent users**

1. Favourites

- Save users' time

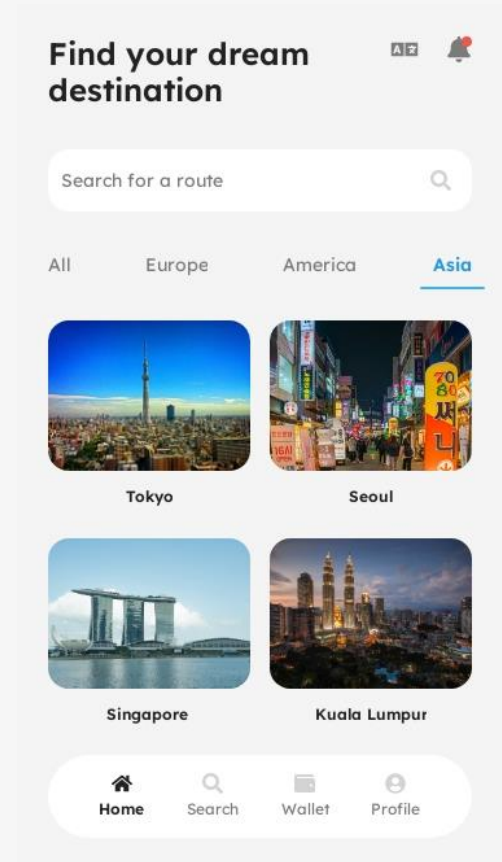
2. My Cards

- Eliminating the need to re-enter credit card information



# Principles-Display design

- **Mullet and Sano's categories of design principles**
  1. Organization and visual structure
    - Destinations
  2. Image and representation
    - Toolbar





# Principles-8 golden rules

- **Strive for consistency**
  - we used Identical terminology in the menu to help the user easily identify information(similar colors, layout etc.)
- **Seek universal usability**
  - Universal Usability Concerns section above. (P.6)
- **Offer informative feedback**
  - detailed interface categorization allows users to get visual feedback after each operation.
- **Design dialogs to yield closure**
  - we through a clear transaction interface to provide the satisfaction of accomplishment to the user.
- **Prevent errors**
  - standard formats and a Forget password button for users to reduce error inputs.
  - **Permit easy reversal of actions**
  - we provide a return button to return to the previous page.
- **Keep users in control**
  - We use the common operator interface and payment methods in the market.
- **Reduce short-term memory load**
  - We provide appropriate interface switching and filling in data without repeated repetitions.

# Principles-User-Centered Design Process

- **Requirements/needs:** Booking and purchasing of air tickets to the destination.
- **Wants:** Providing the cheapest way/plan for buying the air tickets.
- **Limitations:** User must enter email and password when registering or logging in (on the login and registration pages, "\*" means must be filled in to continue)

The image displays two screenshots from the GoTravel app. The left screenshot shows a flight search interface for the route HKG to TYO. It lists three flight options with their respective prices and times. A red arrow points from the 'Wants' bullet point to the first flight option, HK\$5,528. The right screenshot shows the login page, which includes fields for email and password, a 'Log in' button, and links for 'Forgot your password?' and 'Sign Up'.

**Flight Search Results:**

Flight Option	Price (Return per traveller)	Time
HK\$5,528	15:35 - 20:25	3h 50m
HK\$6,042	9:20 - 14:25	4h 5m
HK\$6,614	0:40 - 11:50	10h 10m (1 stop) 4h 25m in Seoul (ICN)

**Login Page:**

GoTravel  
Fly anywhere.

