Ellen Feuchtwanger

Airline App User Flow Diagram

Executive Summary

Subject Matter

This report presents my finalised Flow Diagram for an airline mobile app. Documenting the main user flow and primary use case for airline app users.

The key task customers use airline apps for is to book a flight.

Therefore, my flow diagram includes all the stages and screens involved in the process to book a flight, from searching for flights to selecting seats.

The key goal is optimise the user flow with as little complexity as possible.

Method of Analysis

1. I reviewed my research, affinity diagram and customer journey map to identify key stages in the user flow. I used my research data, analysis and insights to optimise the users flow through the airline app and maximise the user experience.

2. I defined the high level flow for booking flights on a new airline booking app.

3. I then sketched the flow diagram by hand, before using Figma to create my final User Flow Diagram.

4. I sketched multiple iterations resolving issues and user pain points discovered during research, affinity diagram and customer journey map processes.

Conclusion (Summarised)

By creating the User Flow Diagram I can improve the users experience by optimising the user flow and minimising complexity.

This is a key step in the process that improves efficiency by minimising errors and the need for future iterations later in the design process.

By using user centric research data to inform my design decisions, my User Flow Diagram visualises the user needs intuitively.
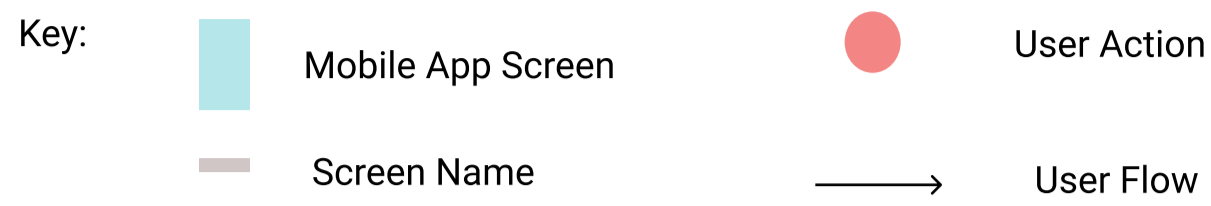
This is a valuable tool when communicating design ideas and the users' needs to stakeholders. It also facilitates the final testing stage, as product teams can easily follow the user flows to find user pain points, and evaluate if the proposed user flow meets user needs.
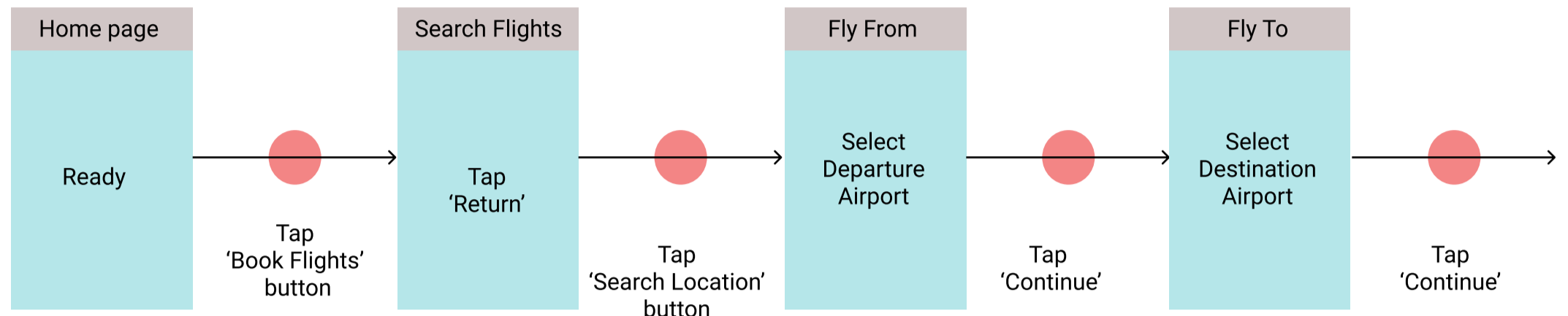
Key Insights (Summarised)

1. The main, overarching and defining Application Type is 'Process'.

2. By using a linear UX approach I have created a simplified and consistent flow, that leads the user through the process

3. There are two key screens that arise in multiple states during the user's flow:
   - The 'Flight Search' page
   - The 'Flight Details' page

4. I simplifyied the user flow to only include the necessary screens, and removed any unnecessary screen states that disrupted the user flow.
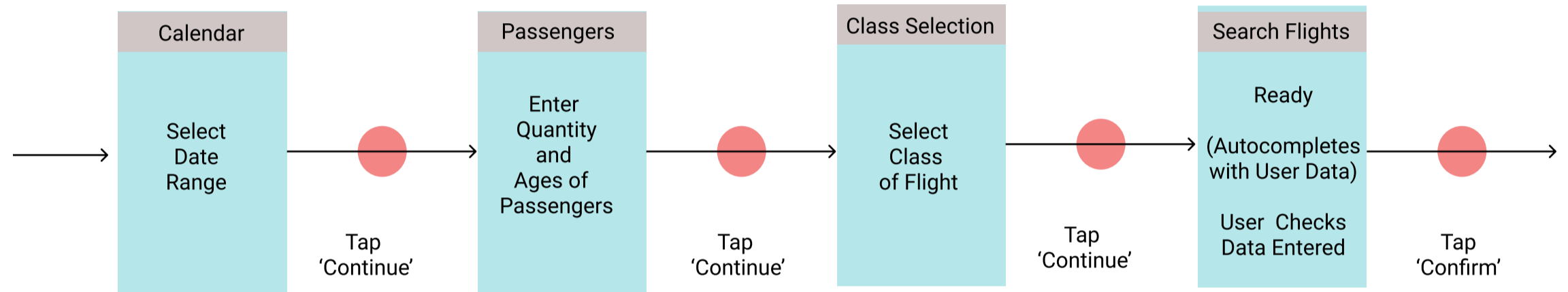
User Flow Diagram

