

DESIGN DOCUMENTATION



MONASH University

FACULTY OF ENGINEERING
ENG1003: Engineering Mobile Apps
Team 036

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1. PROJECT INFORMATION

1.1 Project Background

Exchange programs at Universities offer the opportunity to study in a different country and learn from a new culture, however due to Covid-19 restrictions, many exchange students have been missing out on the opportunity to travel within their host country. As the pandemic restrictions begin to ease, a growing market of exchange students seeking domestic travel will likely increase as local borders begin to open. With an expected increase of demand in the local travel market, Monash University has been sponsored to create a web application to help exchange students plan their travel itineraries, book future flights and archive all the places they have visited.

1.2 Project Summary

The design stage of this project will outline the layout, structure, and sequence of the user interface and data for this web application. This application will be utilising the “Material Design Lite” (MDL) JavaScript and CSS code library for the overall design. All design decisions will be clearly defined, including the font, font size, font colours and MDL references, for all headings, content, buttons, text input fields, date input fields and tables. A wireframe for each page within the application outlines the intended user interface design, and the storyboard will provide the sequence between the different wireframe designs. Finally the structure of the system is described using class diagrams which help to visually explain the association between the different classes that are to be used in this web application.

2. DESIGN DECISIONS

The design decisions section explores the chosen visual elements of the application.

2.1 FIXED HEADER

Font Type: Helvetica

Font Size: 25px

Font Color: White

Header Color: Light Green (HEX #8cc152)

MDL Reference: Fixed Header

Header Links Include:

- All Routes
- Login/Logout
- Schedule Trip Page
- History Trip Page

2.2 CONTENTS

Font Type: Helvetica

Font Size: 8px

Text Color: Black

2.3 BUTTONS

MDL Reference: Raised Button with Ripple

Button Color: Light Green (HEX #8cc152)

Button Text Color: Black

Buttons Include:

- Submit
- Save
- Cancel
- Create Account
- Back to Login
- Delete Trip
- View more
- Sign Up
- Login

2.4 TEXT INPUT

Text Floating Label Font Colour: Light Green (HEX #8cc152)

Text Input Font Colour: Black

MDL Reference: Text with floating label

Text Input Includes:

- Country
- Airport

2.5 DATE INPUT

Date Floating Label Font Colour: Light Green (HEX #8cc152)

Date Input Font Colour: Black

MDL Reference: Text with floating label

Text Input Includes:

- Date for the trip

2.6 TABLE

Table Header Font Size: 20 px

Table Header Font Colour: White

Table Header Background Colour: Dark Green (HEX #2f6e33)

Table Content Font Size: 15 px

Table Content Font Colour: Black

Table Content Background Colour: White

MDL Reference: Data Table

Tables Include:

- Schedule Trip Table
- History Trip Table
- Summary Table
- Trip Details Table

2.7 CHIP HEADER

Chip Header Colour: Light Grey (HEX #dedede)

Chip Header Text Colour: Black

Chip Header Font Size: 25 px

MDL Reference: MDL-Chip

Chips Header Include:

- Scheduled Trips
- History of Trips
- Summary
- All Routes

2.8 LOGO

Small Logo Size (Homepage Button): width - 50px, height - 50px

Big Logo Size: width - 200px, height - 100px

3. WIREFRAMES

3.1 Homepage

The Homepage layout would utilize the scrolling header from MDL, the web page is separated into top and bottom sections. The top section splitted the page with MDL grid as 2-4-2 columns for its contents, while the bottom page takes up all the 8 grids for map display. This page is the very first page a user would visit when entering this application. The following image shows the homepage when the user is experiencing the application for the first time. The map would display all the airports for the selected country and also allow the user to select their desired routes.