Email \*  
example@gmail.com

Password \*  
[Redacted]

[Forgot your password?](#)

[Log in](#)

OR USE

[Facebook](#) [Google](#)

Need an account? [Sign Up](#)

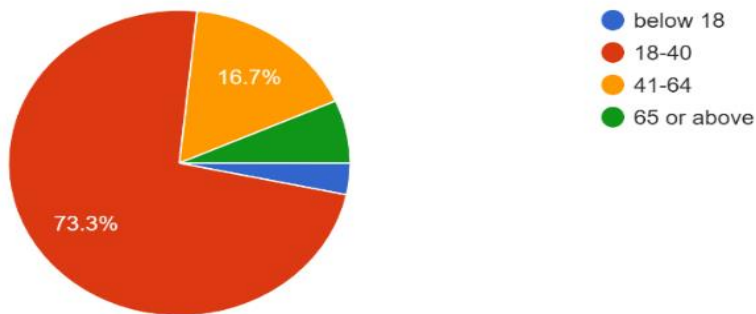
# Principles-CRAP principles

- **Contrasts**
  - We used color choice to classify air tickets (Economy or business class) to help users quickly filter information.
- **Repetition**
  - We use similar text types and icons design to categorize different tasks, such as icons and text in the navigation bar.
- **Alignment**
  - neatly list the information that users need on each page to ensure that there are clear plans and instructions for users to quickly complete tasks.
- **Proximity**
  - Group similar types of information allowing users to quickly move to the menu page to obtain the required information or services.

# Gather user requirements, feedback, or evaluation

Please select your age

30 則回應

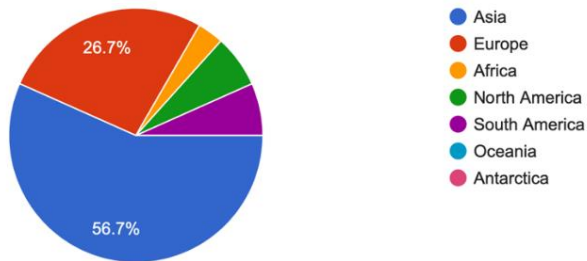


- We asked 30 people, mostly around 18 to 40 years old, to do this survey
- Many things in the prototype are based on this survey

# The continent that we select in the home page

Which continent would you most like to travel to?

30 則回應



1. Asia
2. Europe
3. North America and South America

Find your dream destination



Search for a route



All

Europe

America

Asia



Tokyo



Seoul



Singapore



Kuala Lumpur



Home



Search



Wallet

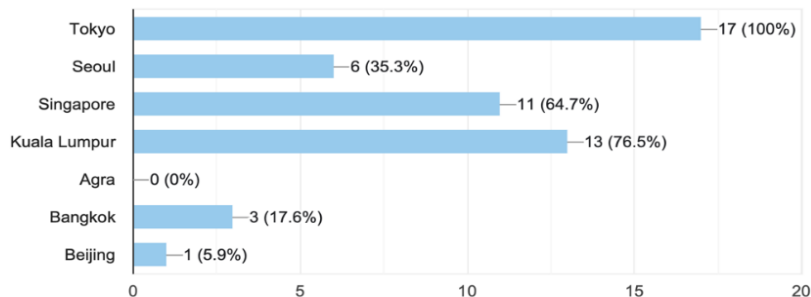


Profile

# The cities that we select in the home page

Which three cities in Asia would you most like to visit?

17 則回應



- 17 people want to go to Asia
  1. Tokyo
  2. Kuala Lumpur
  3. Singapore
  4. Seoul

Find your dream destination



Search for a route



All

Europe

America

Asia



Tokyo



Seoul



Singapore



Kuala Lumpur



Home



Search



Wallet

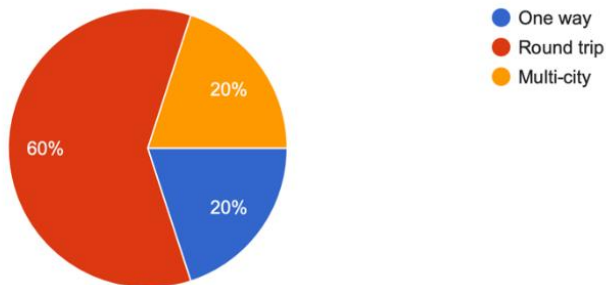


Profile


# For the ticket purchase page

Which type of flight ticket do you prefer to buy when traveling?