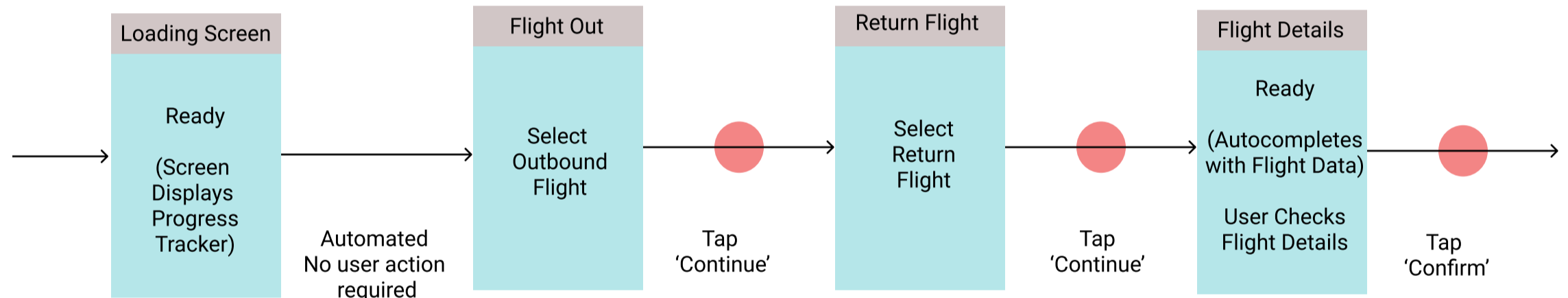## User Goal / Task - Book a Return Flight

Key:
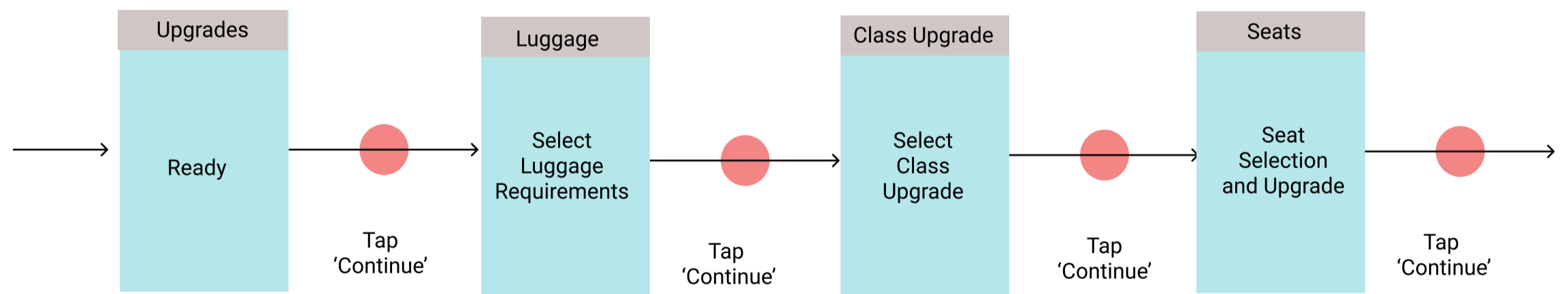- ■ Mobile App Screen
- ● User Action
- ▬ Screen Name
- → User Flow

Stage: Flight Search

Home page
Ready
→ (Tap 'Book Flights' button)

Search Flights
Tap 'Return'
→ (Tap 'Search Location' button)

Fly From
Select Departure Airport
→ (Tap 'Continue')

Fly To
Select Destination Airport
→ (Tap 'Continue')

Stage: Flight Search (Continued)

Calendar
Select Date Range
→ (Tap 'Continue')

Passengers
Enter Quantity and Ages of Passengers
→ (Tap 'Continue')

Class Selection
Select Class of Flight
→ (Tap 'Continue')

Search Flights
Ready
(Autocompletes with User Data)
User Checks Data Entered
→ (Tap 'Confirm')

Stage: Flight Selection

Loading Screen
Ready
(Screen Displays Progress Tracker)
→ (Automated No user action required)

Flight Out
Select Outbound Flight
→ (Tap 'Continue')

Return Flight
Select Return Flight
→ (Tap 'Continue')

Flight Details
Ready
(Autocompletes with Flight Data)
User Checks Flight Details
→ (Tap 'Confirm')

