



# AMBLE

Travel. Explore. Draw.

## Requirement Specification Document

*Versioning:*

Version	Updated	Author	Signed Off By	Signature	Date
V1_Sign_Off	27/09/2019	Team 18			

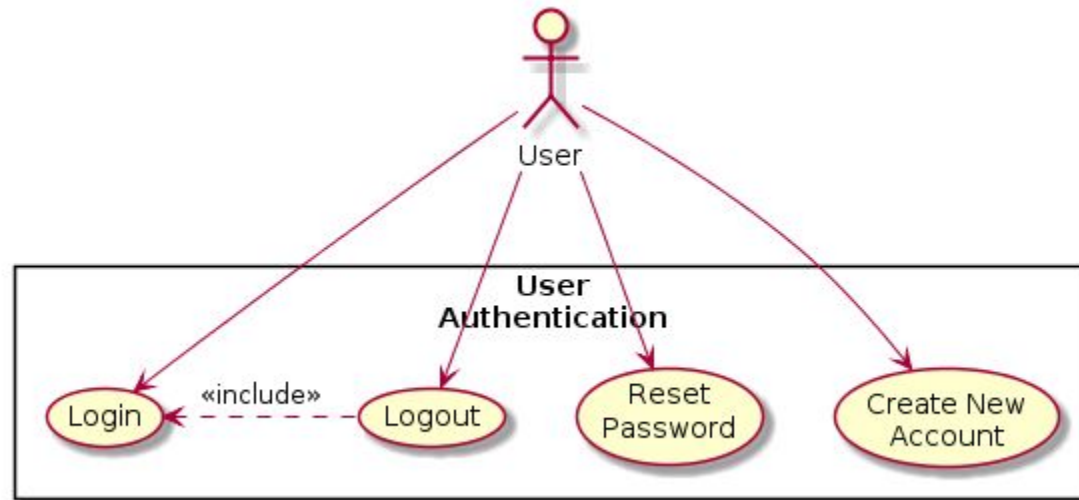
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# Functional User Requirements

## User Authentication



### UC1.0 - Login

Use Case ID	1.0
Use Case Name	Login
Actors	User
Preconditions	User is not logged into the System.
Main Success Scenario	<ol style="list-style-type: none"><li>1. System displays login screen with input fields for email address and password.</li><li>2. User enters email address and password into the input fields.</li></ol>

	<ul style="list-style-type: none"><li>3. User clicks on the login button.</li><li>4. System logs User into account.</li></ul>
Alternative Scenario	<ul style="list-style-type: none"><li>2a. Login failed.<ul style="list-style-type: none"><li>i. System feedback to User on error.</li><li>ii. Return to step 1.</li></ul></li></ul>
Postcondition	User successfully logged in. System redirects User to main screen showing the current User location on the map and an input field to enter a point of destination. ( <a href="#">UC2.0</a> )
Priority	Medium

## UC1.1 - Create New Account

Use Case ID	1.1
Use Case Name	Create New Account
Actors	User
Preconditions	User is not logged into the System.
Main Success Scenario	<ol style="list-style-type: none"><li>1. User clicks on create new account button on the login screen.</li><li>2. System redirects user to create new account screen with input fields for email address, password, name, age, sex, and commute method.</li><li>3. User enters their email address, password, name, age, sex, and commute method into the respective input fields.</li><li>4. User clicks on submit button to create account.</li><li>5. System creates User account successfully.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>3a. User entered invalid format for email.<ol style="list-style-type: none"><li>i. System feedback to User on error.</li></ol></li><li>3b. User entered invalid format for password.<ol style="list-style-type: none"><li>i. System feedback to User on error, displays acceptable password format.</li></ol></li><li>3c. User's email has already been registered for another account.<ol style="list-style-type: none"><li>i. System feedback to User on error, displays prompt to reset password.</li></ol></li></ol>
Postcondition	User account successfully created. System redirects User to Login screen. ( <a href="#">UC1.0</a> )
Priority	Medium