30 則回應




- There 60% of people prefer a round trip
- Both “Multi-city” and “One way” are 20%


Search for flight 

One-way **Round trip** Multi-city

From  
Hong Kong (HKG - Hong Kong Intl.)

To  
Tokyo (TYO - All Airports)

Departing  
18 Nov 2022 

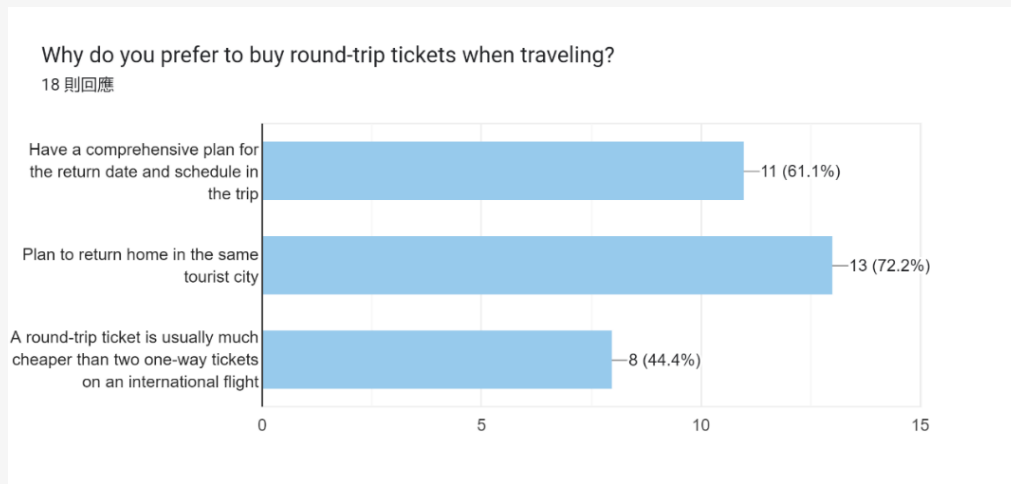
Returning  
20 Nov 2022 

Passengers

Adults (18 - 64)	-	2	+
Seniors (65+)	-	0	+
Children (2 - 17)	-	0	+
Infants (Under 2)	-	0	+

Home Search Wallet Profile

# Why the people chose round-trip



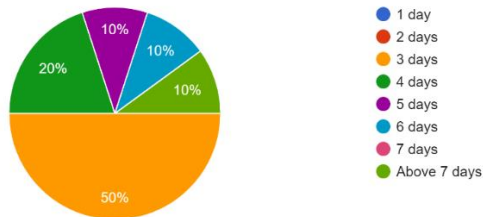
- main reason was that people were planning to go home to the same tourist city



# For the ticket purchase page

How many days do you usually travel?

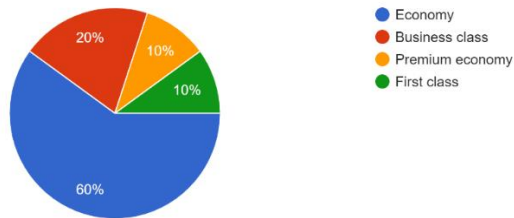
30 則回應



- Most people usually go on 3 days of travel

When you buy a flight ticket, which class do you prefer?

