

# User Research Plan

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**Folders containing interviews / video conference :**

[https://drive.google.com/drive/folders/112oY7dn0ZohsilZsgcTdMpR1LE3i\\_KoC?usp=sharing](https://drive.google.com/drive/folders/112oY7dn0ZohsilZsgcTdMpR1LE3i_KoC?usp=sharing)

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# Introduction

The app that is tested for usability in this section is the existing application of Sri Lanka airlines. The app is developed by Sri Lanka airlines ltd and offers a lot of functionality. The app makes the ticket booking process, check in process and viewing flight details much more convenient and accessible to many people by using mobile as the platform. Although it offers a lot of functionality from a user's perspective, there are a lot of shortcomings in the application itself when it comes to interface design and user experience. In the following sections we will discuss the usability testing process that was done in order to pinpoint those shortcomings, thus gathering the necessary information to improve the quality of the redesigned product. The goals of the usability testing includes, establishing a baseline of users performance , validating user performance measures and identifying potential design concerns .

## Test Objectives

The following objectives were focused when conducting the usability test.

- Finding the shortcomings related to nested UI structures (In order to get a simple task done, we have to navigate through multiple user interfaces)
- Finding the shortcomings related to navigation (lack of a bottom navigation / issues related with the side navigation)
- Finding issues related to the lack of uniformity throughout the application
- Finding the issues which are inherent to the lack of a proper design language (Cupertino standards in apple and material design standards in android)
- Shortcomings that are related to the bad usage of color science.
- Finding the issues related to the improper usage of typography in the application.
- Finding the issues related to improper usage of white space in the application.
- Finding issues related to long forms and lack of labels in forms
- Finding issues related to the services not being available.
- Finding design inconsistencies and usability problems. (failure to locate and properly act on the errors due to labeling ambiguities)
- Establish a user performance baseline and satisfactory levels after using the application

The above-mentioned areas will be mainly focused when usability testing the existing application in order to improve the user experience of the redesigned application and to find areas in which it is pos improved upon.

# Methodology

In order to identify the pain points and to test the above hypothesis, a user research was conducted after selecting 2 people from the chosen list of personas. The user experience research methods that were chosen were user interviews and customer feedback gathered through a google form that was distributed. These methods were affordable, simple and effective with contrast to expensive methods such as usability lab studies or ethnographic field studies which either were much more expensive or time consuming.

## Interview

- 2 people who best fit the personas were selected and interviewed online covering all the 4 functionalities of the 4 members.
- Each interviewee was interviewed by 2 members respectively.
- The interviews were recorded for further reference. (Since the interviews were conducted online it was much easier to record).
- While one member was interviewing, the other member took notes and made sure all the test objectives were covered in the interview.
- In order to make sure that all aspects of the test objectives were covered a script was prepared beforehand
- The questions that were asked in the interview were mostly closed-ended questions in order to focus on the issue directly at hand. But open-ended questions where the user can express their opinion were also asked.

## Questionnaire

- A questionnaire was distributed which included mostly questions with quantitative answers so that it was easier to analyze the data
- The questionnaire was divided into 6 sections
- The first section was mostly to get an understanding about the users' demography
- In this section general questions such as age group and gender were asked to find out whether there was a correlation between the demography of the users and how they felt about the application
- The following sections covered the major 4 functionalities of the application and with the focus on the user experience.

## **Procedure for the interview**

- The participants were given a brief explanation about the application that was about to be tested
- The participants were aided with the installation process of the application either from the android play store or the apple app store as required.
- Several questions were asked from the participants to confirm whether they fit the demography of the persona.
- Then they were briefed about the tasks that was to be completed. The facilitators also informed the participants that they will be timed and evaluated on how effectively they manage to perform the task. They were also advised not to deviate from the task at hand and not sidetrack from the designated path to achieve the assigned task.
- The participants were encouraged to guide the team through their thought process while they were doing the tasks that a proper idea could be achieved
- All of the thoughts and the recording process was recorded.
- After the whole process was completed, several questions were asked from the employees to answer in retrospect.