## UC1.2 - Reset Password

Use Case ID	1.2
Use Case Name	Reset Password
Actors	User
Preconditions	User is not logged into the System. User clicked on Reset Password button.
Main Success Scenario	<ol style="list-style-type: none"><li>1. System displays reset password screen with input field for email address.</li><li>2. User enters email address into input field.</li><li>3. System sends reset email to User's email account.</li><li>4. User clicks on the link in the email and is directed to a webpage to enter a new password.</li><li>5. User enters a new password.</li><li>6. User submits updated account password.</li><li>7. System updates User password.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>1a. User entered invalid format for email address.<ol style="list-style-type: none"><li>i. System feedback to User on error.</li></ol></li><li>1b. User email address not found in System.<ol style="list-style-type: none"><li>i. System feedback to User on error.</li></ol></li><li>2a. User did not receive email from System<ol style="list-style-type: none"><li>i. User clicks on button to resend the reset email to User email address.</li></ol></li><li>3a. User did not click on the link in the reset email.<ol style="list-style-type: none"><li>i. Email token will expire in 5minutes, and the request is discarded.</li></ol></li><li>4a.<ol style="list-style-type: none"><li>i. User password does not meet password criteria</li><li>ii. System displays password criteria conditions</li></ol></li></ol>
Postcondition	User password updated successfully. System redirects User to Login screen. ( <a href="#">UC1.0</a> )

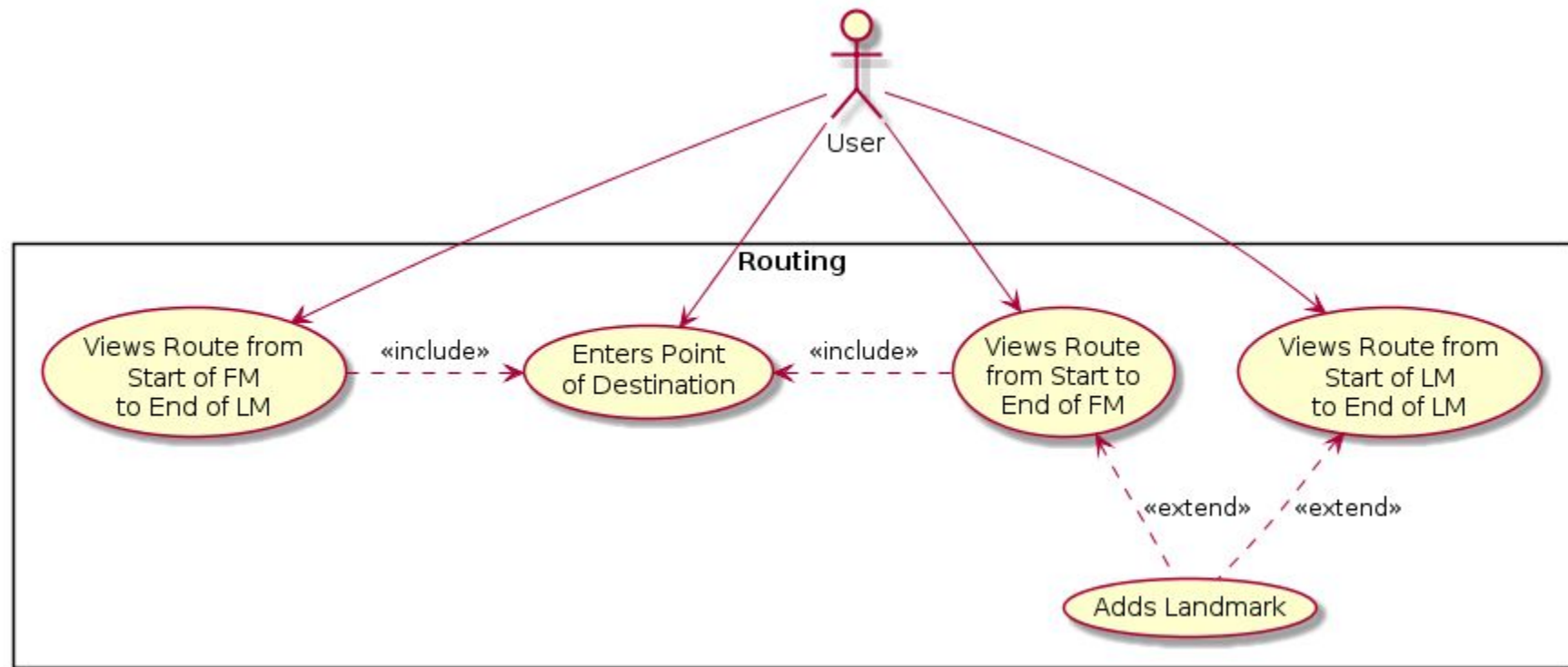
Priority	Medium
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### UC1.3 - Logout