Stage: Upgrades

Upgrades
Ready
→ (Tap 'Continue')

Luggage
Select Luggage Requirements
→ (Tap 'Continue')

Class Upgrade
Select Class Upgrade
→ (Tap 'Continue')

Seats
Seat Selection and Upgrade
→ (Tap 'Continue')

Stage: Payment

Flight Details
Ready
(Autocompletes with Flight Data)
User Checks Flight Details
→ (Tap 'Confirm')

Passengers
Enter Passenger Details
→ (Tap 'Confirm')

Payment
Enter Payment Details
→ (Tap 'Confirm')

Loading Screen
Ready
(Screen Displays Progress Tracker)
→ (Automated No User Action Required)

Stage: Confirmation

Confirmation
Ready
(Autocompletes Confirmation of Payment and Next Steps)

Task Completed
End of User Flow

Key Insights

Type of Application

It is important to define the Application Type because high-level design decisions made at the start of a project have a knock-on effect on later design decisions.

The four Application Types are represented by the four quadrants of the UXDI Application Framework. Each type has a different characteristic, which is determined by the workflow. The apps workflow is a series of steps the user has to go through to complete a task. Application types are defined based on two aspects of the workflow; structure and complexity.

The user journey, from searching to booking a flight, transitions between two types of application; 'Utility' and 'Process'. However, it is important to specify the overarching, defining main application type.

The whole process, combining searching and booking a flight, is highly structured and complex. It involves large quantities of steps, user data and software calculations. Therefore, I concluded that the main defining Application Type is 'Process'.

The 'Flight Search' stage in the process is an example of a 'Utility' Application Type. It is a single use case application that specialises in helping the user complete one key task. The key defining characteristics is the workflow is highly structured but has low complexity.

The 'Flight Booking' (Flight Selection and Payment) stage in the process is an example of a 'Process' Application Type. It is a defined process with multiple steps and a sequential structure. The workflow is highly structured and complex. The users workflow is complex because users need to enter a large amount of data. The apps workflow is also highly complex because the software has to make complex calculations.

Linear Sequence

The user flow for booking a flight can be simplified into a linear sequence of steps.

The user is guided through a predetermined series of steps to create a seamless flow in order to achieve a goal or task. A linear sequence in UX Design enables us to create user-centred, goal-oriented experiences.

I created a simple and easy to use flow by minimising the number of options, actions and steps required. I identified the core actions that are critical to solving the problem and achieving the users goal. Studies have shown that the user experience is improved when users have fewer options to choose from and the software is automated to make decisions for the user.

By using a linear UX approach and creating multiple flow iterations I have created a simplified and consistent flow.

Multiple Screen States

Multiple steps in the flow are carried out on the 'Search Flights' and 'Flight Details' screens, but the screen is in a different state depending on data the user has entered.

This means users will spend more time on these screens so they will be critical to the users experience. Therefore, the 'Search Flights' and 'Flight Details' screens need to be a key focus during the design process.

I included each screen state, in order to fully represent the entire user flow. I focused on simplifying the user flow to only include the necessary screens. I removed the unnecessary screen states that disrupted the user flow.

Conclusion

By creating the User Flow Diagram I can improve the users experience by optimising the user flow and minimising complexity. This is a key step in the process that improves efficiency by minimising errors and the need for future iterations later in the design process. By using user centric research data to inform my design decisions, my User Flow Diagram visualises the user needs intuitively.

This is a valuable tool when communicating design ideas and the users' needs to stakeholders. It also facilitates the final testing stage, as product teams can easily follow the user flows to find user pain points, and evaluate if the proposed user flow meets user needs. Finally, at the hand-over stage, it allows developers to view the user flow and understand the user needs and implement designs quickly.

The key insights I have learnt during the process is the main, overarching and defining Application Type is 'Process'. By using a linear UX approach and creating multiple flow iterations, I have created a simplified and consistent flow. There are two key screens that arise in multiple states during the user's flow; the 'Flight Search' page and the 'Upgrades' page. Therefore, these two screens need to be a key focus during the design process as the user will visit it many times during their flow and therefore will have a greater influence on their user experience.

I included each screen state, in order to fully represent the entire user flow. I focused on simplifying the user flow to only include the necessary screens. I removed the unnecessary screen states that disrupted the user flow. I focused on creating a linear flow that leads the user through the process.

Step 1:

I defined the high level flows for a new airline booking app

I reviewed my research, affinity diagram and customer journey map to identify key stages in the user flow. I defined the best process to optimise the users flow through the airline app and maximise the user experience.