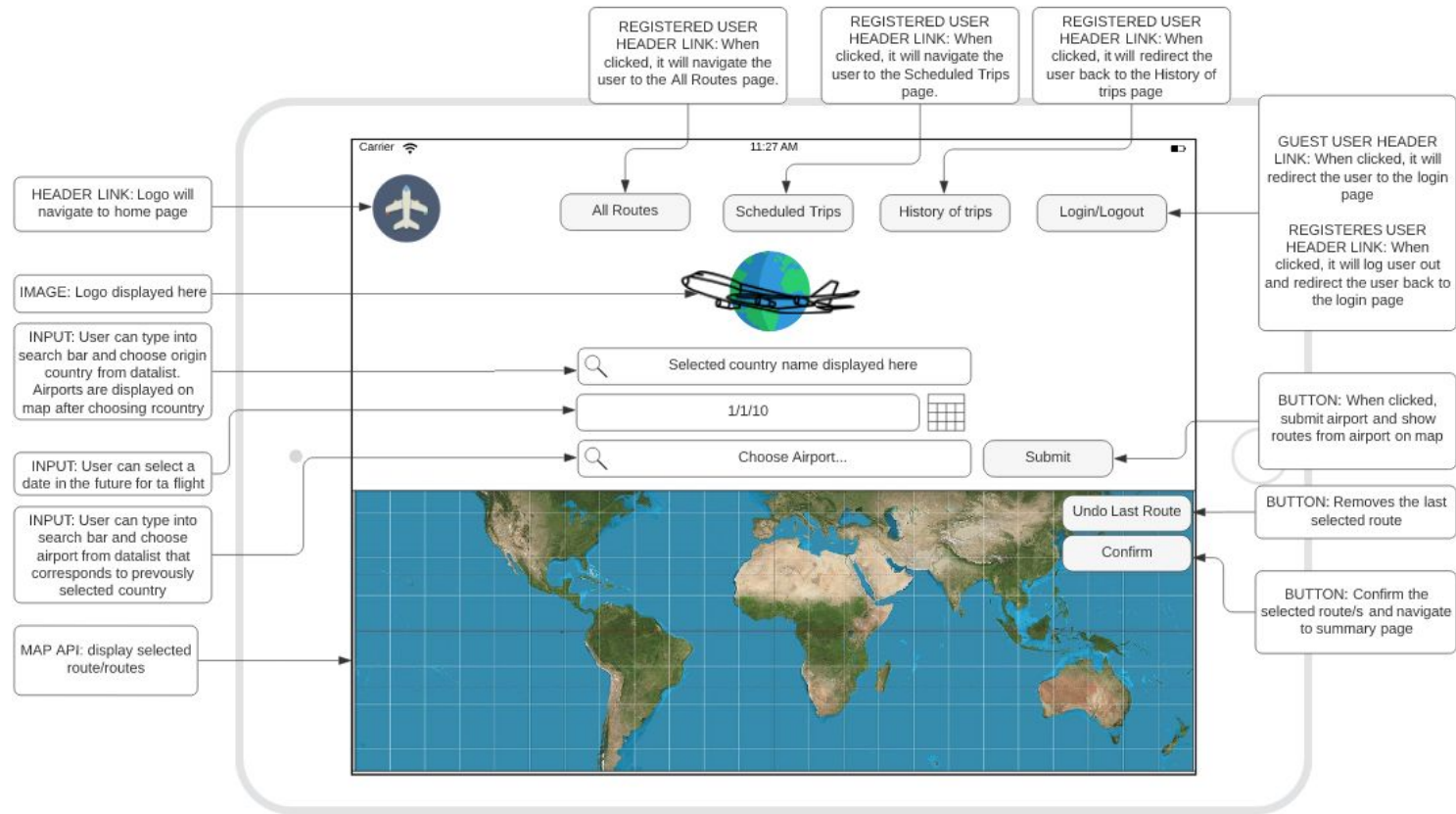


Figure 1: Homepage Wireframe

3.2 Summary Page

The following wireframe depicts the summary page of the application. The summary page displays information of the selected routes for the trip and provides the user an overview of their trip.