Use Case ID	1.3
Use Case Name	Logout
Actors	User
Preconditions	User successfully logged in.
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on logout button in the menu.</li> <li>2. System prompts User on logout confirmation.</li> <li>3. User clicks on logout button on System prompt.</li> <li>4. System logs User out of their account and redirects to the login screen.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>3a. User clicks on cancel button on System prompt.               <ol style="list-style-type: none"> <li>i. System closes the prompt.</li> </ol> </li> </ol>
Postcondition	System brings the User back to the login screen. ( <a href="#">UC1.0</a> )
Priority	Medium



## Routing



### UC2.0 - Enter Point of Destination

Use Case ID	2.0
Use Case Name	Enter Point of Destination

Actors	User
Preconditions	User successfully logged in.
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System retrieves User's current location via GPS and stores it as the User's starting location.</li> <li>2. User enters destination into the input field. While entering destination, the System returns a list of auto-completed destination.</li> <li>3. User selects one of the auto-completed destinations or press on the search button to search their own input.</li> <li>4. System returns a list of locations matching the input by the User.</li> <li>5. User selects a specific location.</li> <li>6. System displays the optimised route from the User's starting location to the selected destination based on the shortest amount of time needed to get to the destination on the map.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>1a. User did not enable GPS. <ol style="list-style-type: none"> <li>i. System prompts User to enable GPS.</li> </ol> </li> </ol>
Postcondition	The optimised route from the start of the User's starting location (Start of First Mile route) to the end of the User's destination (End of Last Mile route) is displayed on the map. ( <a href="#">UC2.1</a> )
Priority	High

#### UC2.1 - Overview of Route from Start of First Mile to End of Last Mile

Use Case ID	2.1
Use Case Name	Overview of Route from Start of First Mile to End of Last Mile

Actors	User
Preconditions	User successfully logged in. User has entered a destination. User has selected the specific location based on the entered destination. ( <a href="#">UC2.0</a> )
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays the optimised route from the User's starting location to the selected destination based on the shortest amount of time needed to get to the destination on the map.</li> <li>2. User clicks on start journey button.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>1a. User clicks on cancel button. <ol style="list-style-type: none"> <li>i. System brings the User back to enter point of destination screen. (<a href="#">UC2.0</a>)</li> </ol> </li> </ol>
Postcondition	System displays the overview of route from start of First Mile to end of First Mile. ( <a href="#">UC2.2</a> )
Priority	High

#### UC2.2 - Overview of Route from Start of First Mile to End of First Mile

Use Case ID	2.2
Use Case Name	Overview of Route from Start of First Mile to End of First Mile
Actors	User
Preconditions	User successfully logged in. User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile.