30 則回應



Preferred class:

**Economy** Premium Economy

Business Class First Class

Preferred airline:

Any airline

See 83 flights

Departing

18 Nov 2022

Returning

20 Nov 2022

Passengers

Adults (18 - 64) - 2 +

Seniors (65+) - 0 +

Children (2 - 17) - 0 +

Infants (Under 2) - 0 +

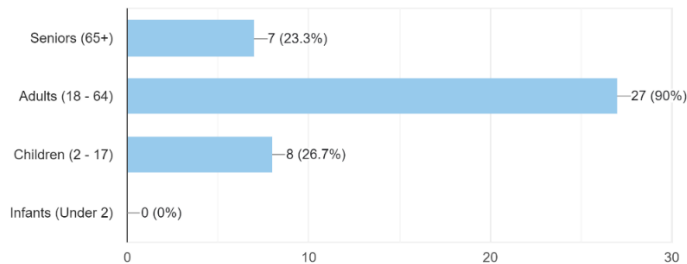
Home Search Wallet Profile

- 60% of people are choosing the Economy for their class when they buy a flight ticket

# For the ticket purchase page

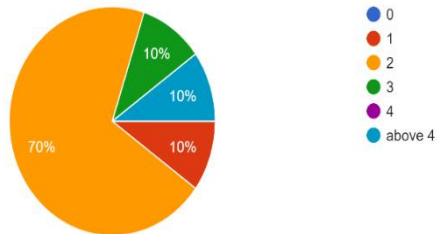
What type of passengers are you and your travel companion?

30 則回應



How many adult tickets do you usually buy at one time?

30 則回應



Search for flight

One-way

Round trip

Multi-city

From

Hong Kong (HKG - Hong Kong Intl.)

To

Tokyo (TYO - All Airports)

Departing

18 Nov 2022

Returning

20 Nov 2022

Passengers

Adults (18 - 64)

- 2 +

Seniors (65+)

- 0 +

Children (2 - 17)

- 0 +

Infants (Under 2)

- 0 +



Home



Search



Wallet



Profile

- Most of the passengers and their travel companions are between 18 to 64 years old
- Most of them are buying just 2 tickets
- We preset need to buy 2 adult tickets on this page

# Prototype details

**Software:** Uizard

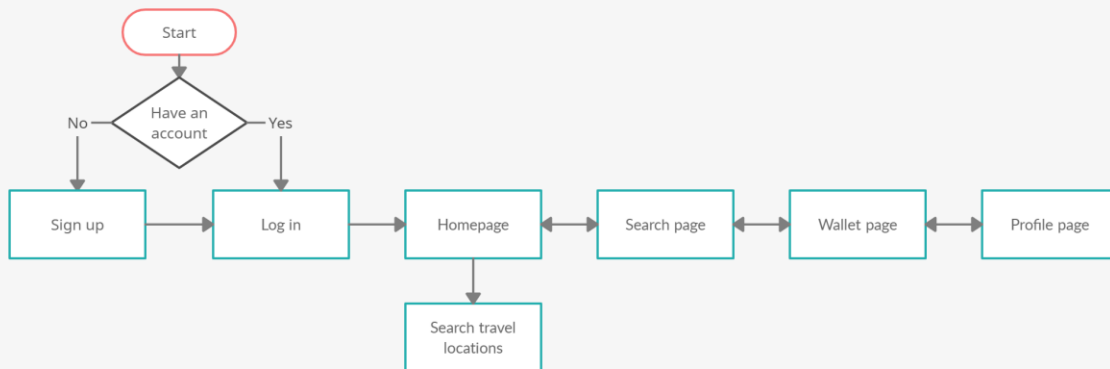
→ Detailed demo in another video

**Only supports very few interactions:** “Open link”

→ ❌ Data validation (Login and Registration)