I identified that the key high-level user journey is booking a flight.
(Key User Journey A on Affinity Diagram Flow Chart on the right)

AFFINITY DIAGRAM FLOW CHART FOR AIRLINE MOBILE APPS
Ellen Feuchtwanger
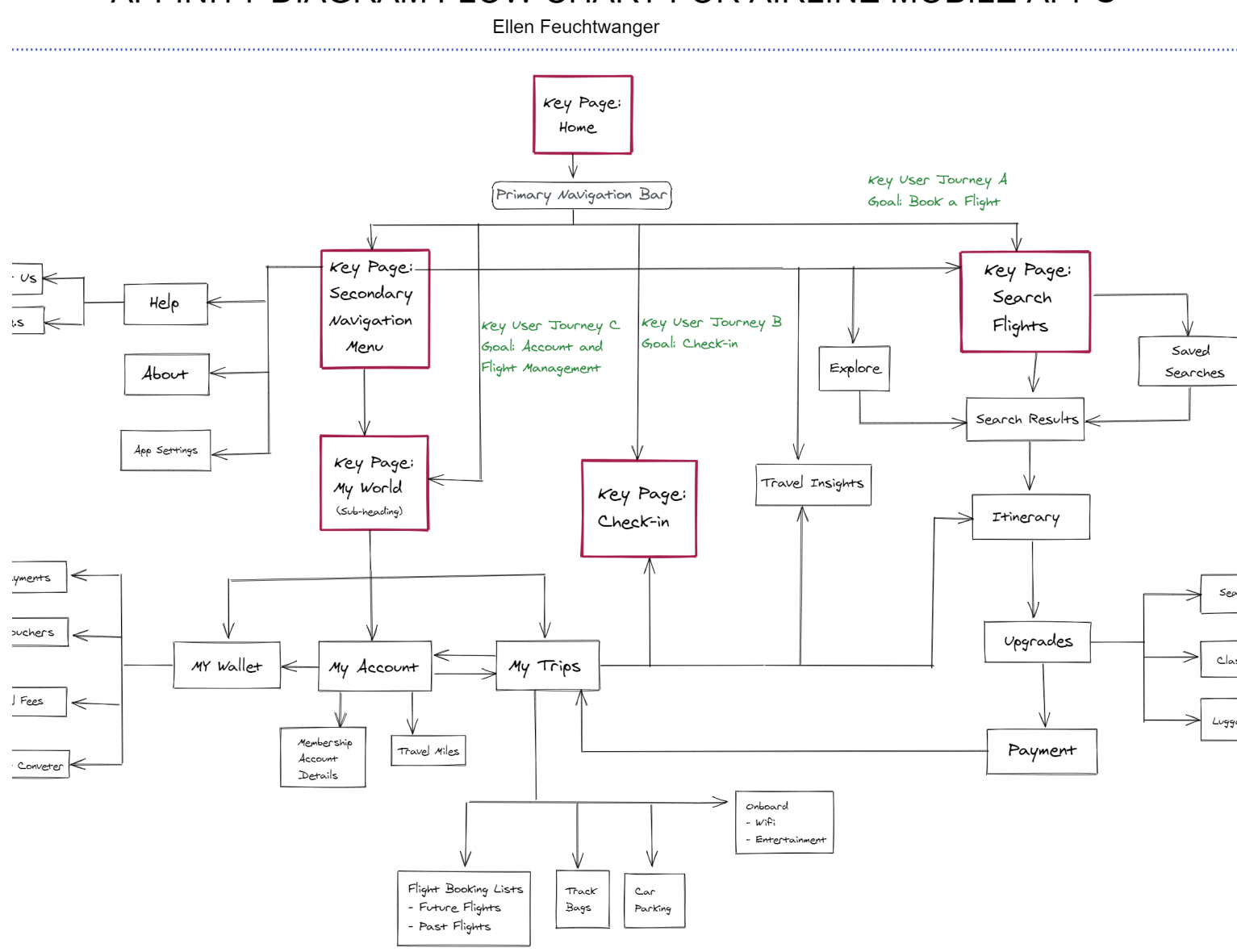
Step 2:

I sketched the User Journey for booking a flight by hand

I initially sketched the key user flow for booking a flight by hand.

This enabled me to quickly evaluate each flow diagram and make multiple iterations to resolve user pain points and improve the user experience.

Key:
Each screen is represented by a box.
Each interaction, such as choosing a departure airport or entering a date, is represented by a circle and arrow

Key Insights and Pain Points
I initially sketched the key screens in the user flow for booking a flight.