## **Roles in the interviewing process**

### **Facilitator**

- They oversaw briefing the participants about the tasks
- They were also moderating the interview with the employee

### **Timer / data logger**

- They oversaw finding out how much time it took for the user to complete a given task
- They also took notes and logged about the user's thought process.

### **Participant**

- They were subjected to testing
- They provided their opinion on which areas could be improved.

# Interviewing

Interview 1:

<https://drive.google.com/drive/folders/1RQxQtBUZdMilm5ciswUngp58MDoOJFCp?usp=sharing>

Interview 2:

<https://drive.google.com/drive/folders/1XCH8UEBMILdo81rb4CfwKiMJnWMO5tIs?usp=sharing>

In order to identify the pain points from a user's perspective, 2 interviews were conducted. The procedure and the code of conduct of the interview will be discussed in the section.

- The objective was mainly to get an understanding of the issues that a general user of the application faces.
- In order to do that a script was prepared covering all aspects of the functionalities that could be achieved within the system
- This included Registration with mobile number / login / Flight booking / FAQ etc.
- The script was prepared in such a way that most of the controversial design decisions of the previous application were covered.
- The main focal points were the lack of proper navigation in the UI , design inconsistencies , service downtime etc.
- Both the interviews were conducted online using the zoom platform and was moderated by the team members themselves

## Interview 1 script (Lasal and Senura)

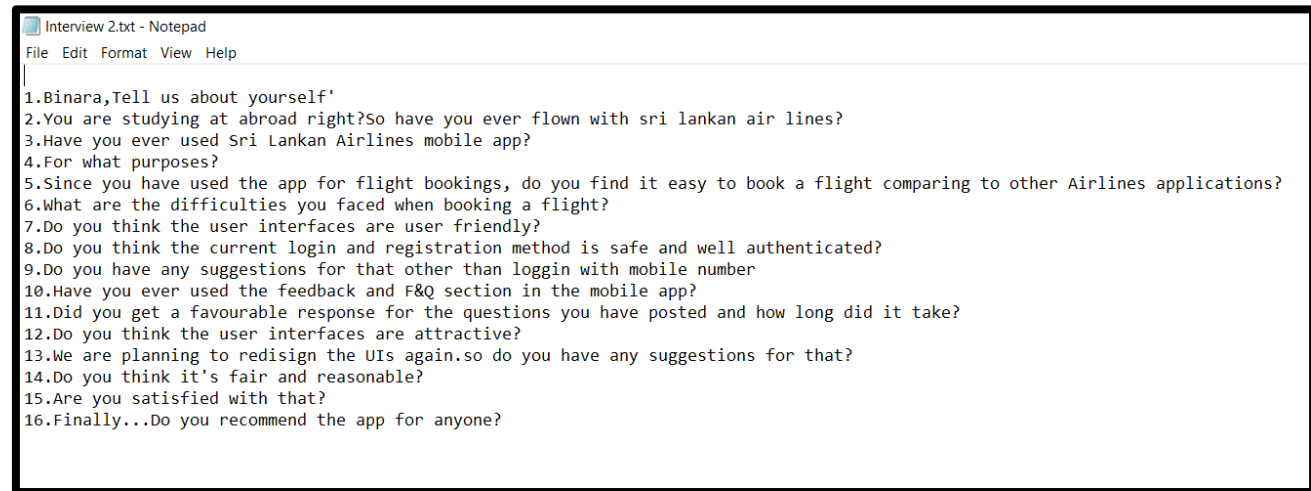
```
a.txt - Notepad
File Edit Format View Help
|--Welcome the user.
--Questions to get an understanding of the users demography
* Tell us a bit about yourself
* Have you flown with Srilankan airlines before? if so how did you book the tickets?
* Have you used the Srilankan airlines application before?
* Can you describe your experience while using the application.

--Questions to get an understanding about how the user felt about the lack of a global signin
* Did you find the lack of a global signin in the application annoying?
* If so what tasks were made harder by the need to provide th phone number?
* If we were to implement an alternative sign-in / user authentication method what would you rather prefer?
  -Google authentication
  -Facebook authentication
  -Username password
  -Mobile authentication

--Questions to get an understanding about how the user felt about the flight boocking process
* next we will ask you some general questions regarding flight booking
* Can you describe your experience with trying to book a flight with the mobile application
* Did you find it easy to discover flights and discounts of flights?
* How did you find the lack of a bottom navigation affect your experience.
* Do you think that if the app used a bottom navigation and deviated away from nested interfaces , it would be much easier to achieve tasks?
* Did you properly understand the input feilds when filling out the forms inorder to book tickets
* Do you think that a proper usage of vector graphics or icons would have helped inorder to achieve the tasks and guided you through the interfaces.
* Rate the overall flight booking experience out of 10

--Questions to get an understanding about the online checkin process
* When flying overseas , did you check-in manually at the airport or using the online method.
* What would you rather prefer? checking in manually or online?
* Did you find the checkin interfaces interactive?
* We are planning on implementing flight scheduling functionality . Do you think such a functionality would be helpful to you?
* Do you think proper typography (fonts , fontweight , size) was used to properly direct the users attention and achieve the task.
* Rate the overal process of the flight scheduling and check-in.
```

