Maynooth University
National University of Ireland Maynooth

Software Engineering and Software Process Project 2024

Names: NAOMI KAZADI KUNABO MUTUAYA,
TONY TEMITOPE OLAJIDE,
GLEN KELLY

Topic: TOURISM

Group: 50

Introduction

For our project we got the brief to create an app that would revolve around tourism. We had several ideas as to what to create, we debated with the idea of doing an app that would revolve around booking holidays and hotels and soon realised that this would not suit our strong points and would not provide a vast enough array of variables for this project.

After this we thought about doing a flight app and quickly realised the UI elements would get extremely technical very quickly; however this led to the idea of a local transport app that would be accessible to all in all major cities and would allow for us to incorporate a number of elements that we were passionate about such as sustainable transport, accessible transport and most importantly to the brief a simplified, multilingual app that could be used by tourists to minimise confusion and allow them to maximise their visit.

In order to find out how we could implement the app, we came up with a number of user stories each and developed their UML diagrams, citing their individual needs and how the app could be developed to maximise their satisfaction in use of the app.

From here we designed the app on these key aspects, with the intention to uphold 3 key characteristics, am Ergonomic app, a multi–lingual app and an accessible app.

User Stories - (Naomi, Tony and Glen)

USER STORIES

1. Sarah seeks to make use of the app to streamline her busy lifestyle as an unmarried mom of four. She aims to effortlessly get entry to bus schedules, set reminders, get hold of updates, and share real-time records with others.

2. Tom, a frequent business traveler, desires to rely on the app for its comprehensive bus timetables and instant updates. He aims to navigate unfamiliar cities with ease using detailed maps and cutting-edge AR technology.

3. Zyan, a wheelchair person, is keen to leverage the app's features for wheelchair-friendly direction planning, personalized settings, and voice command integration. With those skills, he hopes for a seamless city journey tailored to his particular wishes.

4. Eleanor, a retired teacher from Cork, wants to use the app for stress-free travel, effortless schedules, confident public transport, and real-time updates.

5. Liam aims to use the app for a stress-free trip to high school in Cork. With detailed plans and clear instructions, he aims to navigate public transport with confidence.

6. Maria desires to use an app to reduce her travel difficulties in her new country. With multiple languages and clear instructions, she aims to navigate public transport with confidence despite language barriers.

7. Dan aims to use the app to enhance his business travel in Dublin. With its subscription service offering discounted taxi options, he looks forward to securing reliable transportation connections between meetings, reducing unforeseen costs, and minimizing the risk of delays.

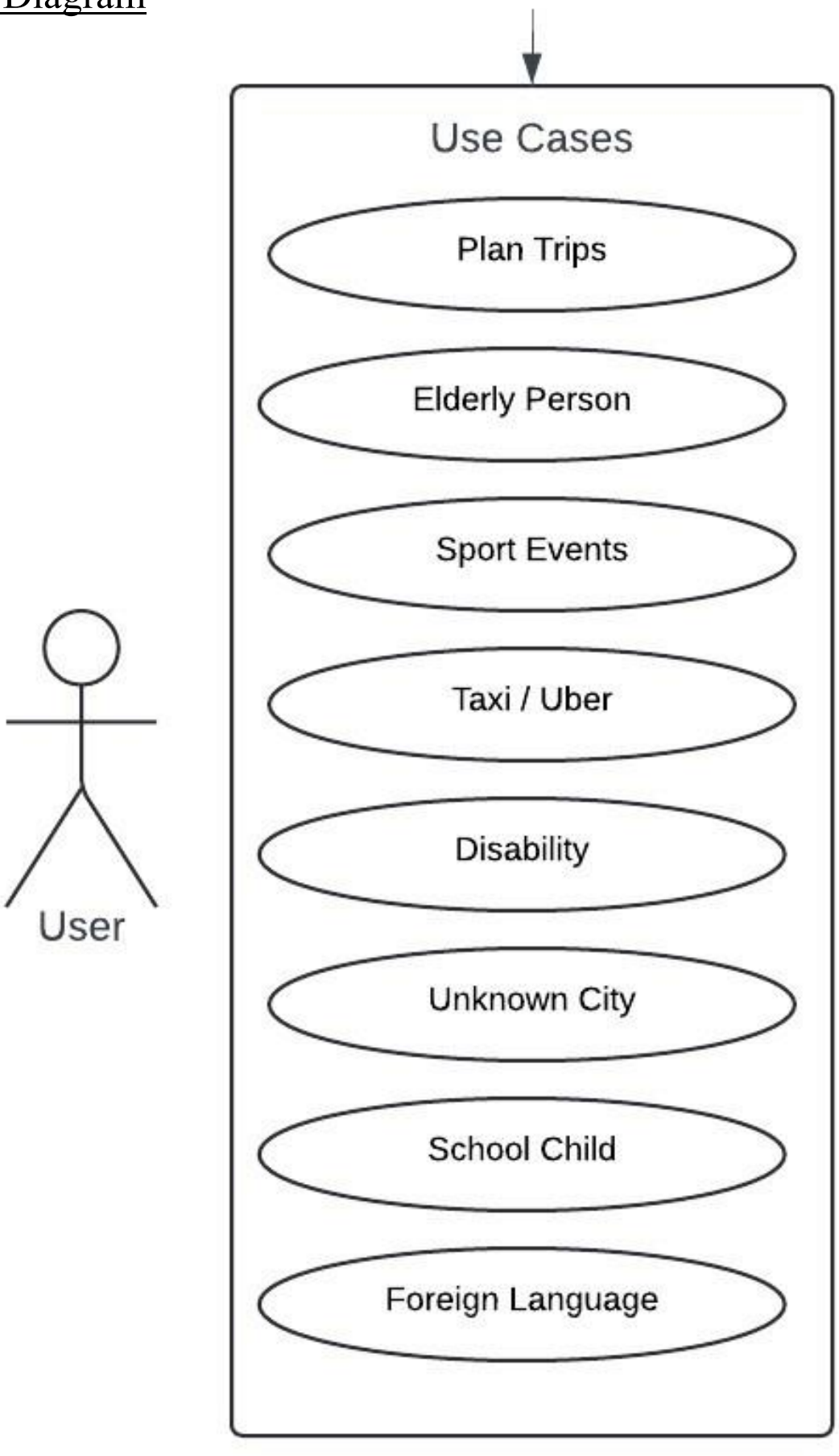
8. Catrina seeks to use the app to simplify her Wicklow-Maynooth commute. Its AI model monitors transport social media for alerts, aiding her in making informed travel decisions and avoiding being stranded.