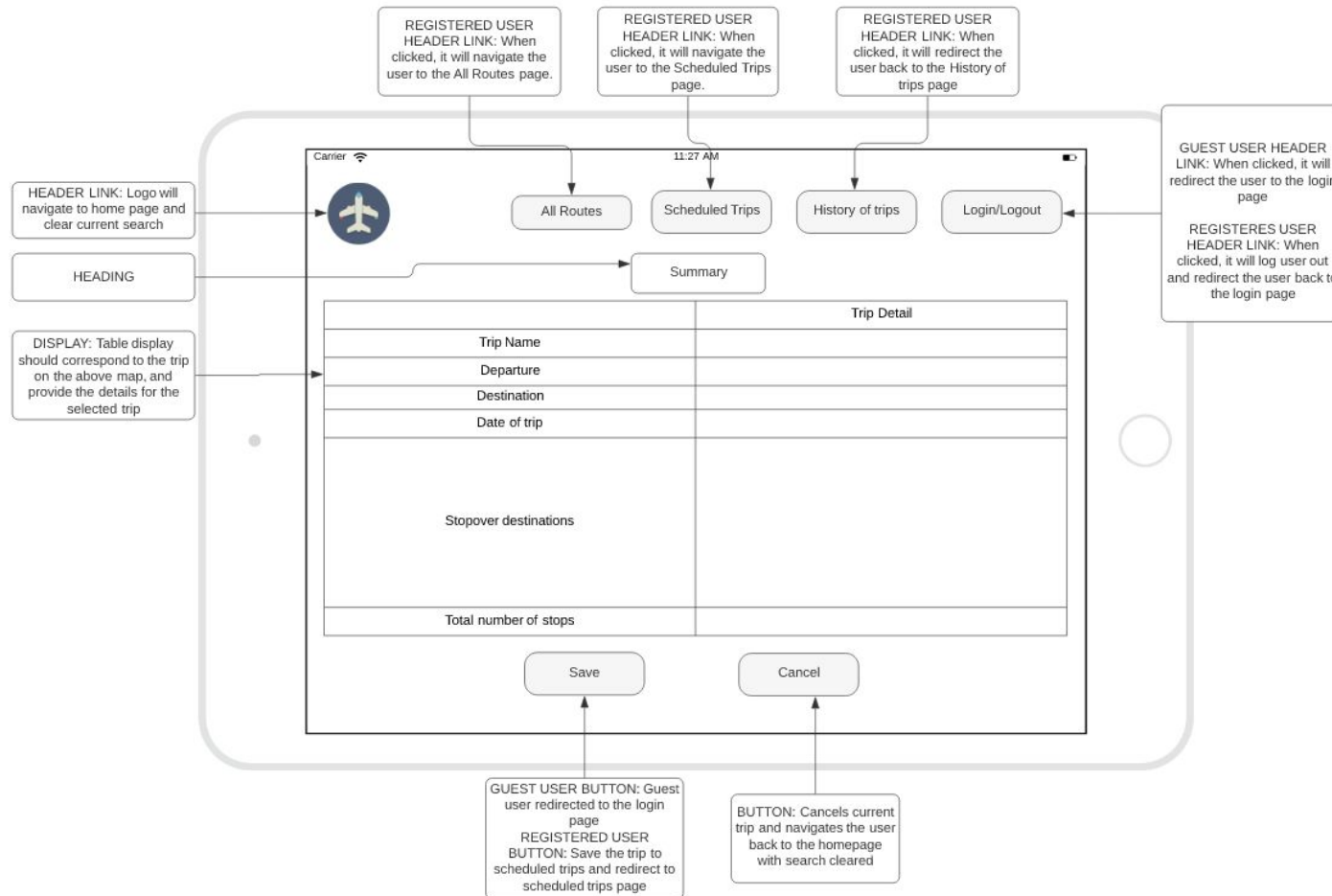


Figure 2: Summary Page Wireframe

3.3 Login Page

The following wireframe displays the login page for the application as a guest user would be redirected to this page after clicking the “Save” button in the summary page or “Login” from the navigation bar. This page allows the user to login to their account by providing their username or email address, as well as a valid password. The guest user can also create an account by clicking the “Sign Up” button if the user uses this application for the first time.

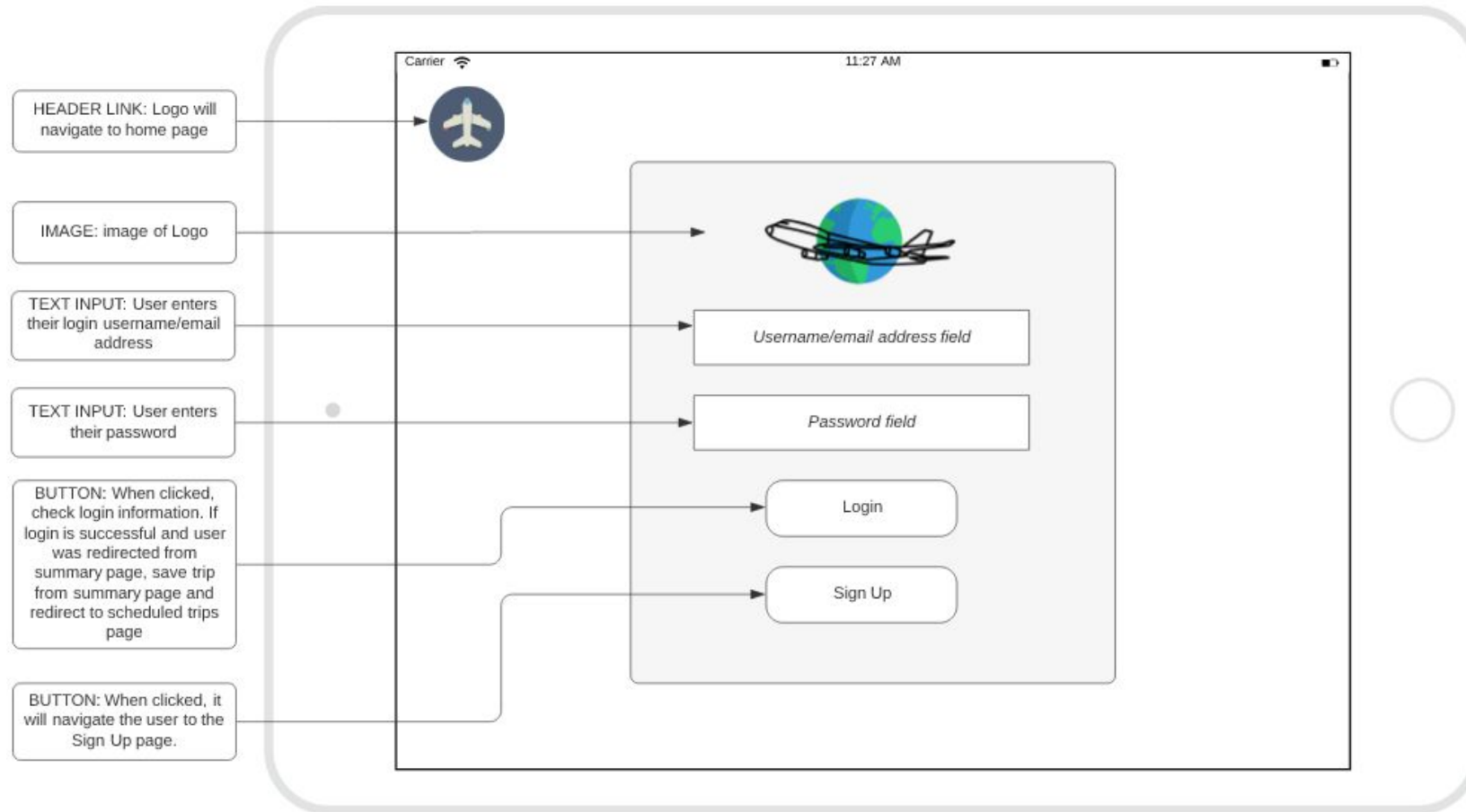


Figure 3: Login Page Wireframe

3.4 Signup Page

The following wireframe depicts the Sign Up page for this application where the guest user can create an account by entering username, email address, and password. Once all information is entered, the account is created by clicking the “Create Account” button. The guest user also has a choice to return to the Login page if they already have an existing account.

