

- 1 The application shall be compatible with the iOS and Android mobile platforms.
- 2 The application shall support a web interface for other mobile devices.

- ① If it is a users first-time opening the application, the application shall prompt the user to enter an email address, password, and credit card information.
 - ① If the account is created successfully, the application shall send a confirmation to the users stored email address.
 - ② If the account creation is not successful, the application shall display an error message that prompts the user to reenter their information and will not be logged in.
- ② If a returning user opens the application, it shall prompt the user to enter their log-in information.
 - ① If the log-in attempt fails, the application will display an error message that prompts the user to reenter their log-in information.
 - ② If the log-in attempt succeeds, the user will be shown a transit management screen.

- ① If the application loses connectivity, the application shall display an error message.
- ② The application shall retrieve the users location at intervals of 120 ± 10 seconds.
- ③ If the user is within 150 feet of a train-stops geo-location coordinates, the train-stops name, ticket price, and incoming train information shall be displayed on the user interface.
- ④ If train stop information is being displayed on the applications user interface, the application shall update the train stops incoming train information at intervals of 30 ± 5 seconds.

- ① If the user selects to purchase a ticket, their stored credit card will be charged for the price of the train stops ticket.
 - ① If the card does not process, an error message shall be displayed and the order shall not be accepted.
 - ② If the transaction succeeds, the application shall create a virtual ticket.
- ② If the user selects to use their ticket, the application shall signal the gate up to a maximum of 3 attempts at 20 ± 5 second intervals to open.
 - ① If the application is unsuccessful on the 3rd attempt, an error message shall be displayed.
 - ② Otherwise, the turnstile is unlocked, permitting the user to pass through.
- ③ The application shall store unused virtual tickets for at least 1 year.
- ④ The application shall store used virtual tickets for at least 30 days.
- ⑤ The application shall allow the user to change their email.

LOS Requirements	Desired Level	Accepted Level
LOS-1: Concurrent Users	150000	75000
LOS-2: Start-up and user location time	7 s	15 s
LOS-3: Ticket Purchase Transaction Time	5 s	20 s
LOS-4: Update Account Information Time	10 s	30 s