## Interview 2 Script (Dilmi and Ayodhya)



- While the interview was being moderated by 2 of the members in the group, the other 2 members were recording and taking notes of the responses.
- Since the meeting was via Zoom, it is easy to record for further referencing of the interviews

## video recording

App testing :

<https://drive.google.com/drive/folders/1j0uoF7IOJ-9p0B8BxY4GGivshkuYbv7m?usp=sharing>

- The main objective of this segment was to guide the user through some general functionalities within the system and see how effectively they achieve the task
- Firstly, the users were briefed about the application and what we were testing for.
- Also, the matrices that we were testing them against were also explained
- Apart from that the code of conduct was explained to the user
- The video recording session conducted of all the 4 members in the team
- It was conducted via Zoom and the screen streaming functionality of Zoom was used to stream the user behavior in the application
- The interviewing team consisted of 4 members. A moderator, a timer and 2 data recorders.
- The moderator guided the user through the process of achieving certain tasks. Unlike just asking the user to achieve a certain task, they were explained about the task to be achieved and while they were achieving the tasks, several questions were asked to find the thought process behind the user and how they felt about the user interfaces while achieving the tasks.
- The timer timed the user achieving the task and calculated against the success matrices that they were evaluated against.

# Questionnaire

App testing:

<https://forms.gle/91QMzVxWuU57sb6C9>

## Thought process behind making the question.

- The questionnaire is divided into 6 sections
- The first section contains questions to get a demography of the user

### Demographic questions

- In order to get an understanding about the user's demography questions such as
  - Age group
  - Gender
  - Education level
- By getting the qualitative categorical data, it is possible to find whether there is a correlation between them and the satisfaction levels.

### Section about downtime

- This section was specifically designed to address the down time of certain functionalities and how it has negatively affected the user's experience.
- Here, mostly scale variables were taken to quantitatively analyze the negative experience.