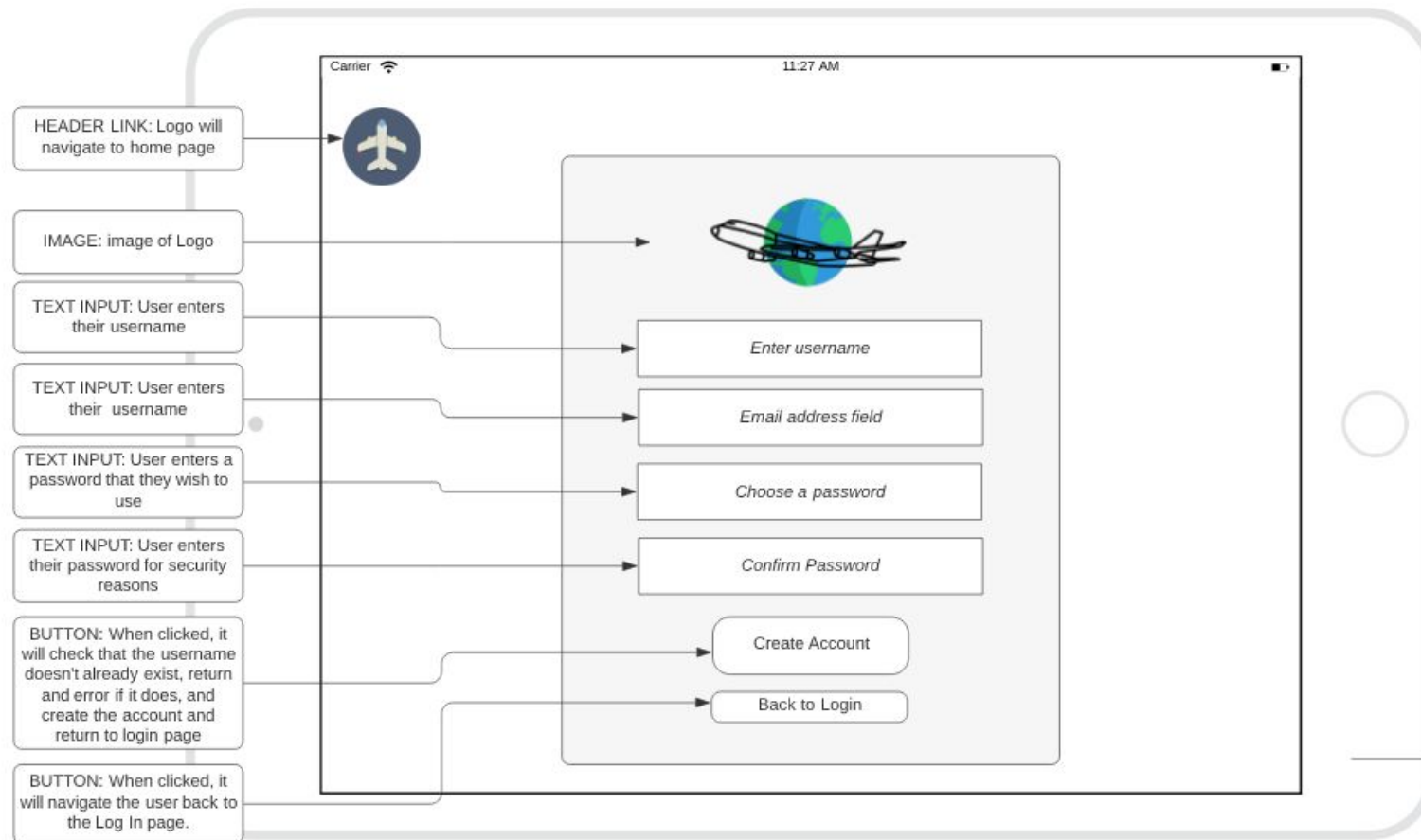


Figure 4: Signup Page Wireframe

3.5 Scheduled Trips Page

The following wireframe depicts the Scheduled Trips Page for registered users. The registered user can access this particular page via the Header Link. The registered user can also view the details of a particular trip by clicking on the “View More” button.