	( <a href="#">UC2.1</a> )
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays the optimised route from the User's current location (Start of First Mile route) to the location to take public transportation (End of First Mile route), alongside with displaying nearby Landmarks on the map.</li> <li>2. User clicks the start journey button.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>1a. User clicks on cancel button. <ol style="list-style-type: none"> <li>i. System directs User back to the map to choose point of destination. (<a href="#">UC2.0</a>)</li> </ol> </li> </ol>
Postcondition	System displays a zoomed in map of the route from the User's current location to the end of the First Mile with a specific instructional direction for User to follow. ( <a href="#">UC3.0</a> )
Priority	High

#### UC2.2.1 - Adding Landmark to First Mile Route

Use Case ID	2.2.1
Use Case Name	Adding Landmark to First Mile Route
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>System displays the optimised route from the User's current location (Start of First Mile route) to the location to take public transportation (End of First Mile route), alongside with displaying nearby Landmarks on the map.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on a Landmark icon on the map.</li> <li>2. System displays an info window which is attached to the specific Landmark icon and it shows the name of the Landmark, a short description of the Landmark, the Landmark rating score and an add to route button.</li> </ol>

	<ol style="list-style-type: none"> <li>3. User clicks the add to route button.</li> <li>4. System registers the Landmark as an intermediary step in the First Mile Route.</li> <li>5. System displays the optimised route from the User's current location (Start of First Mile journey) to the Landmark, then from the Landmark to the location to take public transportation (End of First Mile journey).</li> <li>6. User clicks on start journey button.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>6a. User clicks on cancel button. <ol style="list-style-type: none"> <li>i. System brings the User back to enter point of destination screen. (<a href="#">UC2.0</a>)</li> </ol> </li> </ol>
Postcondition	System displays a zoomed in map of the route from the User's current location to the end of the First Mile with a specific instructional direction for User to follow. ( <a href="#">UC3.0</a> )
Priority	High

### UC2.3 - Overview of Route from Start of Last Mile to End of Last Mile

Use Case ID	2.3
Use Case Name	Overview of Route from Start of Last Mile to End of Last Mile
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. (<a href="#">UC2.1</a>)</p> <p>User has finished the First Mile journey.</p> <p>User has arrived at the location of the start of Last Mile journey from the completion of the public transportation journey.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays the optimised route from the User's current location (Start of Last Mile route) to the</li> </ol>

	<p>destination (End of Last Mile route), alongside with displaying nearby Landmarks on the map.</p> <p>2. User clicks the start journey button.</p>
Alternative Scenario	<p>2a. User clicks on cancel button.</p> <p>i. System directs User back to the map to choose point of destination. (<a href="#">UC2.0</a>)</p>
Postcondition	System displays a zoomed in map of the route from the User's current location to the end of the Last Mile with a specific instructional direction for User to follow. ( <a href="#">UC3.0.2</a> )
Priority	High

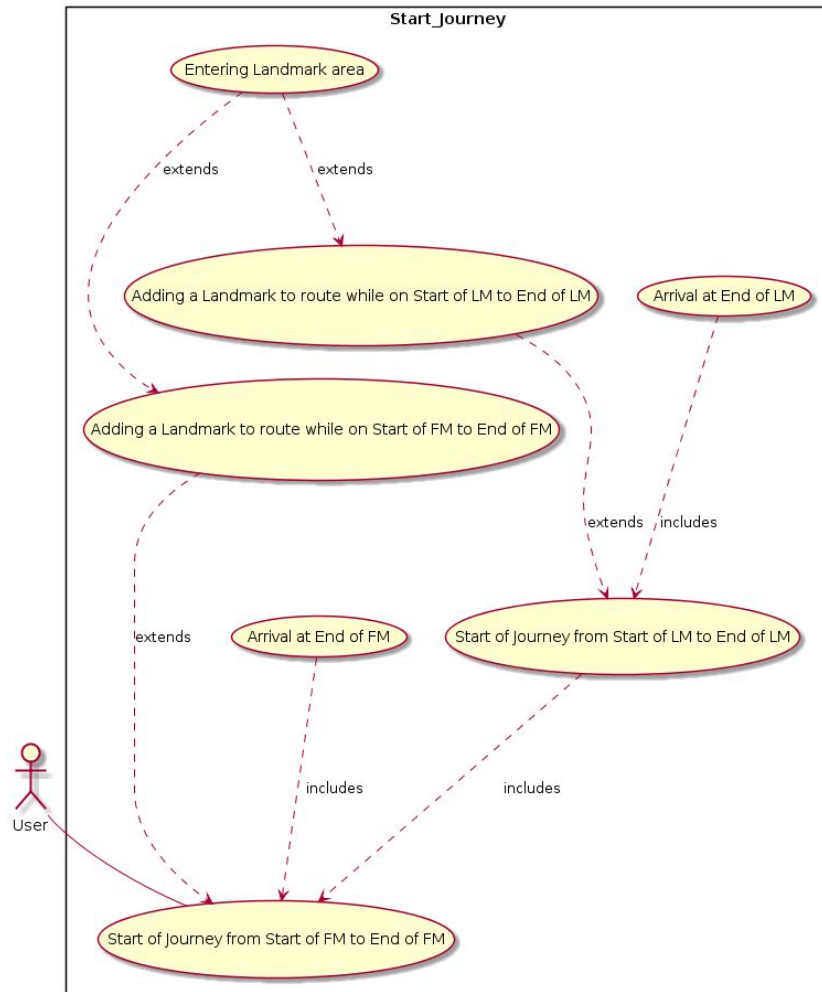
#### UC2.3.1 - Adding Landmark to Last Mile Route