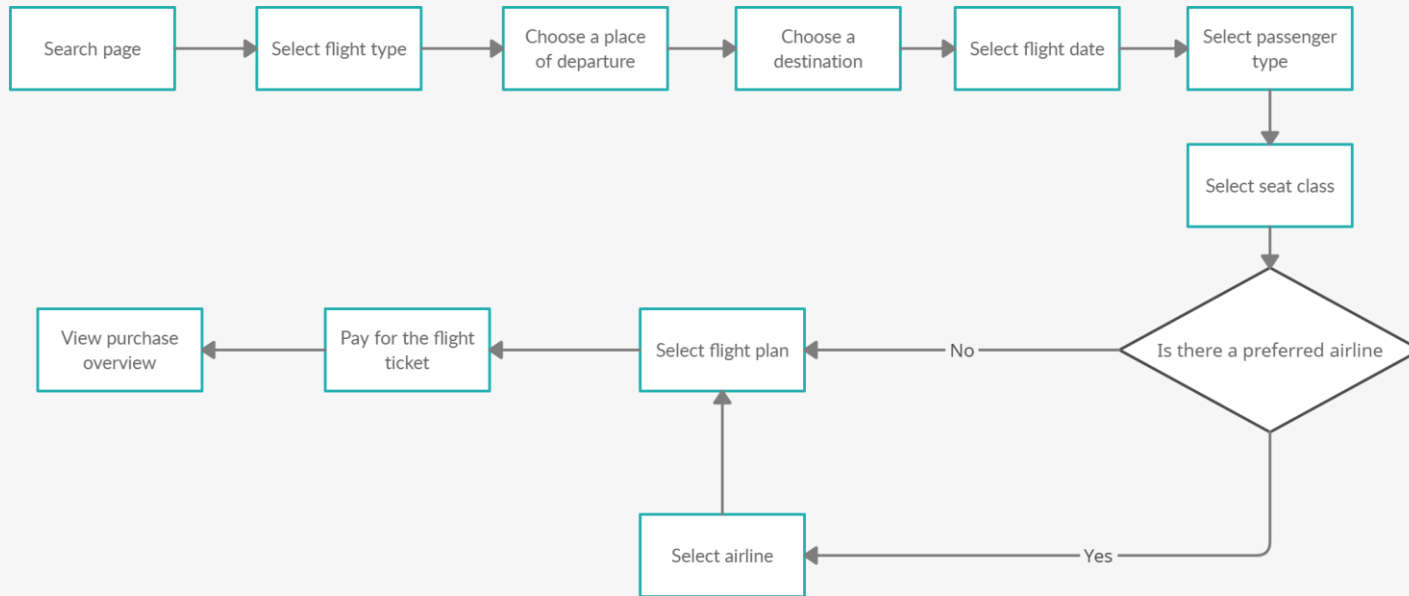


## User Flowchart

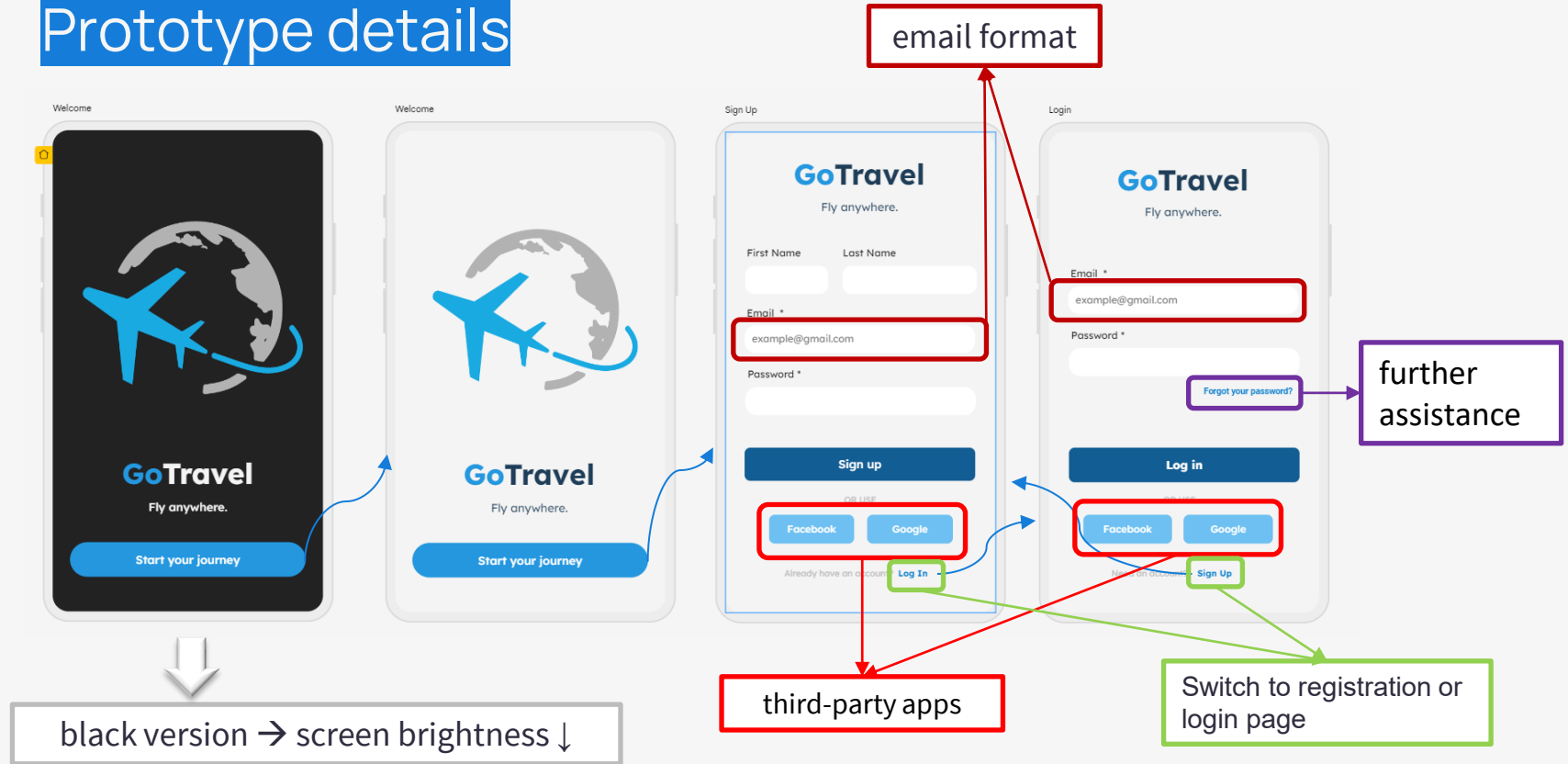


# Prototype details

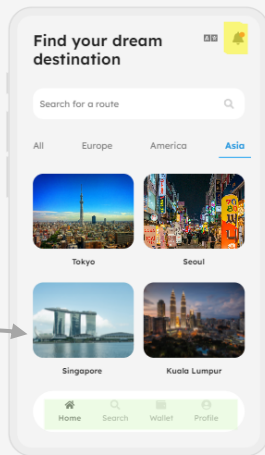
## User Flowchart (booking flight ticket)



