

User Requirements Document

Project Title: MBTA Transit App for Live Map

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Version	Date	Description
1	1/30/2023	Starting template.
2	2/23/2023	Initial version.

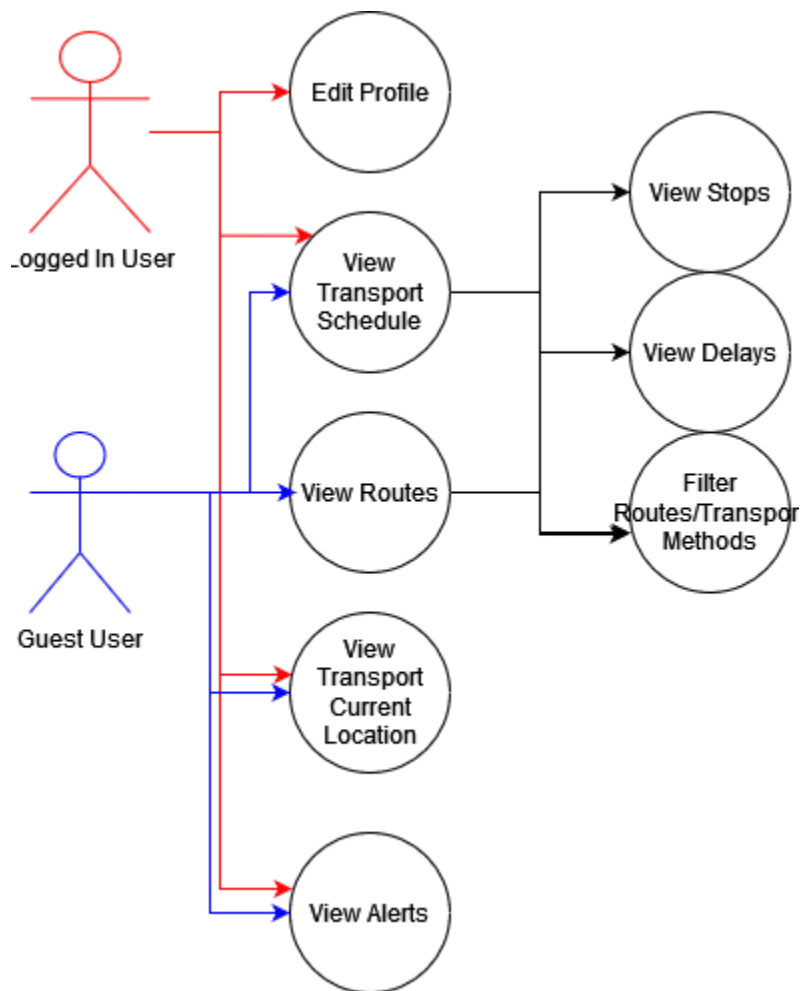
Signed off: Dr. Brockenbrough 2/9/2023 10:01 am

Introduction

The MBTA offers various transportation methods to the Massachusetts area through services such as the subway system, commuter rail, bus, and ferry routes. These transportation methods can be difficult to navigate. Movin' Maps offers users real-time locations of transport through a GUI to make it easier to follow and plan routes. Users will be able to store their favorite routes on their account, filter the GUI to show specific routes or methods of transportation, and be recommended routes relative to their location. The status will display arrivals and alerts will update with delays.

UML Use Case Diagram

<https://app.diagrams.net/>



User Stories/Scenarios

User Story 1

It is essential for me to use the MBTA as a form of commuting to work as I live in the city. Often I find myself arriving to the office late simply because of delays I was unaware of. I want to be able to see where my train is and any delays that may have occurred. I'm not very good with technology therefore It is a necessity for the application to be user friendly.

User Story 2

Recently I have moved to a new city, I do not own a car so I rely on the MBTA for transportation. I am unfamiliar with the MBTA routes. I need an application where I can easily see all of my possible route options, this way i can fully embrace the city. I dont

want to have to go searching around the application for the mapped routes so make it clear for me to easily view. Also I am very impatient so I need to know if there are alerts/delays along with being able to map my whole route for the day.

User Story 3

My girlfriend lives by an MBTA station and she is at work currently, She had forgotten to bring her lunch and I'm going to have to use the blue line to get to her work, I arrive to the station to find out that the blue station is shut down for the month due to repairs. I dont always have time to check the daily news or use the train on a daily basis to know in advance. I had only found out once I got to the station that the blue line wasnt operational.

User Interface Design

Create an initial design of your user interface.