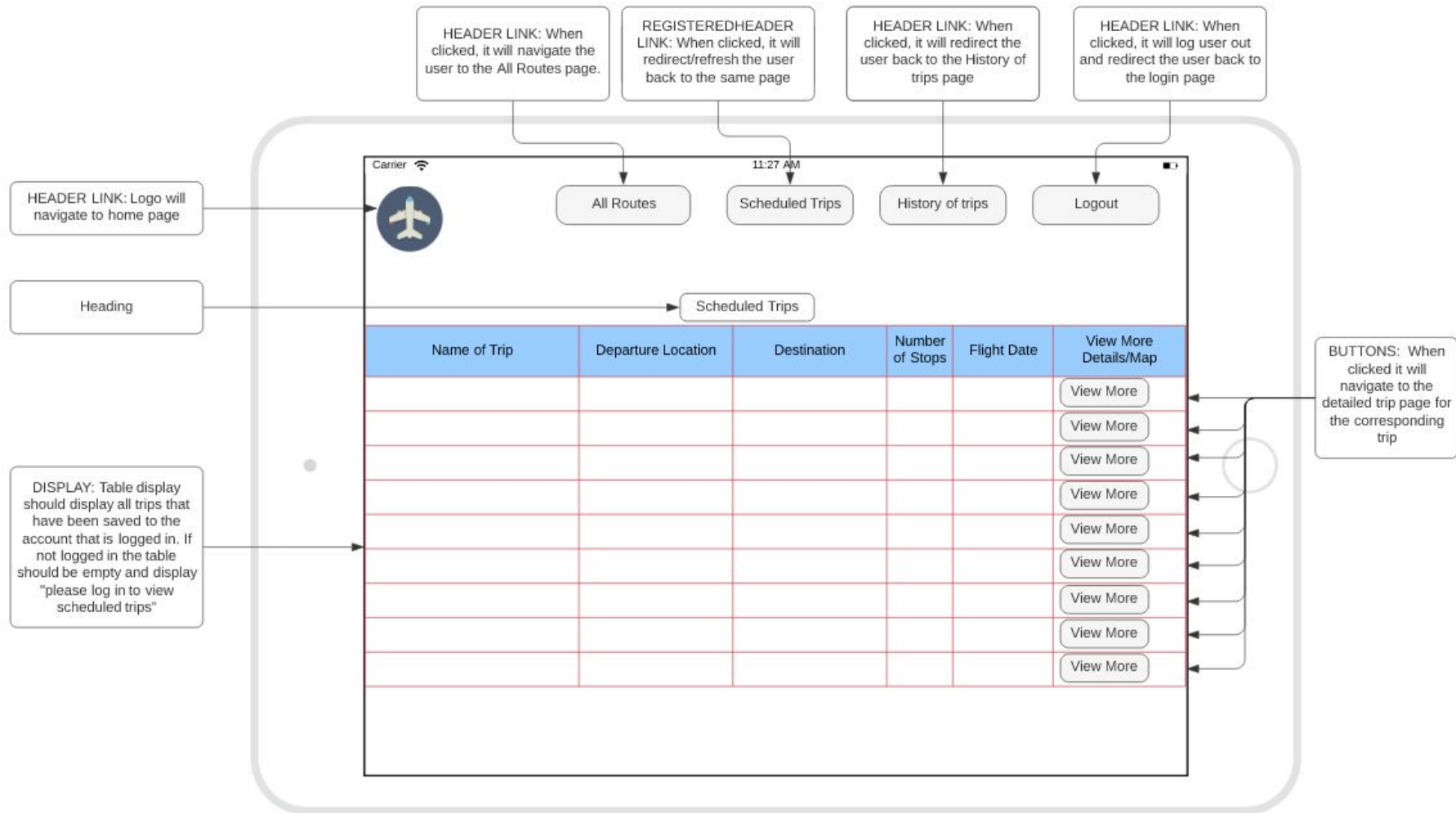


Figure 5: Scheduled Trips Page Wireframe

3.6 History of Trips Page

The following wireframe displays the History of Trips Page for the registered user. This page includes all the past trips the user created and the registered user can also access the details for those trips by clicking the “View More” button. The registered user can access this particular page via the Header Link.