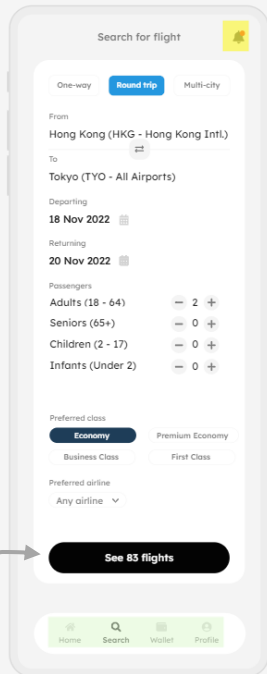
# Prototype details



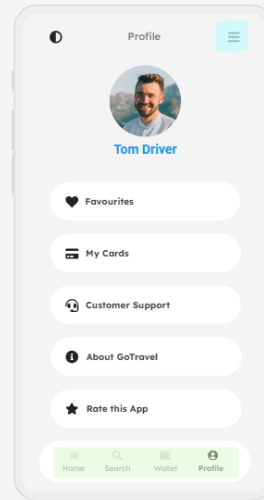
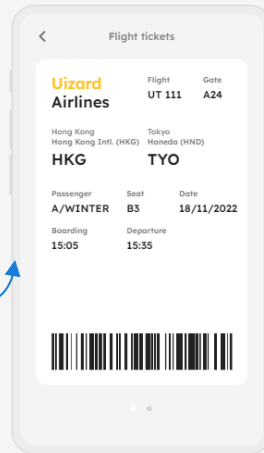
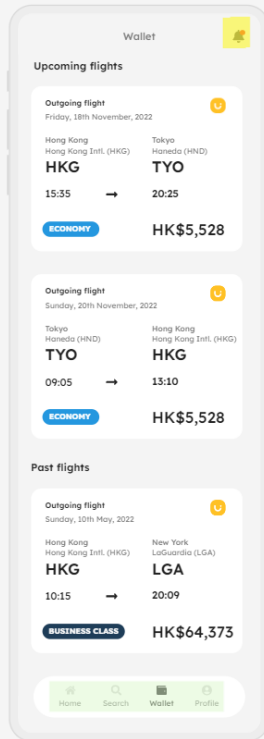
# Prototype details



Click → Display the description of the location

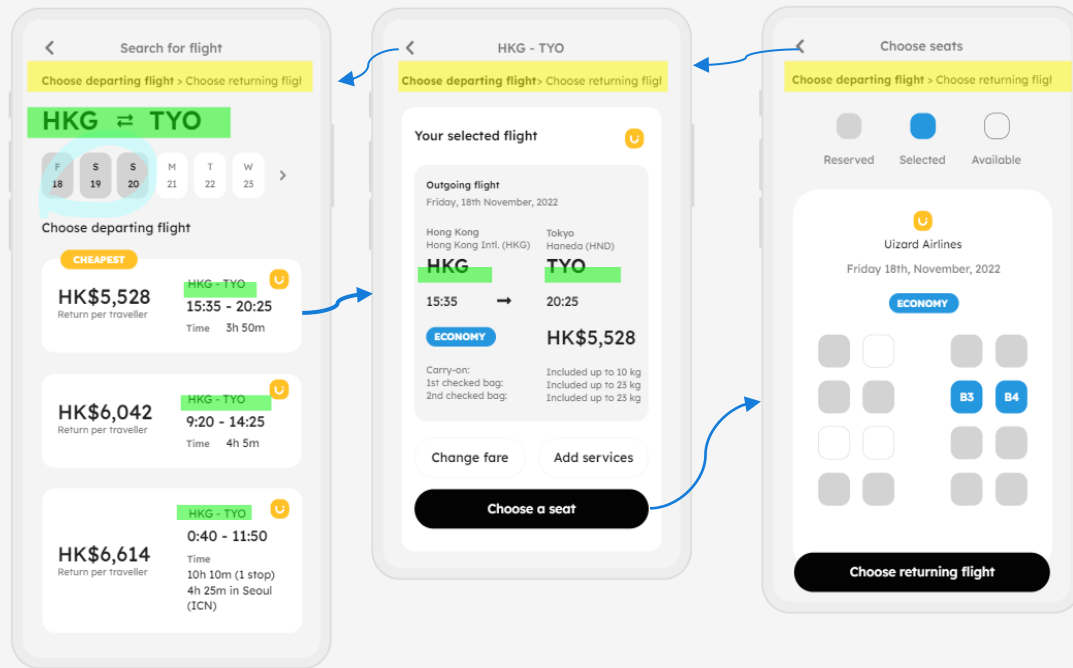


view the flight details and select flight plans



- "Notifications" button → view the latest announcements (highlighted in yellow)
- Navigation bar (highlighted in green)
- "Settings" button → change the language and currency of the app (highlighted in blue)