9. Jean aspires to use the app to enhance his Paris Saint Germain match day experiences. With its active route planner and real-time train data from SNCF and RATP, he aims to efficiently plan his route from the suburbs to Parc des Princes.

10. Marie looks to the app to elevate her GAA match experiences in Dublin. Through its Sports/Concerts feature, she aims to manage tickets and qualify for transport ticket cashback. With real-time monitoring and personalized recommendations, she seeks to optimize travel and enhance her overall match-day experience.

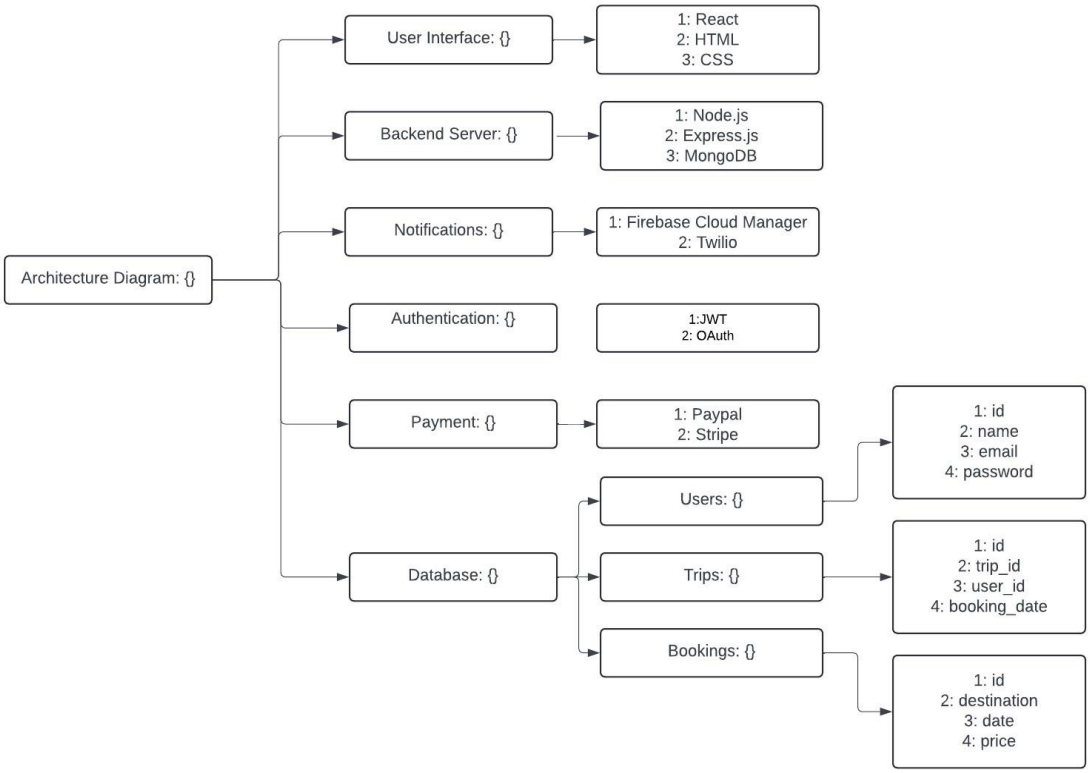
System Diagrams - (Naomi and Tony)

User Case Diagram

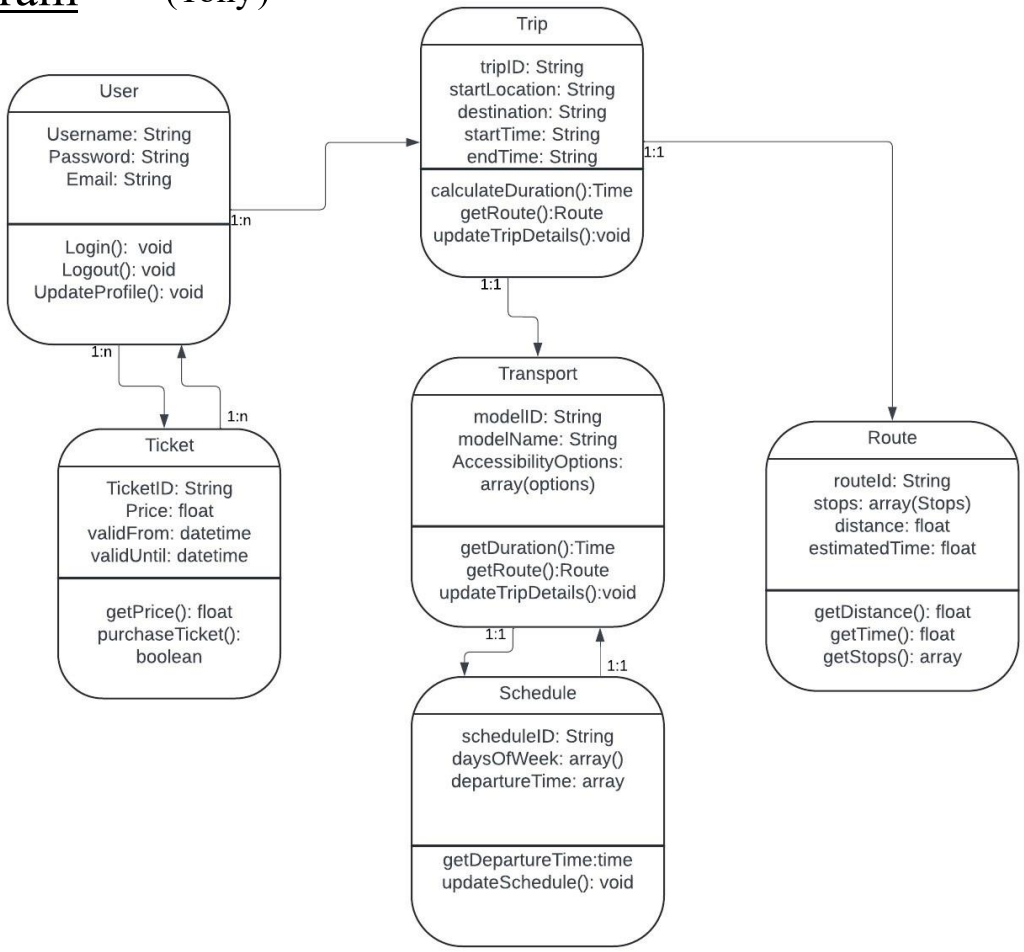


UML Diagrams - (Naomi and Tony)