### Section on Login / registration

- In this section the issues related to authentication and how the lack of a global login and session management negatively affected the users were explored.
- In here they were also asked what sort of a sign in would improve the users experience (google authentication, Username password authentication )

### Section on flight booking and booking retrieval

- In this section mostly questions regarding the process of flight discovery, booking and flight detail retrieval was asked.
- Also issues such as navigating through the interfaces and quickly achieving tasks was mainly focused
- Also, how shortcomings in the input fields and how the user interacted with input boxes and other methods of information entry was explored
- Also issues inherent to nested forms with multiple UIs were explored



## How the questionnaire should be distributed and data collection process

- The questionnaire is planned to be distributed online since it was created using google forms
- The main method is to distribute through WhatsApp groups
- Also other social media platforms such as Facebook and Instagram are planned to be used
- One other method of data collection is online forums

### Participant Profiles

<<This is where you include information about your test participants and ensure that they match the user personas of the product you will be testing.

*Note: in most cases participants will remain anonymous, so ensure that you do not include any names or personal information.>>*

The table below provides a breakdown of the participants selected for testing:

Name	Demography	Location, Date and Time
U_0001	1. Undergraduate 2. Between the age group of 20-30 3. Loves traveling 4. Travels a lot during the vacations 5. Mostly like to do things online	Zoom platform 16 / 8 / 2021
U_0002	1. Srilankan student who is studying abroad 2. Between the age group of 20-30 3. Travels frequently for his studies 4. Uses mobile applications to get most of their tasks done	Zoom platform 16 / 8 / 2021

## User Research – Tasks/Scenarios

No.	Task Instruction	Target	Probes
1	<ul style="list-style-type: none"> <li>Asked to post a question in the Q&amp;A section               <ul style="list-style-type: none"> <li>The user has to post a question on the Q&amp;A section regarding any concern he is having. Once he posted a question he should track whether a response will be given within a limited time. So this task was assigned to observe the whole process happened in the feedback and Q&amp;A section</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Get interact with the Customer Care Service</li> </ul>	
2	<ul style="list-style-type: none"> <li>Asked to book a flight and cancel it               <ul style="list-style-type: none"> <li>The objective of this task is to give the user an overall idea about the flight booking process. In here he has to first login to the app through his mobile app. Then has to navigate to the booking UI and check whether all the options are working properly.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>To confirm whether the flight booking function is working properly and user understand the process properly</li> </ul>	
3	<ul style="list-style-type: none"> <li>Asked to check available flights for a</li> </ul>	<ul style="list-style-type: none"> <li>Target was to make</li> </ul>	

	<p><i>particular date</i></p> <ul style="list-style-type: none"><li>○ <i>User has to navigate to the UI where available flights are displaying. There, user has to select the starting and ending date and the destination. He has to confirm whether the details are properly displayed when he submits the correct time and destination.</i></li></ul>	<p><i>customer understand the process of flight checking</i></p>	
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## Plan for Data analysis

*The interview was conducted in such a way that mostly close ended questions and questions where answers were quantitative were asked with some questions where the user can provide their opinion*

- *The data that will be collected from the interviews are scrutinized after rewatching the interview video and the data is entered into a data analysis software (Microsoft excel).*
- *The Excel software was used for its ease of data analysis and graphing capabilities*
- *The qualitative data were refactored first, and variables were properly organized.*
- *The quantitative data were graphed in a histogram to analyze*
- *2-way frequency tables were used to analyze combination of categorical variables.*
- *Stacked bar charts were also used.*
- *Other than that Pie charts and other graphical methods were also use.*
- *Excels analyze function were also used*

*The main success matric the user was analyzed against in the video recording was time. Other than that, users were counted in how many times they had to renavigate to find the relevant functionality*

- *Time will be analyzed against the relevant functionality*
- *Apart from that the number of times the user had to renavigate to find functionality will be analyzed as a separate variable*

*The questionnaire was created using google forms. Therefore, the data analysis capabilities inherent to google forms was mainly used to analyze the given data. Apart from that the responses will be exported as a csv file and imported to excel to do further analysis*

- Bar charts, pie charts, histograms, and frequency tables to were used to do univariate analysis based on the whether the variables were qualitative or quantitative.*
- Stacked bar charts with legends , 2 way frequency tables and other analysis methods in the excel was used to do multivariate analysis.*