# Prototype details

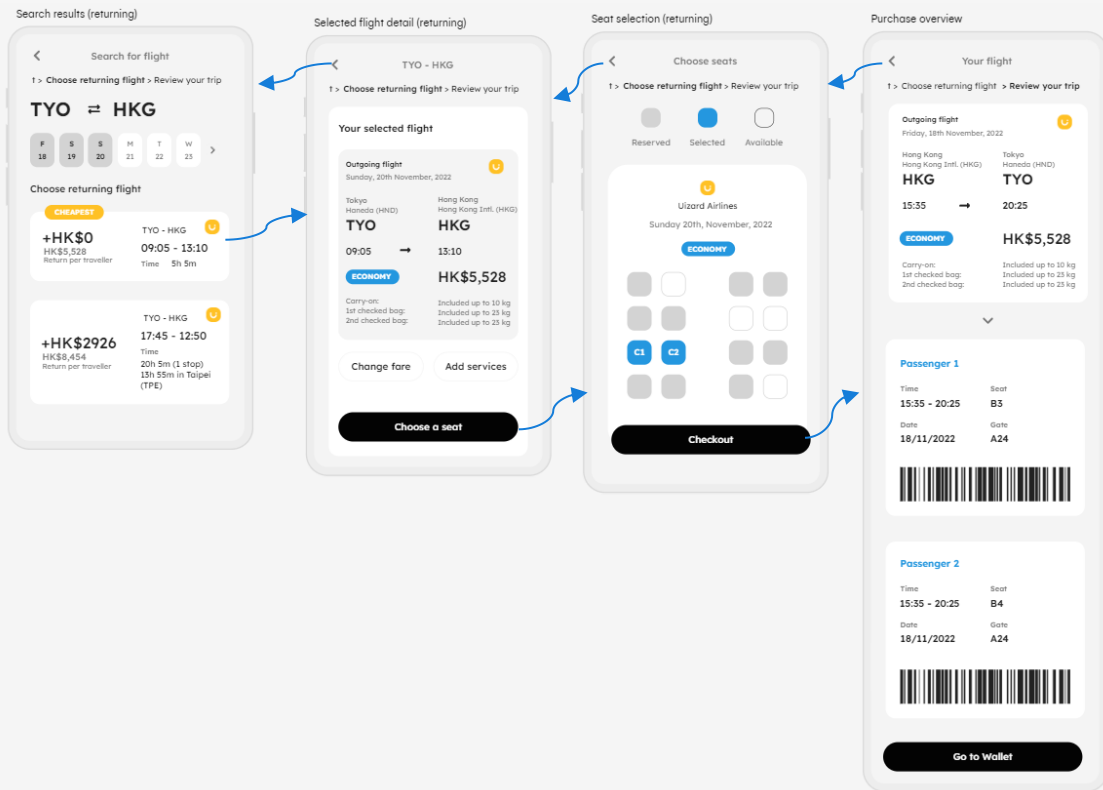


- Progress bar for users to see what stage they are in (highlighted in yellow)
- Selected dates will be greyed out (circled in blue)
- Use an abbreviation for the location name (highlighted in green)

[Departing flight]

Select flight plan → View more flight details or add services → Choose the flight seat

# Prototype details



[Returning flight]

Select flight plan → View more flight details or add services → Choose the flight seat → Check out → View purchase overview

barcode and flight information of the purchased ticket



# Demonstration



# Conclusion

- We learned more about the process of flight booking and stages such as user evaluation and principles of UI design. Hopefully, we can travel anywhere without masks as soon as possible.

# Difficulties

- We have difficulty thinking and using principles in prototypes because we need to consider both functionality and design layout. Also, we need to determine what content should consider the user's perspective when prototyping. It is important that we have a clear idea of UI design after finishing the project.

Thanks!