Architecture Diagram - (Tony)

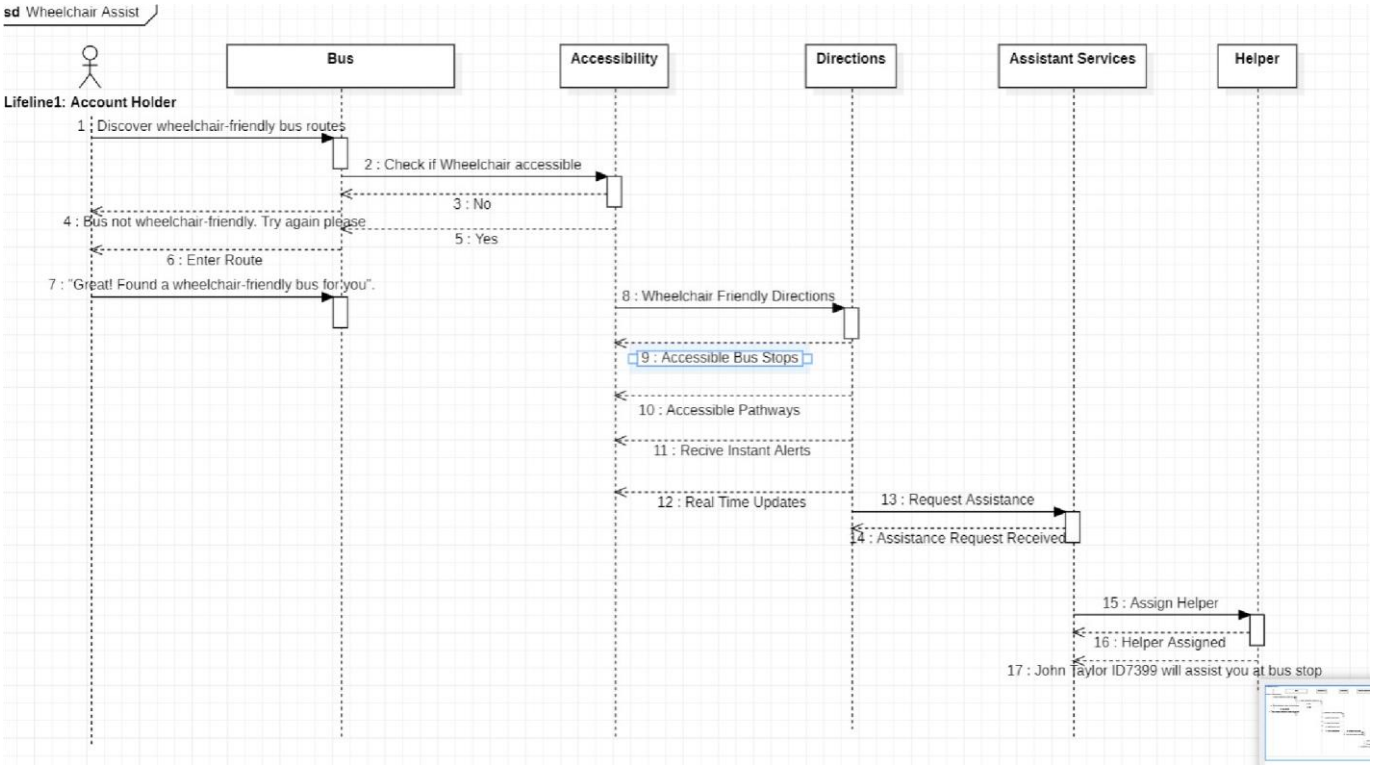


Class Diagram - (Tony)