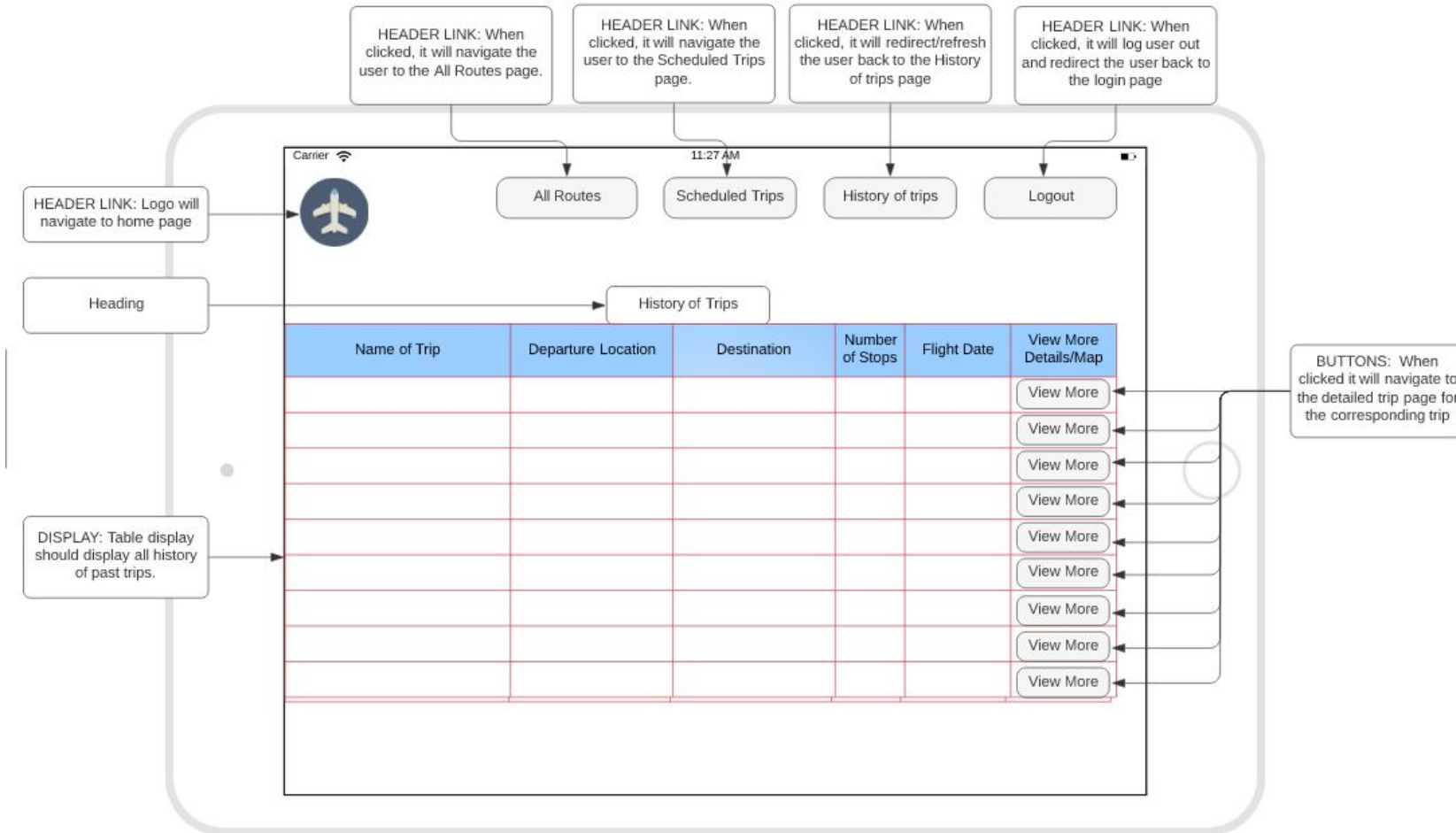


Figure 6: History of Trips Page Wireframe

3.7 Detailed Trip Page

The following wireframe depicts the Detailed Trip Page as a registered user. This page displays a detailed description of a certain trip and also gives the registered user an opportunity to delete their trip. If the trip is deleted, the app will redirect to the schedule trip page.

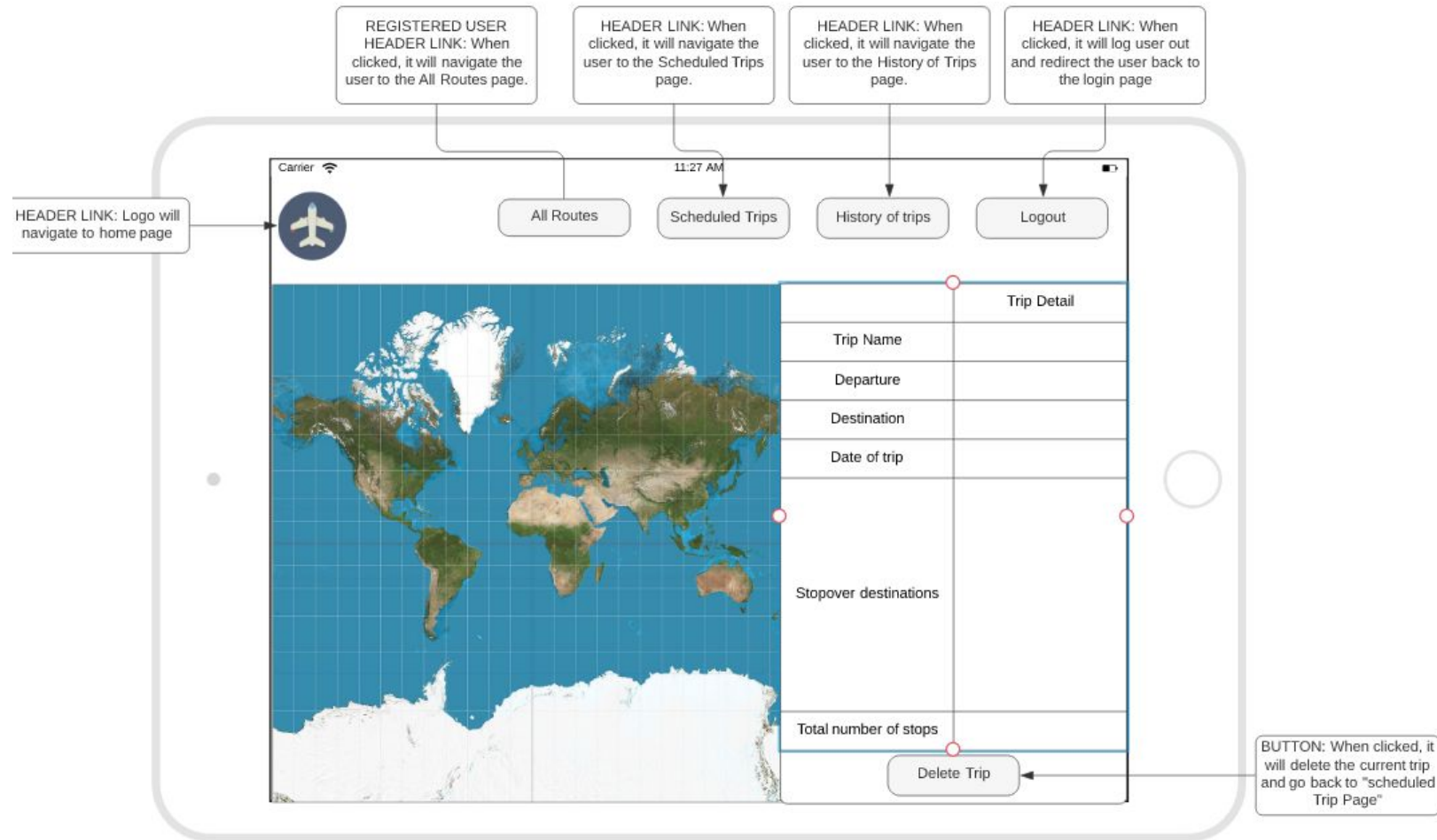


Figure 7: Detailed Trips Page Wireframe

3.8 All Routes Page

The following wireframe displays the “All Routes” page for both registered and guest user. This page allows the user to view all the routes from a chosen country displayed on the map.