However, upon reflection and re-reading my research I decided I needed to also include the pop-up screens. This will enable me to evaluate and improve the users' experience across the entire flow.
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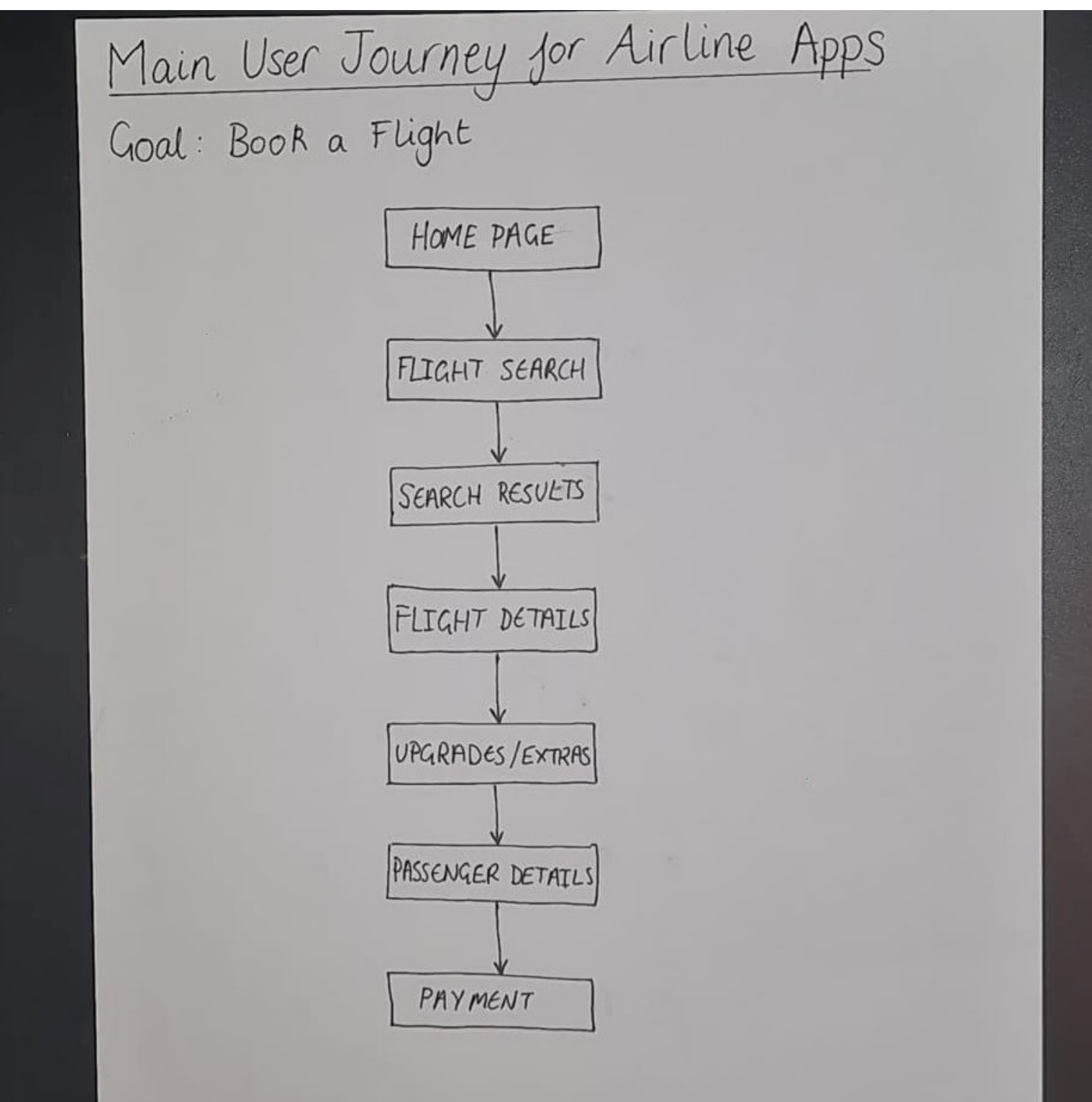
Step 3:

I addressed pain points and created multiple iterations

User Flow Diagram Sketch 2

Key Insights and Pain Points
I added the pop-up screens to complete the user flow.

However, when analysing this design I concluded that the user flow is confusing and overly complex.

For my next iteration I focused on improving the user flow to minimise complexity and confusion.
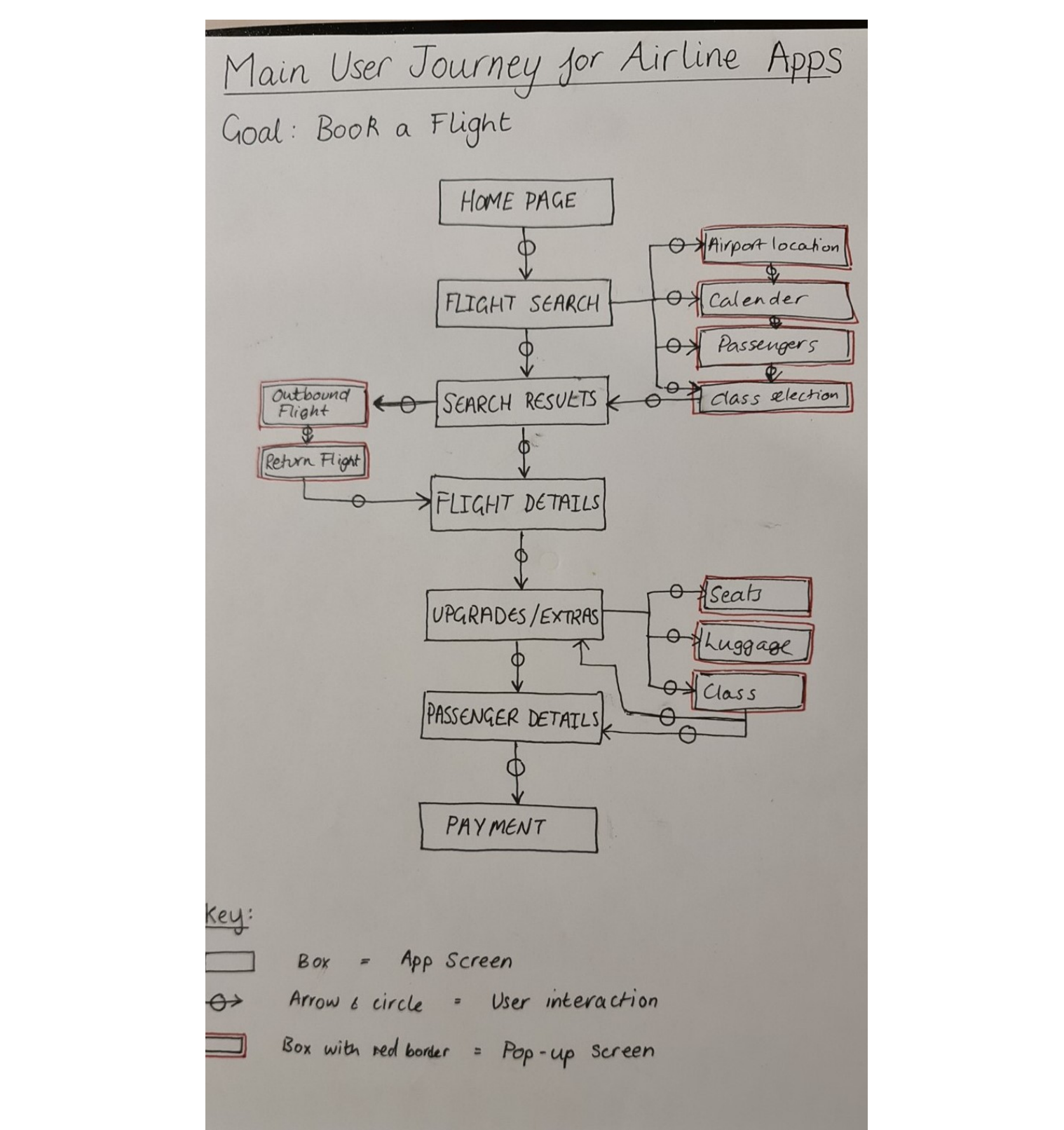
Step 3: Continued