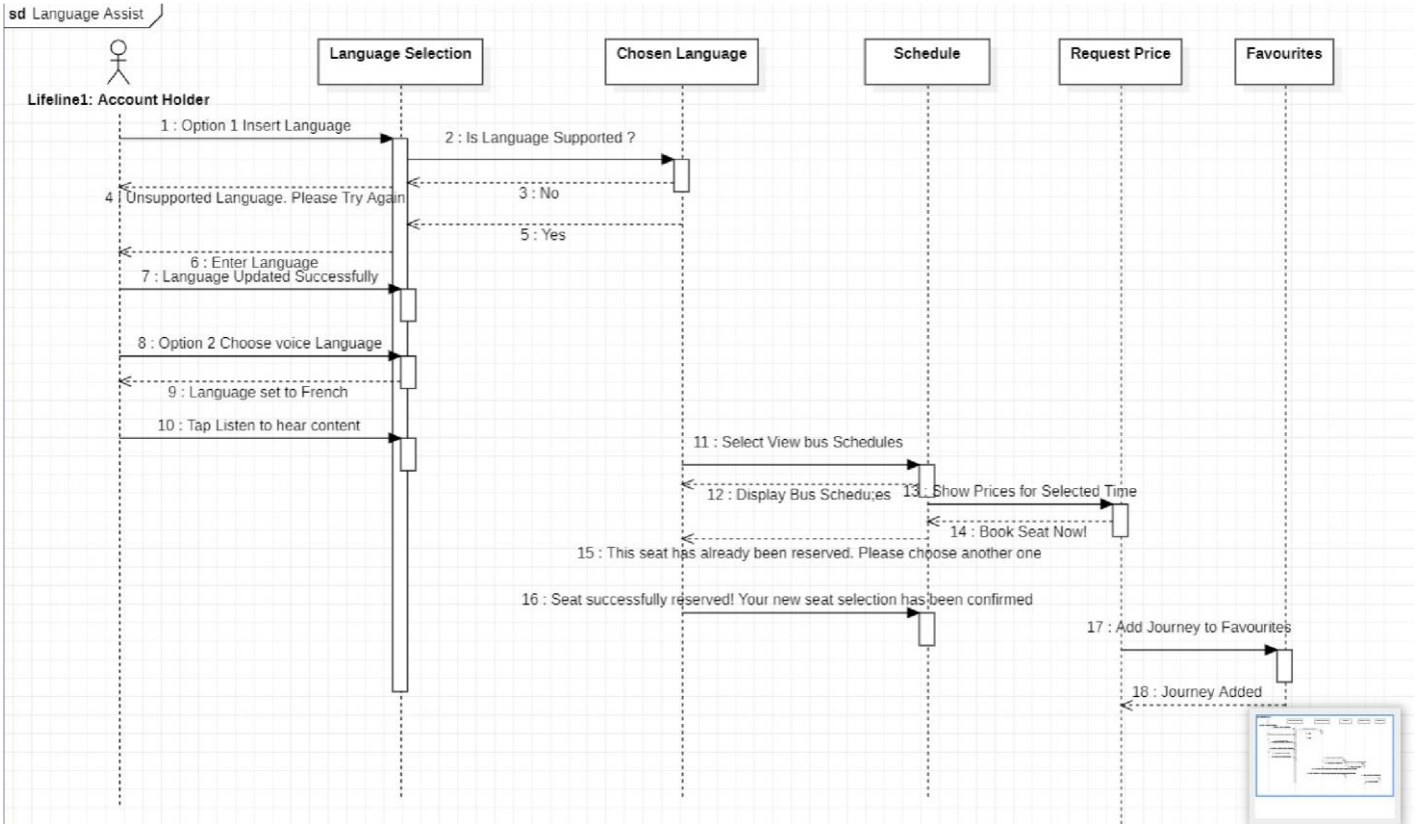


Sequence Diagrams

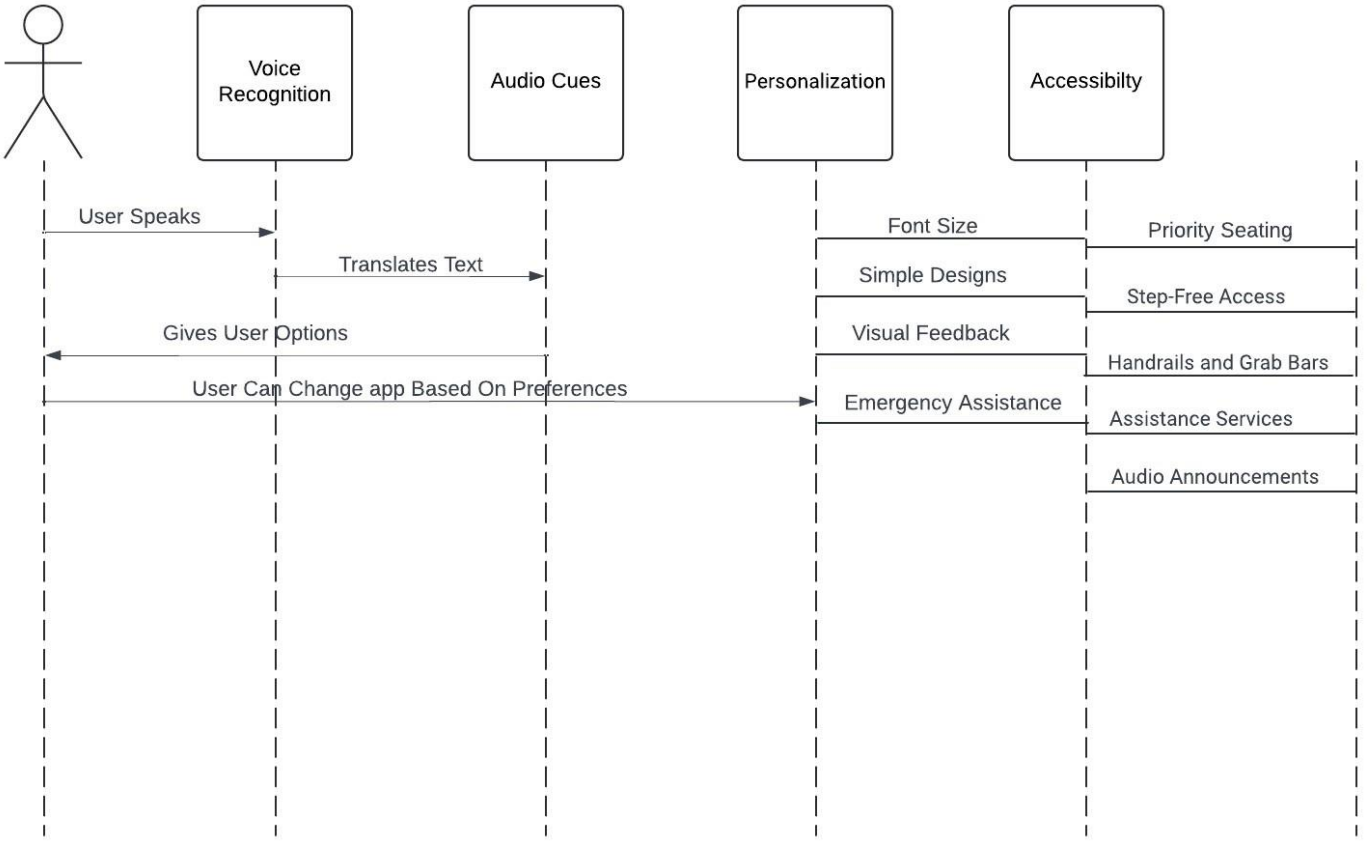
Wheelchair UML - (Naomi)