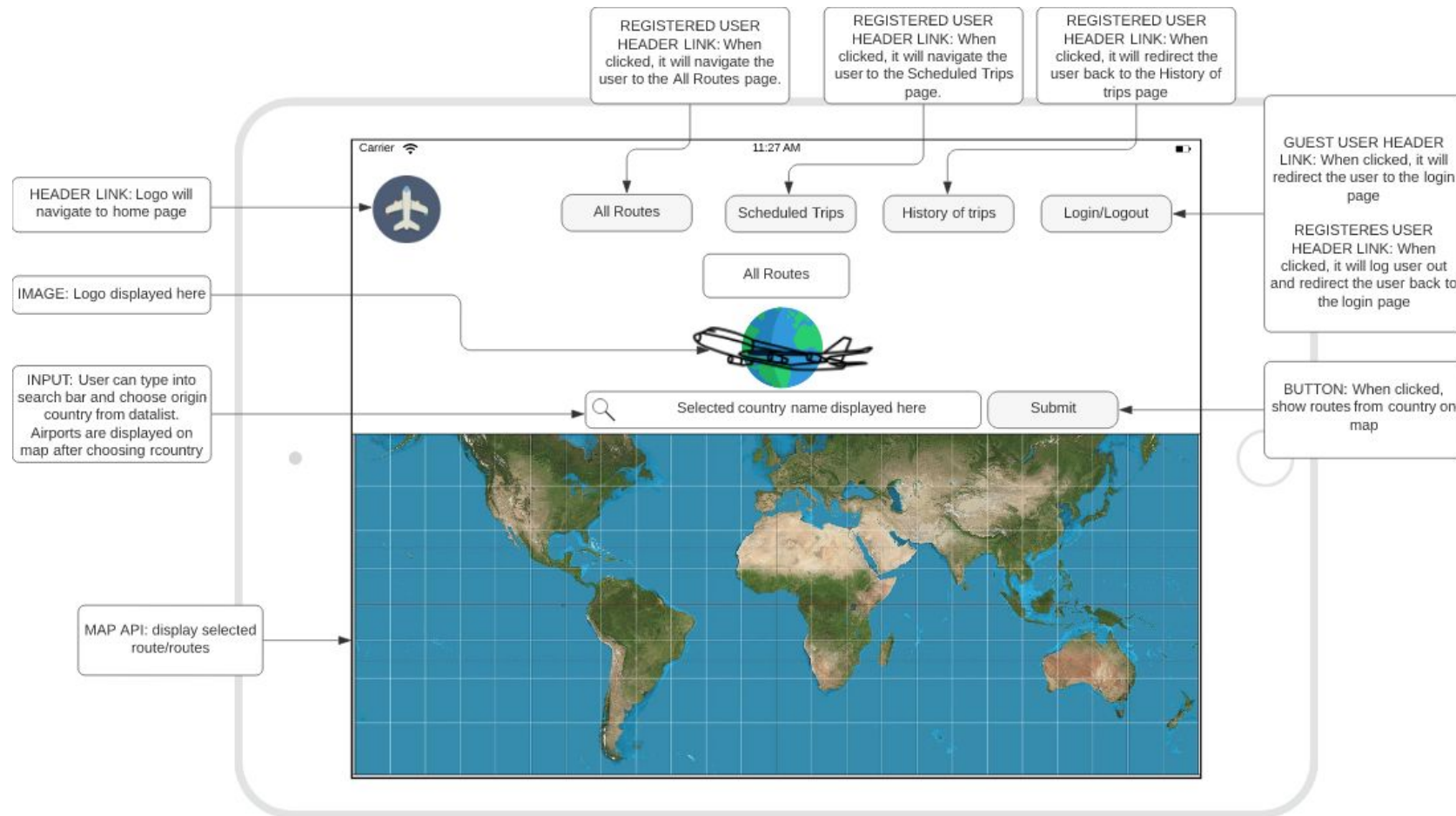


Figure 8: All Routes Page Wireframe

4. STORYBOARD

Figure 9 depicts the storyboard for the application. Links to full size image: [LucidChart Link](#) or [Google Drive JPEG](#)