Use Case ID	2.3.1
Use Case Name	Adding Landmark to Last Mile Route
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>System displays the optimised route from the User's current location (Start of Last Mile route) to the end of the Last Mile (End of First Mile route), alongside with displaying nearby Landmarks on the map.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on a Landmark icon on the map.</li> <li>2. System displays an info window which is attached to the specific Landmark icon and it shows the name of the Landmark, a short description of the Landmark, the Landmark rating score and an add to route button.</li> <li>3. User clicks the add to route button.</li> <li>4. System registers the Landmark as an intermediary step in the Last Mile Route.</li> <li>5. System displays the optimised route from the User's current location (Start of Last Mile journey) to the Landmark, then from the Landmark to the end of the Last Mile. (End of First Mile journey).</li> <li>6. User clicks on start journey button.</li> </ol>

Alternative Scenario	6a. User clicks on cancel button. i. System brings the User back to enter point of destination screen. ( <a href="#">UC2.0</a> )
Postcondition	System displays a zoomed in map of the route from the User's current location to the end of the First Mile with a specific instructional direction for User to follow. ( <a href="#">UC3.0</a> )
Priority	High

## Step by Step Navigation

Use Case Diagram 3.0





### UC3.0 - Start of Journey from Start of First Mile to End of First Mile

Use Case ID	3.0
Use Case Name	Start of Journey from Start of First Mile to End of First Mile
Actors	User
Preconditions	User successfully logged in. User has entered a destination. User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. ( <a href="#">UC2.1</a> ) User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. ( <a href="#">UC2.2</a> ) System displays map with the optimised route from the User's current location to the end of the First Mile.
Main Success Scenario	<ol style="list-style-type: none"><li>1. System displays a zoomed in map of the route from the User's current location to the end of the First Mile with a specific instructional direction for User to follow.</li><li>2. System returns a different set of instructional direction while User is moving along the route.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>2a. User clicks on exit step by step navigation button.<ol style="list-style-type: none"><li>i. System brings the User back to the overview of route from start of First Mile to end of First Mile screen. (<a href="#">UC2.2</a>)</li></ol></li><li>2b. User clicks on cancel route button.<ol style="list-style-type: none"><li>i. System brings the User back to enter point of destination screen. (<a href="#">UC2.0</a>)</li></ol></li></ol>
Postcondition	User arrives at the End of First Mile. ( <a href="#">UC3.2</a> )
Priority	High