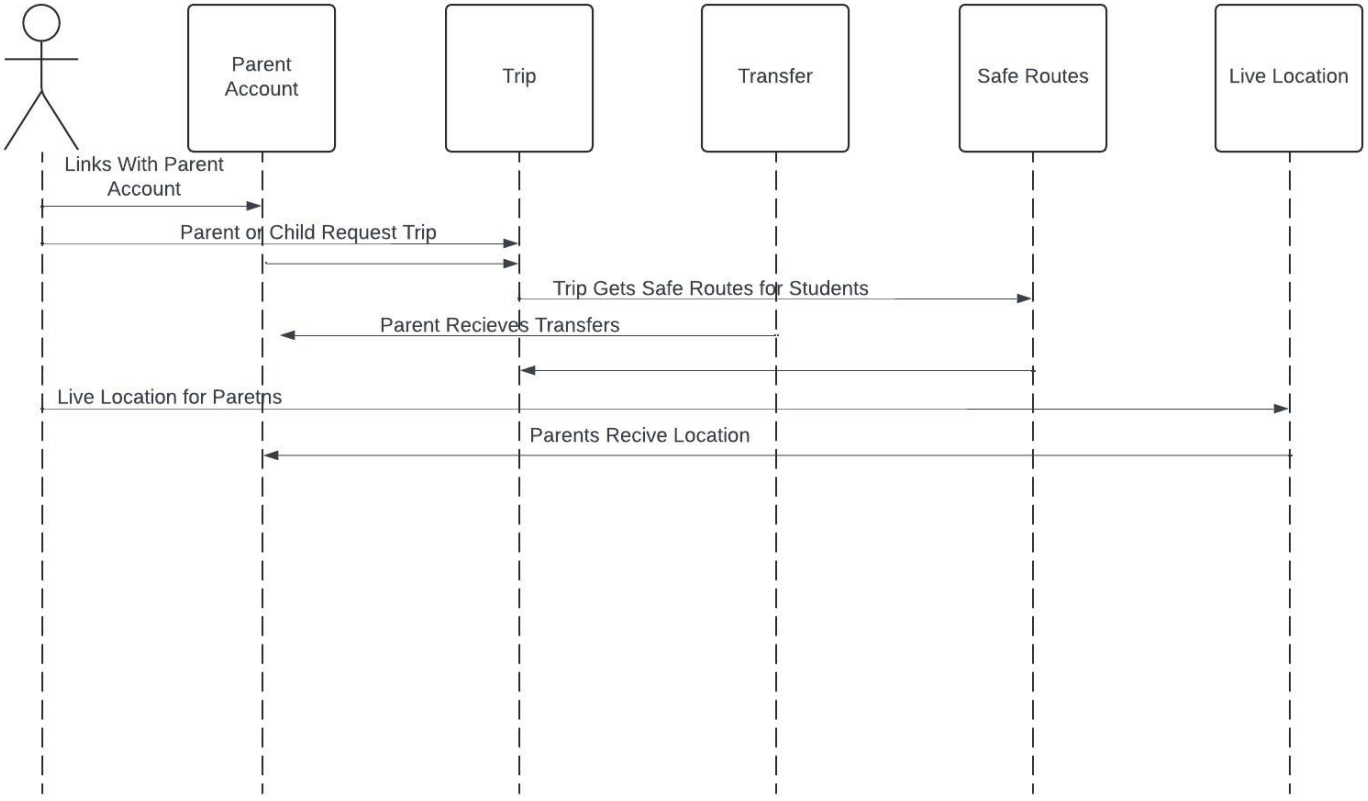
Languages UML - (Naomi)



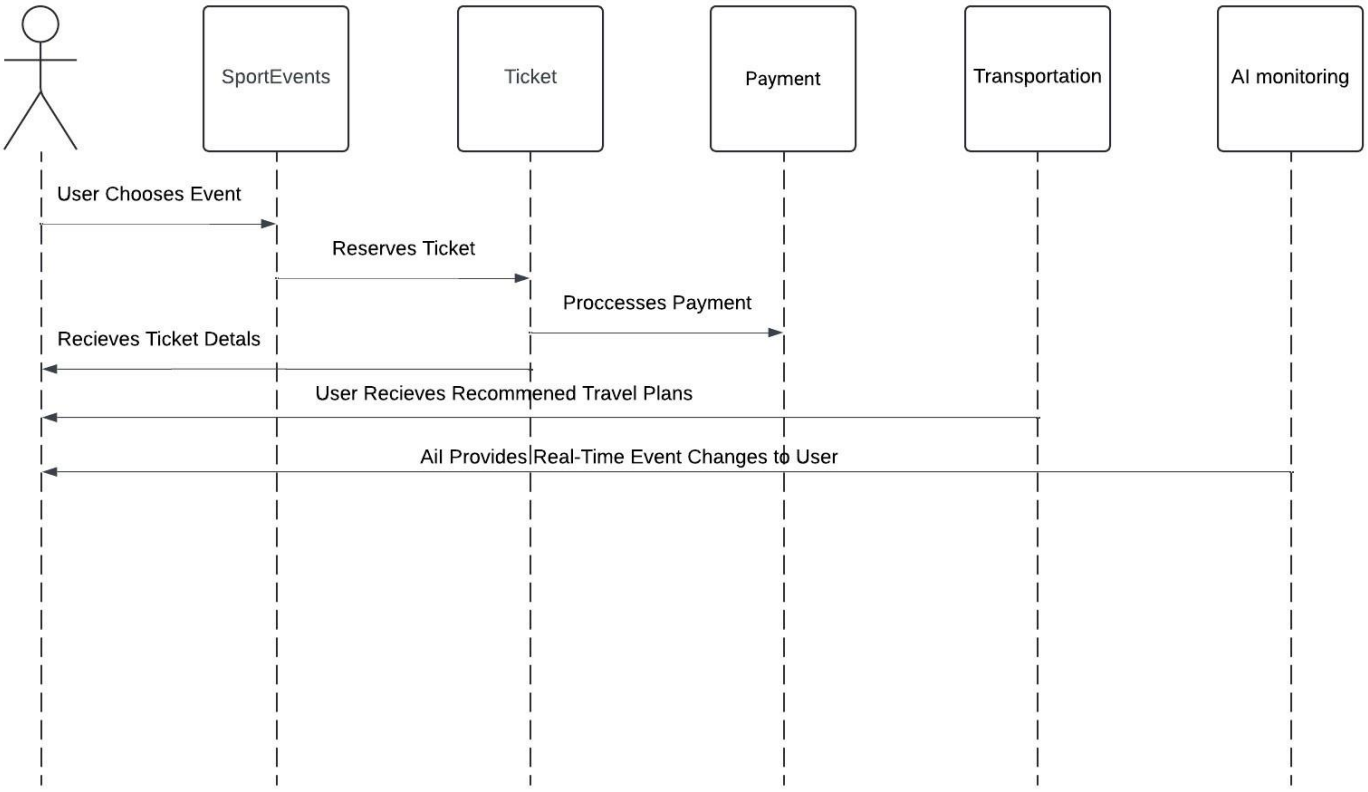
Older Person - (Tony)