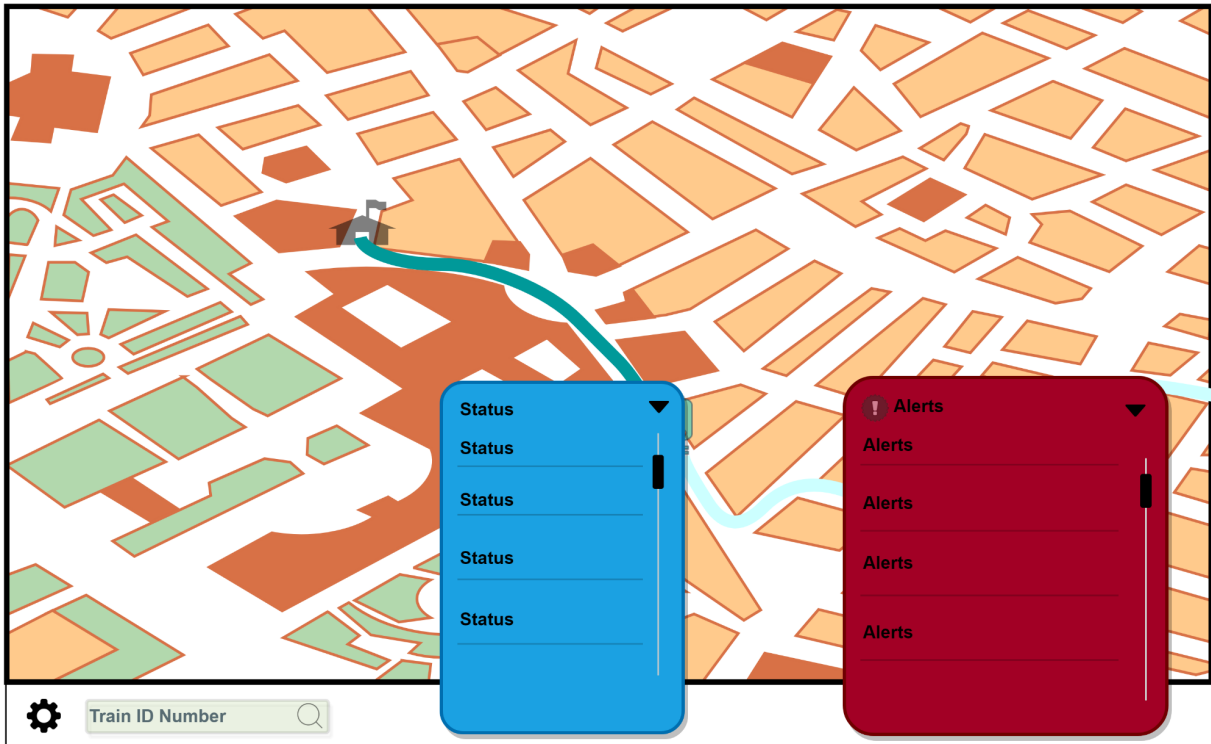
[page 1]

PAGE 1



Page 1 displays what all users will encounter when opening up the webpage. The live map that will show all the subway lines and their routes with train moving around There will be four interactable tabs: the gear icons , train search settings, status slide up tab and the alert slide up tab.

[page 2]



Page 2 shows if you click on either status or alerts it will extend and show information . The status tab will show the station the filtered train has passed , will arrive to, or station at. The Alerts tab will display delays, closures , and any number of inconveniences that occur on the line. The green search bar will allow you the specify which line you want to filter though all the rest.

[page 3...]



Page 3 displays settings with options for favorite routes, darkmode, customization and signing in or out of the account.

User Requirements

1. Objectives

- Create a User Interface to provide straightforward navigation of live transport
- Tracks commuter rail, the subway system, bus, and ferry routes in live time

2. User Interface

- Displays GUI of routes on a map of the area
- Updates real-time location of transport
- Represents different forms of transport with unique icons
- Displays stops
- Displays current user inputted location

3. Functionality

- Filter Routes
- Filter transportation
- Login/Signup
- Allow for public users

- Store favorite routes on registered accounts
 - Updates real-time location every 1 second
 - User inputs current location
 - Provides alerts of delays
 - Save login information
4. Security
- Password length 8-24 characters
 - Use of uppercase and special characters (!@#\$%&)
 - Unique Email and Username
 - Regular updates (Change once a year)
 - Avoid Predictable Patterns (12345)
 - Use of passphrases (spaces within password)
5. Support and Maintenance
- Content Management
 - Bug fixes
 - Performance optimization (reduce load times)
 - Data Backup
 - Mobile Optimization (ensuring screen ratio adapts to mobile devices)
 - Accessibility (improving the U/I based on user feedback)

Appendix: Stakeholder Interview Questions and Answers

Create a set of interview questions to ask the stakeholders to help determine what the application should do. Fill in the answers when we conduct the interviews..

1. Is there a theme you would like the GUI to follow?
 - a. Any specific designs or color schemes
2. Are there particular features you would like for logged-in users?
 - a. Ex. Customizable features such as profile pictures
3. Is there any specific user data you would like to require when signing up?
4. Is this a free or paid-for product?
5. Is there a target audience this application is being designed for?

Stakeholder Comments:

- Some initial notes/requirements:
 - The user may or may not be logged in.

- The user can log in, or log out, or register.
- If logged in, more features are presented.
- There is a user profile that contains information about a user preference or default (which line)?