### UC3.0.1 - Adding a Landmark to route while on journey from Start of First Mile to End of First Mile

Use Case ID	3.0.1
Use Case Name	Adding a Landmark to route while on journey from Start of First Mile to End of First Mile
Actors	User
Preconditions	User successfully logged in. User has entered a destination. User is within radius of various nearby Landmarks. User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. ( <a href="#">UC2.1</a> ) User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. ( <a href="#">UC2.2</a> ) System displays map with the optimised route from the User's current location to the end of the First Mile.
Main Success Scenario	<ol style="list-style-type: none"><li>1. System displays a zoomed in map of the route from the User's current location to the end of the First Mile with a specific instructional direction for User to follow, alongside with displaying nearby Landmarks on the map.</li><li>2. System returns a different set of instructional direction while User is moving along the route.</li><li>3. User clicks on a Landmark icon on the map.</li><li>4. System displays an info window which is attached to the specific Landmark icon and it shows the name of the Landmark and an add to route button.</li><li>5. User clicks the add to route button.</li><li>6. System registers the Landmark as an intermediary step in the First Mile Route.</li><li>7. System re-routes the User by returning a set of instructional direction towards the Landmark.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>2a. User clicks on exit step by step navigation button.<ol style="list-style-type: none"><li>i. System brings the User back to the overview of route from start of First Mile to end of First Mile screen. (<a href="#">UC2.2</a>)</li></ol></li><li>2b. User clicks on cancel route button.</li></ol>

	i. System brings the User back to enter point of destination screen. ( <a href="#">UC2.0</a> )
Postcondition	User enters a Landmark Area. ( <a href="#">UC3.1</a> )
Priority	High

### UC3.0.2 - Start of Journey from Start of Last Mile to End of Last Mile

Use Case ID	3.0.2
Use Case Name	Start of Journey from Start of Last Mile to End of Last Mile
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>User has entered a destination.</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. (<a href="#">UC2.1</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. (<a href="#">UC2.2</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of Last Mile to end of Last Mile. (<a href="#">UC2.3</a>)</p> <p>User has finished the First Mile journey.</p> <p>User has arrived at the location of the start of Last Mile journey from the completion of the public transportation journey.</p> <p>System displays map with the optimised route from the User's current location to the end of the Last Mile.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays a zoomed in map of the route to the end of the Last Mile with a specific instructional direction for User to follow.</li> <li>2. System returns a different set of instructional direction while User is moving along the route.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>2a. User clicks on exit step by step navigation button. <ol style="list-style-type: none"> <li>i. System brings the User back to the overview of route from start of Last Mile to end of Last Mile screen. (<a href="#">UC2.3</a>)</li> </ol> </li> <li>2b. User clicks on cancel route button. <ol style="list-style-type: none"> <li>i. System brings the User back to enter point of destination screen. (<a href="#">UC2.0</a>)</li> </ol> </li> </ol>
Postcondition	User arrives at the End of Last Mile. ( <a href="#">UC3.2.1</a> )

Priority	High
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### UC3.0.3 - Adding a Landmark to route while on journey from Start of Last Mile to End of Last Mile

Use Case ID	3.0.3
Use Case Name	Adding a Landmark to route while on journey from Start of Last Mile to End of Last Mile
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>User has entered a destination.</p> <p>User is within radius of various nearby Landmarks.</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. (<a href="#">UC2.1</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. (<a href="#">UC2.2</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of Last Mile to end of Last Mile. (<a href="#">UC2.3</a>)</p> <p>User has finished the First Mile journey.</p> <p>User has arrived at the location of the start of Last Mile journey from the completion of the public transportation journey.</p> <p>System displays map with the optimised route from the User's current location to the end of the Last Mile.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays a zoomed in map of the route from the User's current location to the end of the Last Mile with a specific instructional direction for User to follow, alongside with displaying nearby Landmarks on the map.</li> <li>2. System returns a different set of instructional direction while User is moving along the route.</li> <li>3. User clicks on a Landmark icon on the map.</li> <li>4. System displays an info window which is attached to the specific Landmark icon and it shows the name of the Landmark and an add to route button.</li> </ol>