User Flow Diagram Sketch 3

Key Insights and Pain Points
I focused on improving the user flow to minimise complexity and confusion.

I achieved this by minimising the number of user interactions and transforming the flow diagram into a linear process.

I grouped related screens into the main stages of the process.

Categorising the screens makes the flow diagram easier to digest at a glance and locate key stages in the process.

The key problem I identified in the 'Flight Search' and 'Upgrades' stages in this design does not account for screens that appear in multiple states during the user's flow.

For example, the user returns to the 'Flight Search Page' after entering data into each of the pop-up screens (location, dates, passenger and class). The user returns to the same page, but in a different state, as the software automatically updates the screen with the data the user just entered in the previous pop-up screen.

Therefore, on my next iteration I will include each screen state, in order to fully represent the entire user flow.
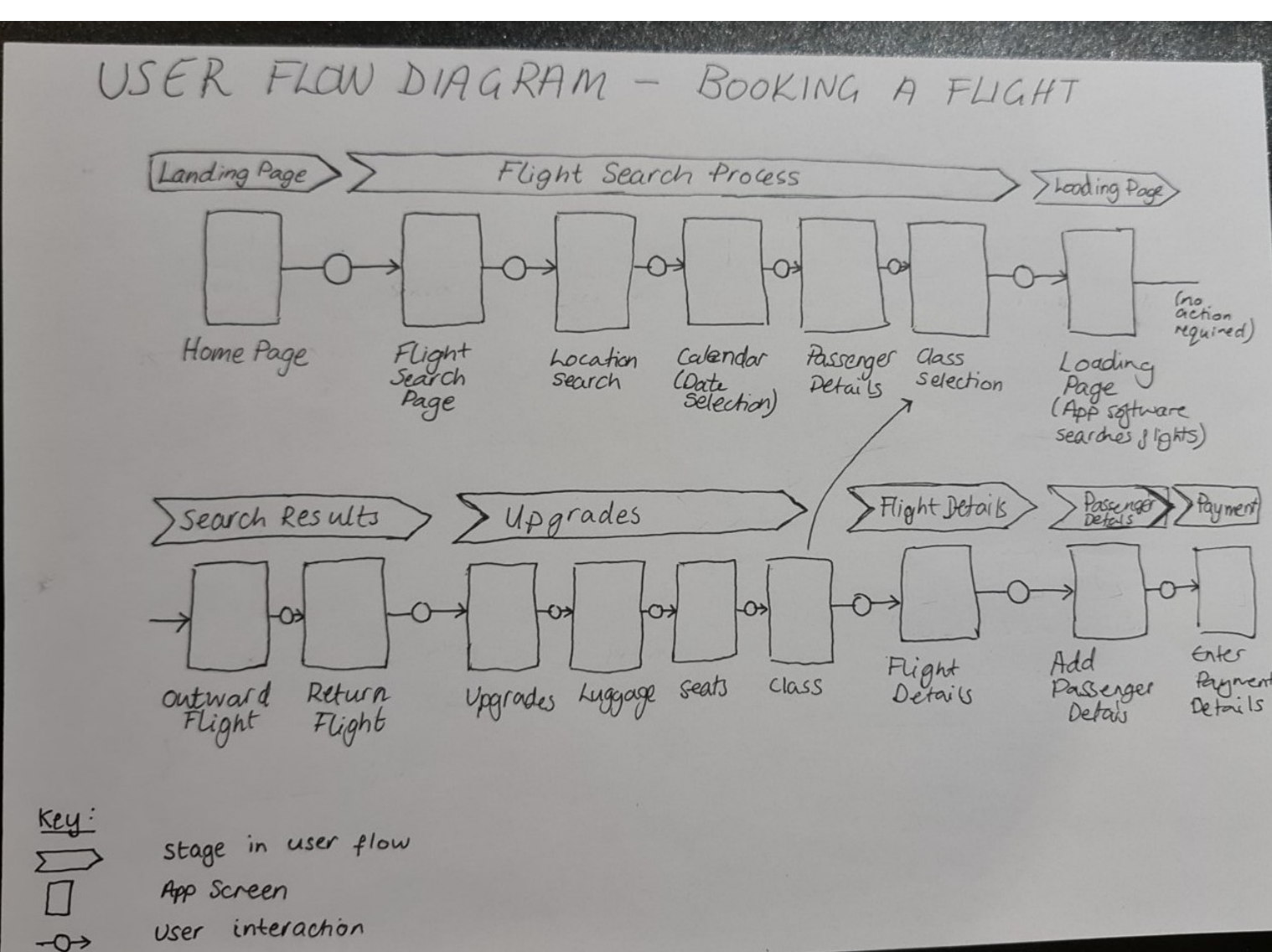
Step 3: Continued
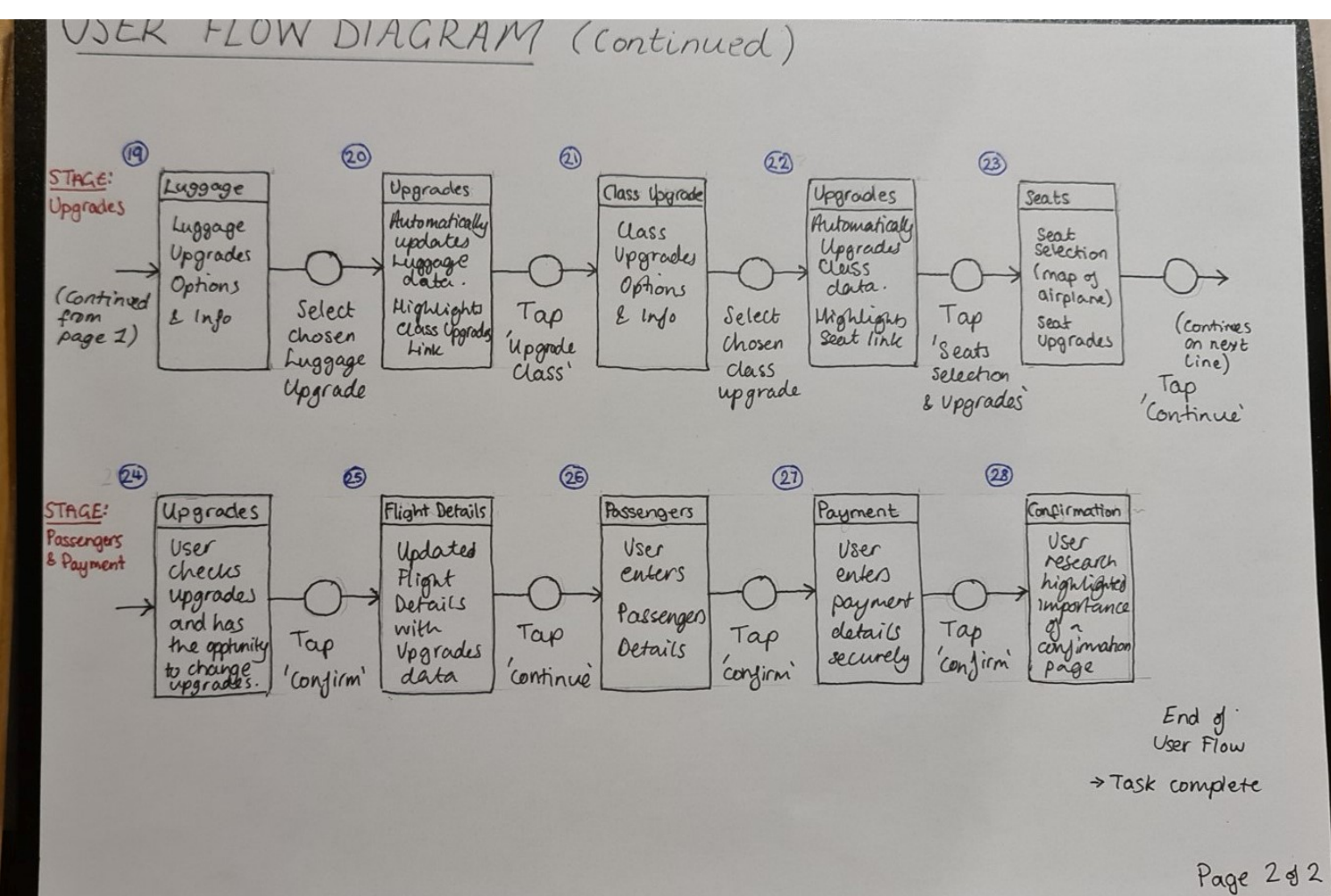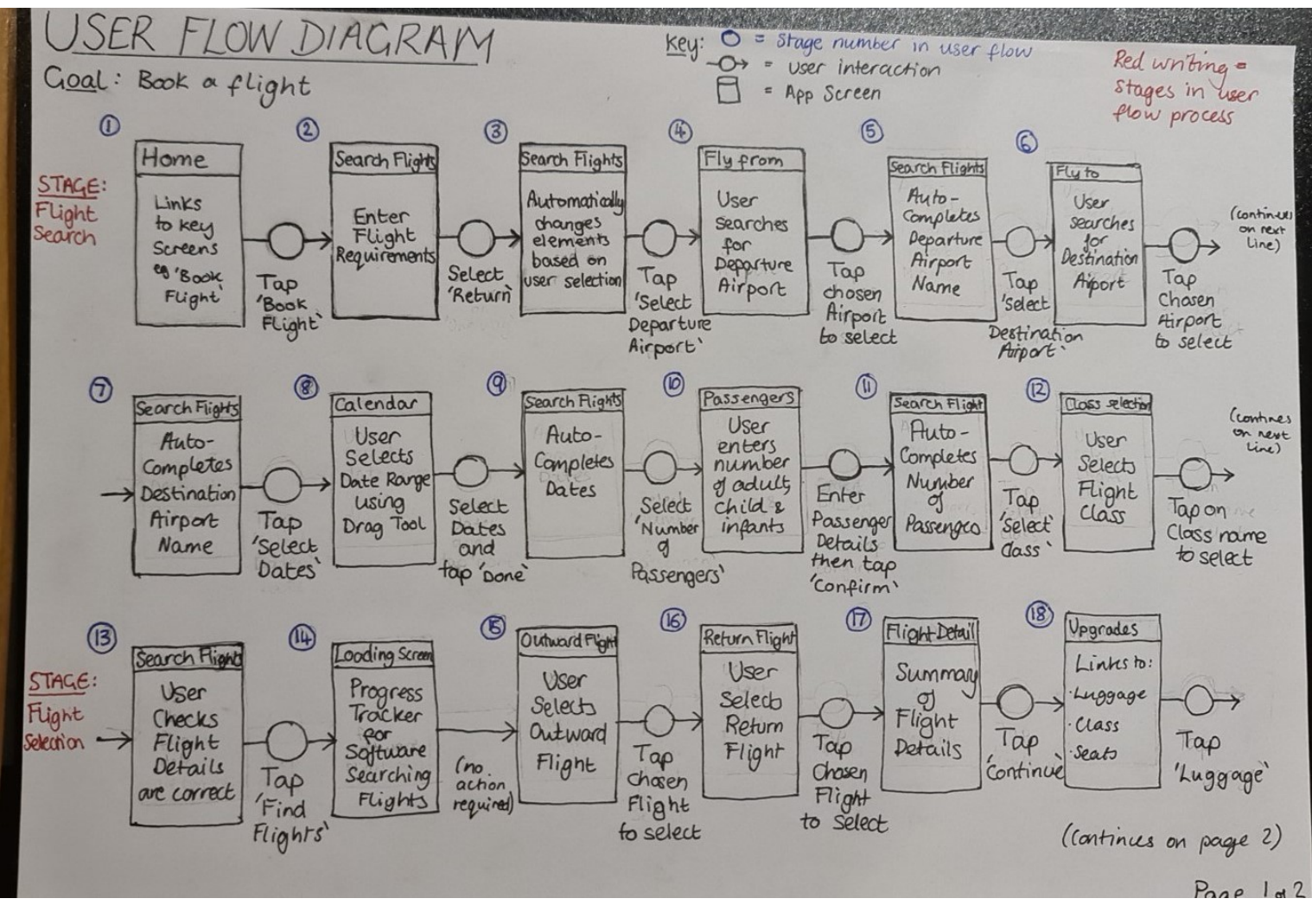
User Flow Diagram Sketch 4

Key Insights and Pain Points

In this version, I included the master screen states for the 'Search Flights' and 'Upgrades' screen. I based the flow on the common practises used by Airline Apps currently on the market, which I discovered during the Competitive Benchmarking and Usability Tests, I completed earlier in this project.

The 'Search Flights' screen appears 6 times during the process.
The 'Upgrades' screen appears 4 times during the process.

However, apon reflection and analysis I concluded that this flow is overly complex and involves more steps than necessary. From my user resarch, I learnt that users want to complete their task or goal in the quickest time and fewst number of steps as possible.

Therefore, on my next iteration I will simplify the user flow to minimise the number of screens. This will enable users to complete their task quicker and easier.

Step 3: Continued

User Flow Diagram Sketch 5

Key Insights and Pain Points

I focused on simplifying the user flow to only include the necessary screens.

I removed the unnecessary screen states that disrupted the user flow.

I focused on creating a linear flow that leads the user through the process.

Conclusion

I concluded that the user pain points highlighted in the user research stages of the project have been adressed.

I then translated my final flow diagram into digital format using Figma.