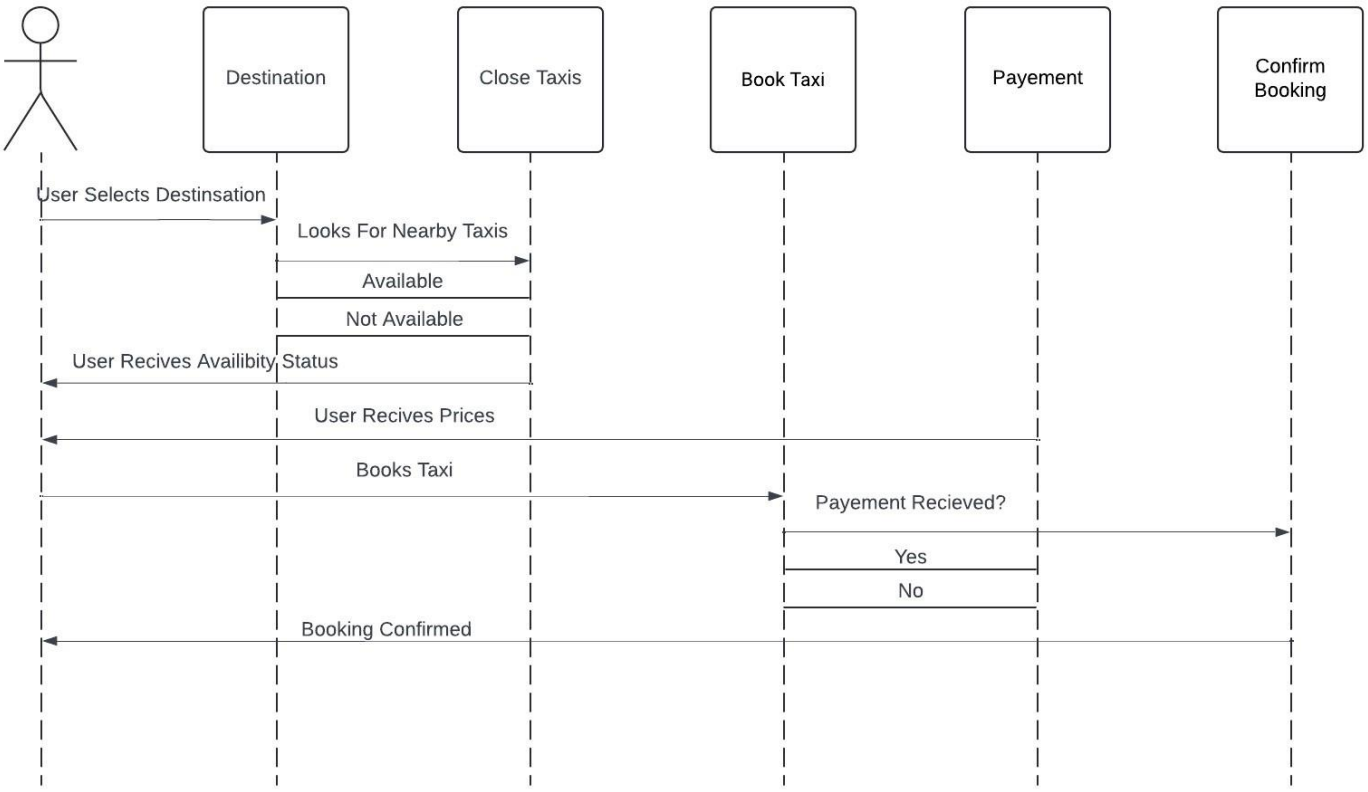
School Child - (Tony)



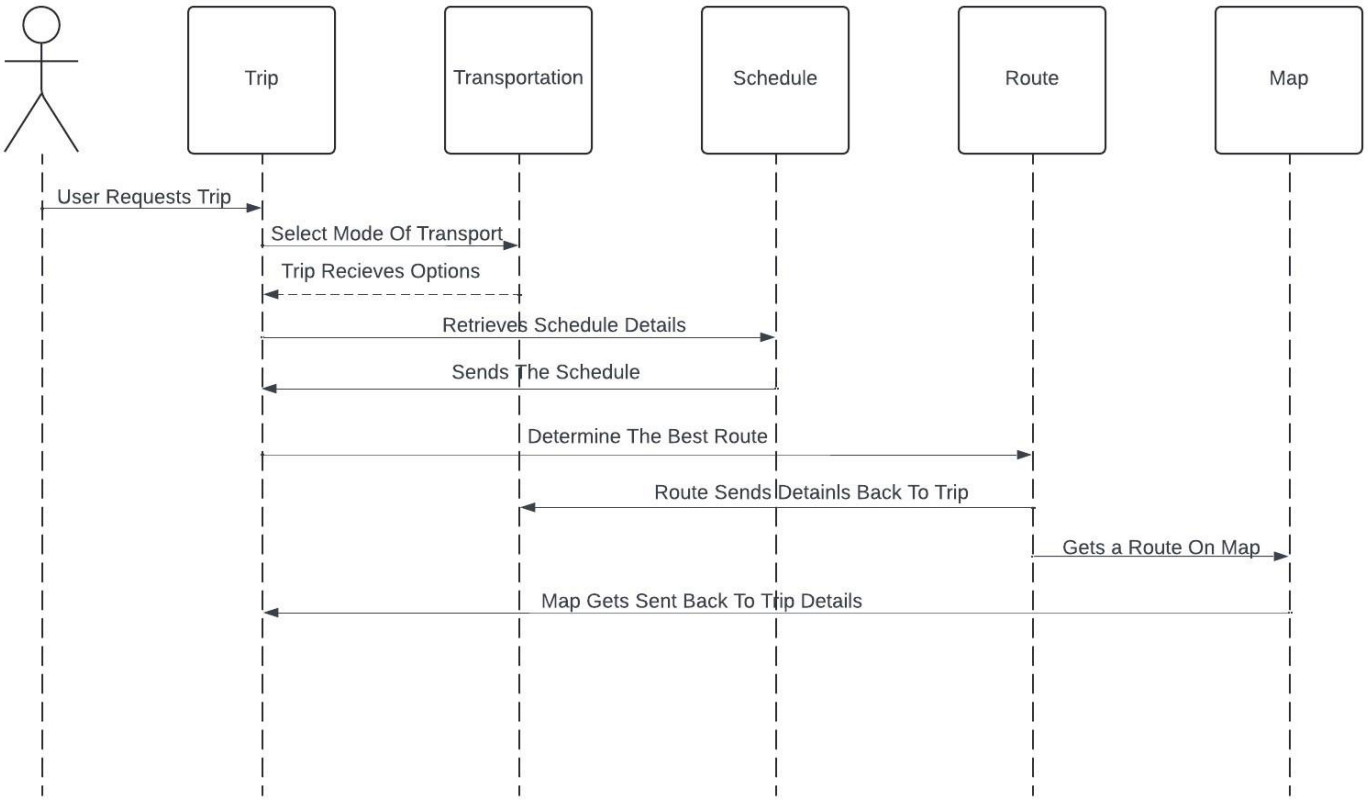
Sports Fan - (Tony)