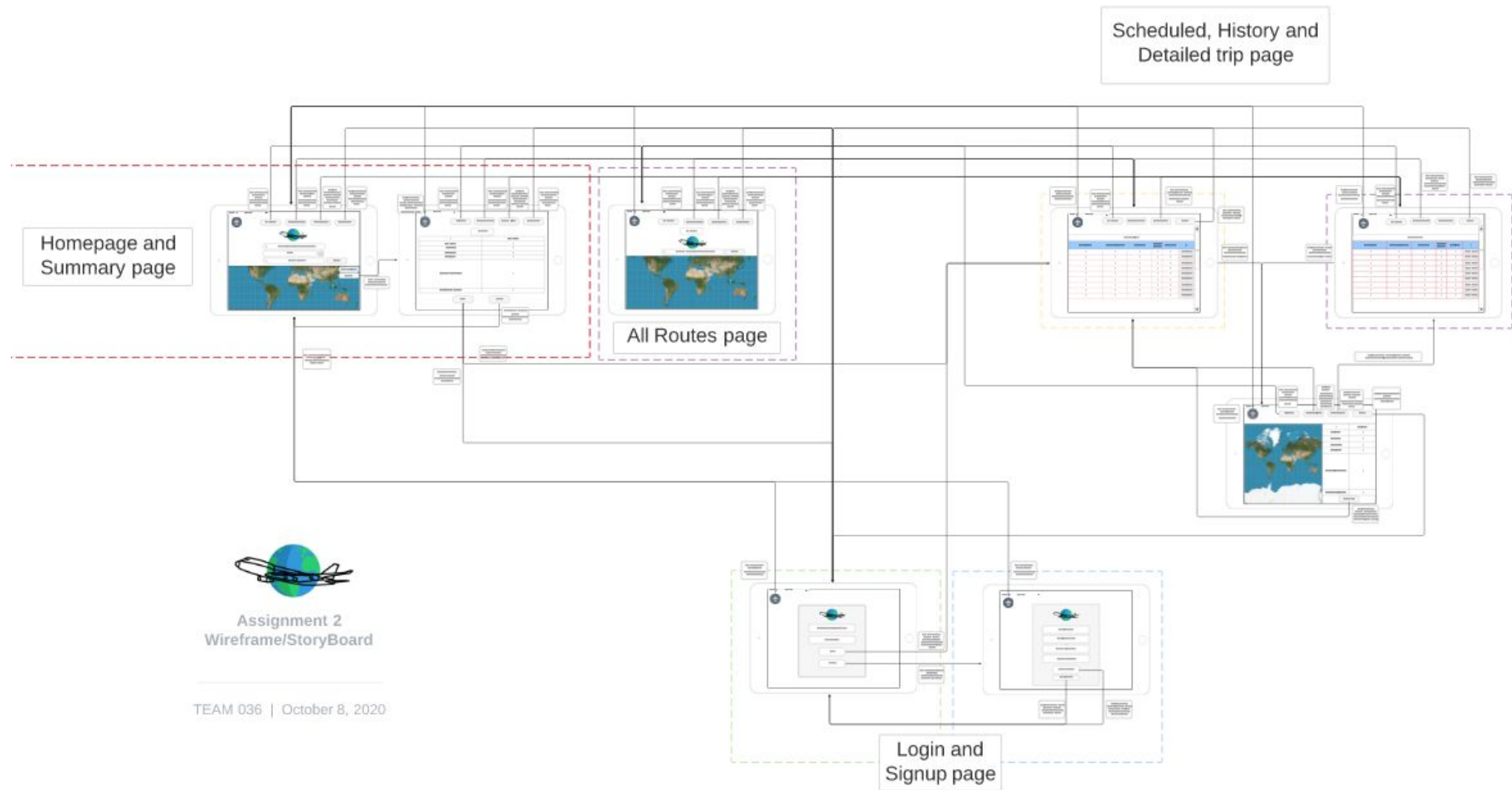


Figure 9: Storyboard for design sequence of the web application

5. CLASS DESIGN

Class diagrams to depict the classes and data necessary for the application and how each class interacts with one another.

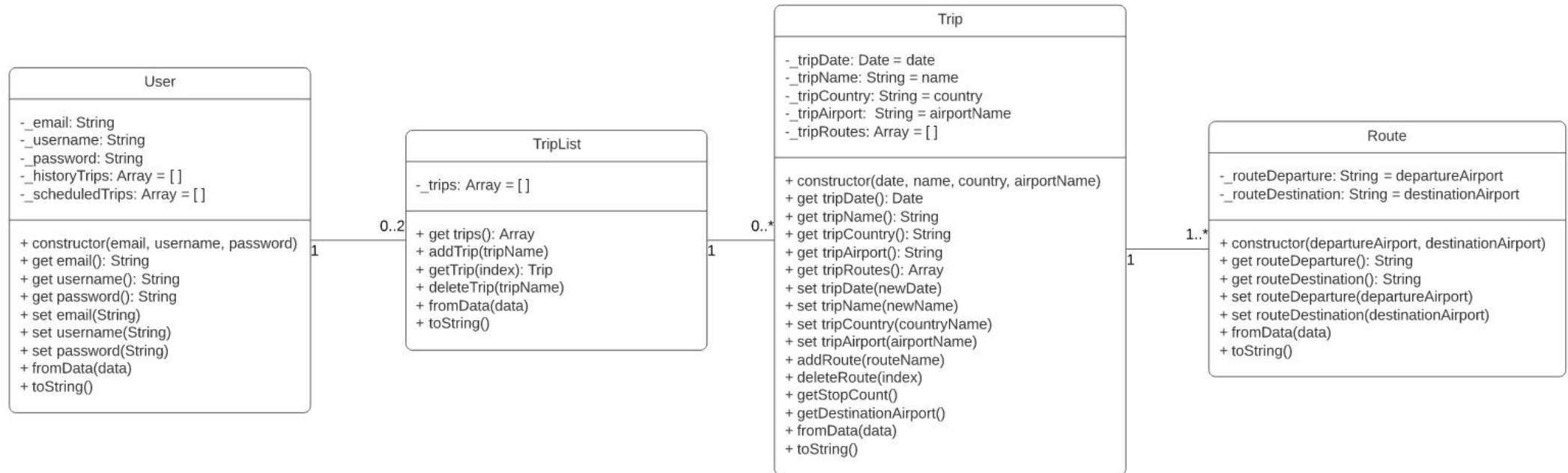


Figure 10: Class Diagram for the web application