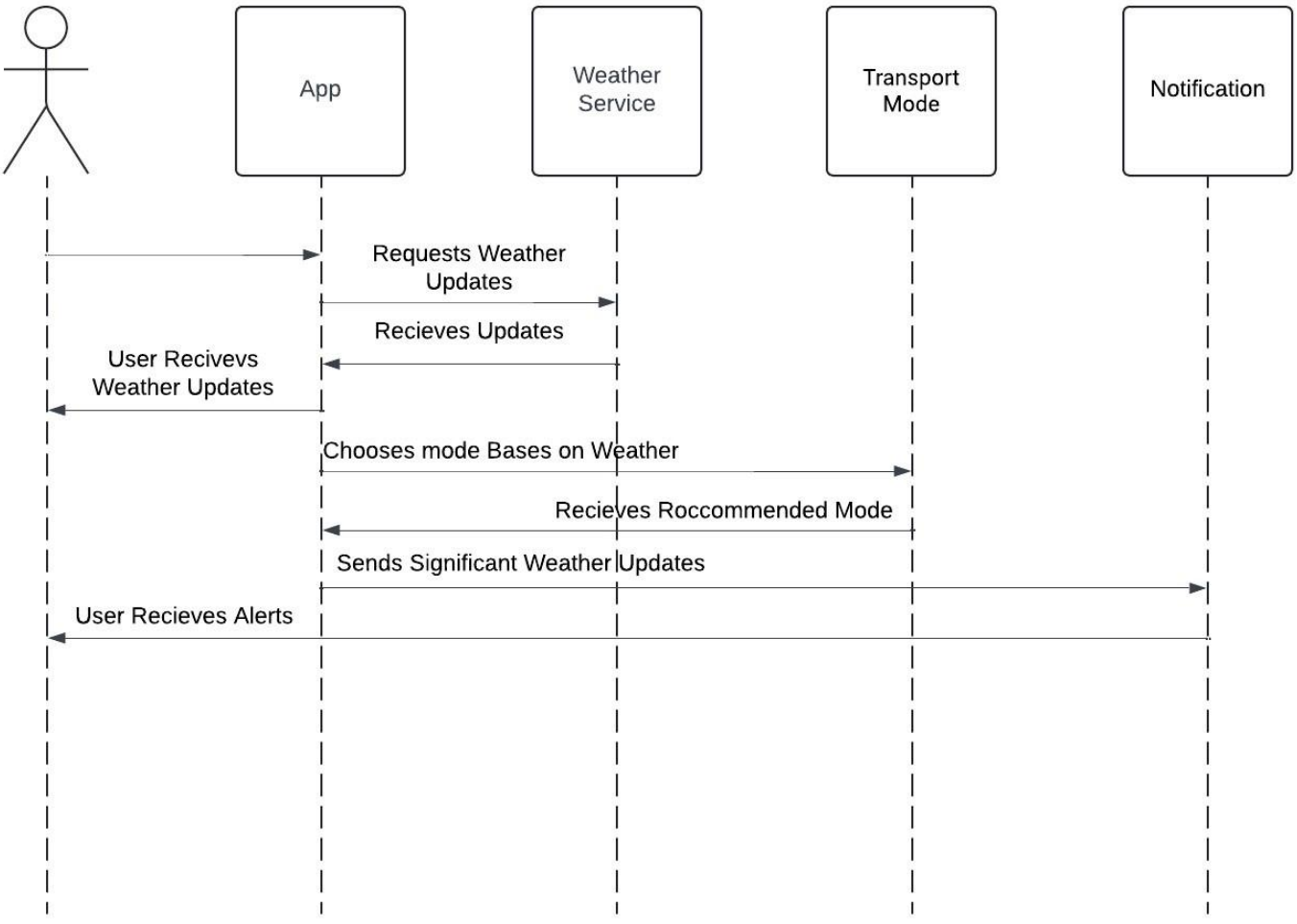
Booking Taxi - (Tony)



User in Unknown City - (Tony)

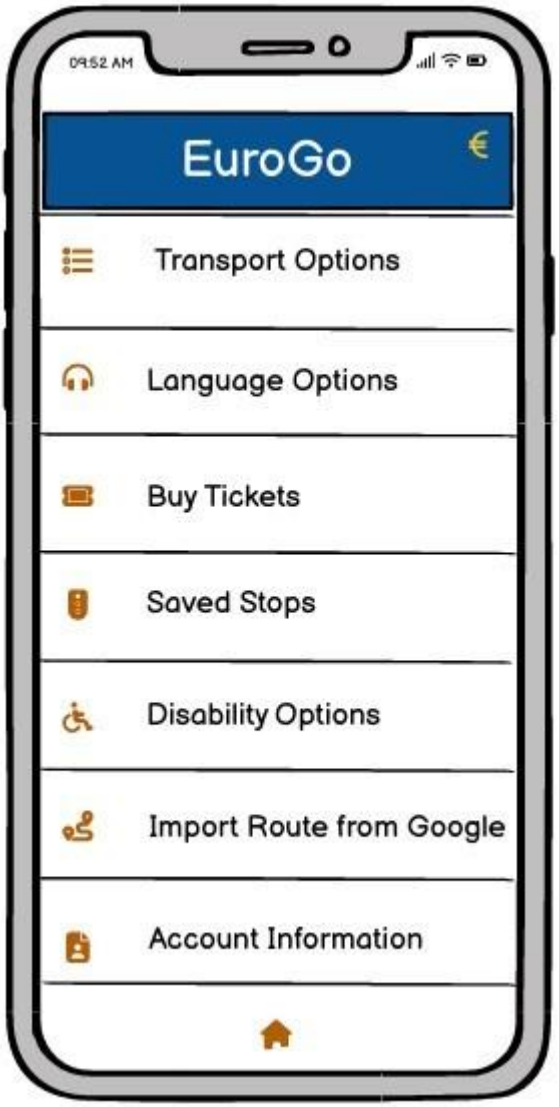


User Affected by Weather - (Tony)



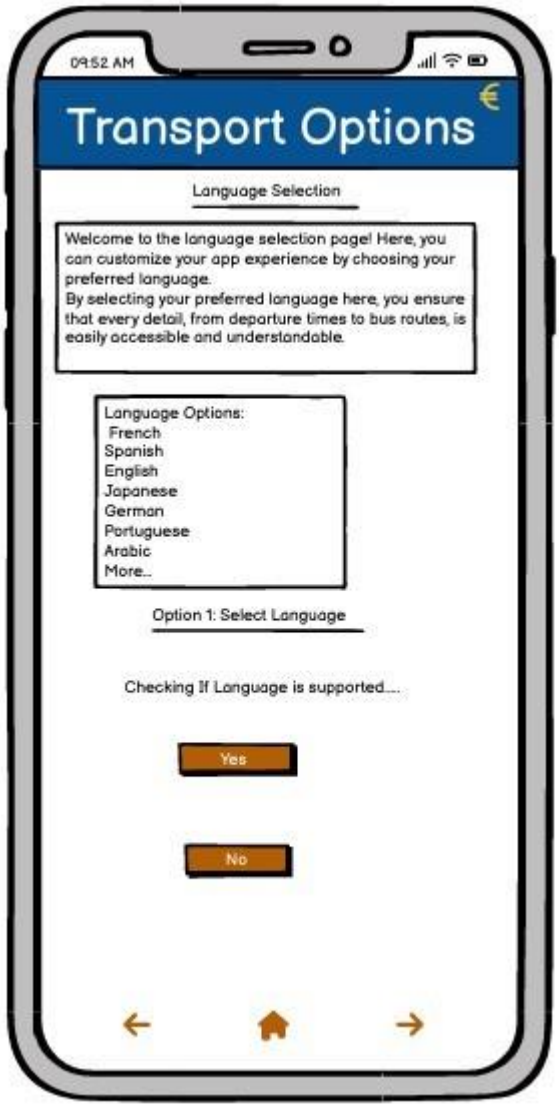
Ui and App Design - (Naomi)

Home Page



Accessibility Page

Options Page

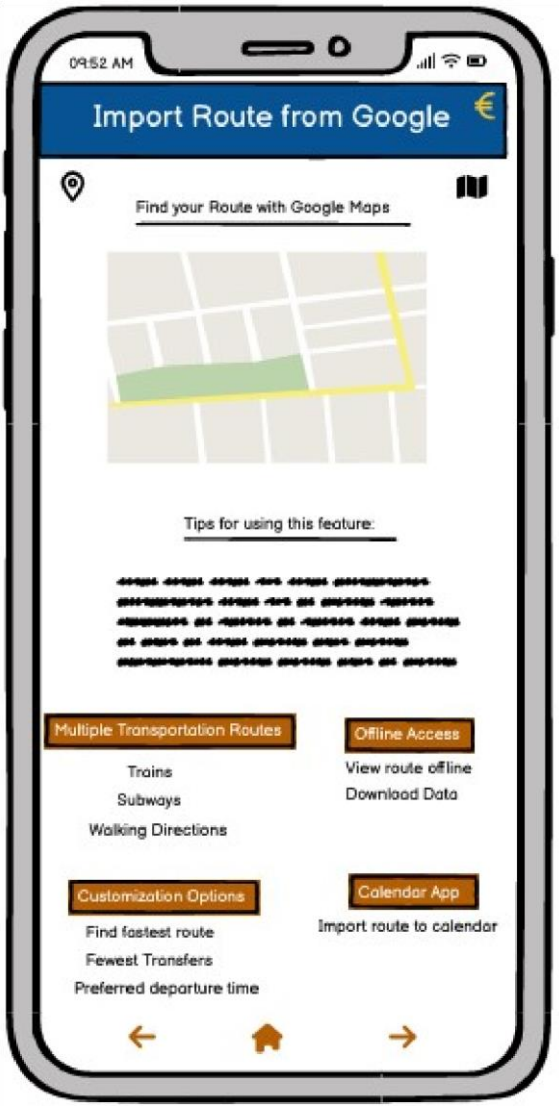


Voice Selection Page

Saved Stops

Buy Tickets

Importing Google Maps



Account Page Data

System Tests

Scenario	Test Step	Expected Result
Making Everyday Commutes Simpler	The user selects a location on the map or enters the address to get there.	A list of local bus routes and the associated departure times are displayed
Wheelchair Friendly Features	The user selects a destination and activates wheelchair-accessible features.	The app determines routes with stops that are suitable for wheelchair users and offers navigation assistance based on the user's mobility restrictions.
Schedules and Updates for Business Visitors	For a business trip, the user inputs their destination and departure times	The app shows detailed schedules for the chosen path, including estimated arrival times and any delays impacting the travel.
Simpler Travel for Retirees	The retiree uses the "Trip Planner" to look up a place to go.	The app displays simplified schedules and alerts the user of any delays or changes to the plan
Stress Free Trips to School for Students	Student enters the school location and departure time in the app.	The app provides step-by-step instructions and route recommendations for traveling to school
Seamless Commutes for Newcomers	Newcomer selects their preferred language in the app settings and enters their destination	The app translates the directions into the specified language and offers clear travel instructions
Navigation for Users in An Unknown City	The user inputs the address they want to travel to in their new city.	The app should generate a clear route to the destination, it should provide step-by-step instructions, including street names, landmarks, and any necessary public transportation connections
User plans to attend a sports event using the app	User checks sports section of the app and selects the desired event	The app displays ticket options for the selected sports event, including seating choices and pricing details.

Conclusion

For our project our brief was to create an app that would revolve around tourism.

We had the idea of a local transport app that would be accessible to all in all major cities and would allow for us to incorporate a number of elements that we were passionate about such as sustainable transport, accessible transport and most importantly to the brief a simplified, multi -lingual app that could be used by tourists to minimise confusion and allow them to maximise their visit. We came up with a number of user stories each and developed their UML diagrams, citing their individual needs and how the app could be developed to maximise their satisfaction in use of the app.

Looking back now on the App we have created, all of us are satisfied that we have satisfied the brief we gave ourselves. The app is multilingual, it has multiple language options and the availability to buy tickets with us in your native language; as well as offering annotated instructions in your native language from our AI voice model. We have also implemented a versatile ergonomic app interface that allows for a very accessible platform which gives our users details on disability accessible services, where to catch them and in some cases the disability services that may be available in these locations.

From this we can be satisfied that we met the brief and would be enthusiastic in the future to drive development on from here to possibly include flight information and connections or even just build on our principals already outlined.

Non-Quoted Credits

PowerPoint

Video Editing

Presenting of Video