	<ol style="list-style-type: none"> <li>5. User clicks the add to route button.</li> <li>6. System registers the Landmark as an intermediary step in the Last Mile Route.</li> <li>7. System re-routes the User by returning a set of instructional direction towards the Landmark.</li> </ol>
Alternative Scenario	<ol style="list-style-type: none"> <li>2a. User clicks on exit step by step navigation button. <ol style="list-style-type: none"> <li>i. System brings the User back to the overview of route from start of Last Mile to end of Last Mile screen. (<a href="#">UC2.3</a>)</li> </ol> </li> <li>2b. User clicks on cancel route button. <ol style="list-style-type: none"> <li>i. System brings the User back to enter point of destination screen. (<a href="#">UC2.0</a>)</li> </ol> </li> </ol>
Postcondition	User enters a Landmark Area. ( <a href="#">UC3.1</a> )
Priority	High

### UC3.1 - Entering Landmark area

Use Case ID	3.1
Use Case Name	Entering Landmark area
Actors	User, System
Preconditions	<p>User successfully logged in.</p> <p>User is within the geofence boundary of a Landmark.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System detects user has entered geofence area</li> <li>2. System displays a new screen displaying the name, description and picture of the Landmark, alongside the Landmark rating score. Within the Landmark area screen, the System will also display Canvases that were created at the Landmark, alongside with the title, description, comments and a picture of the Canvas, alongside a Canvas rating score.</li> </ol>
Alternative Scenario	

Postcondition	System displays the Landmark information.
Priority	High

### UC3.2 - Arrived at the End of First Mile

Use Case ID	3.2
Use Case Name	Arrived at the End of First Mile
Actors	User, System
Preconditions	<p>User successfully logged in.</p> <p>User has entered a destination.</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. (<a href="#">UC2.1</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. (<a href="#">UC2.2</a>)</p> <p>User has finished the First Mile journey.</p> <p>User has arrived at the location of the start of the public transportation journey.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System detects when the User has completed the First Mile journey and arrived at the end of the First Mile journey.</li> <li>2. System displays information that the User has reached the end of the First Mile journey and has successfully completed the First Mile journey.</li> </ol>
Alternative Scenario	
Postcondition	System prompts User to start the public transport journey.

Priority	High
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### UC3.2.1 - Arrived at the End of Last Mile

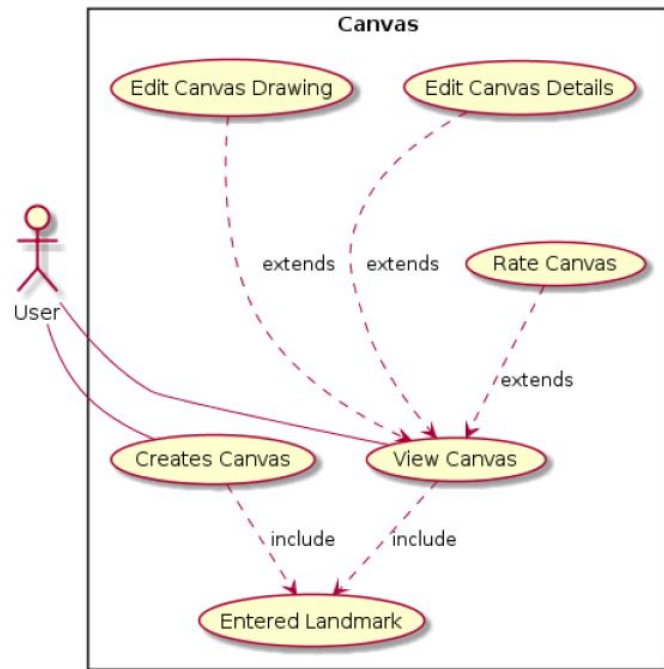
Use Case ID	3.2.1
Use Case Name	Arrived at the End of Last Mile
Actors	User, System
Preconditions	<p>User successfully logged in.</p> <p>User has entered a destination.</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of Last Mile. (<a href="#">UC2.1</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of First Mile to end of First Mile. (<a href="#">UC2.2</a>)</p> <p>User has viewed and clicked on start journey from the overview of route from start of Last Mile to end of Last Mile. (<a href="#">UC2.3</a>)</p> <p>User has finished the First Mile journey.</p> <p>User has finished the public transportation journey.</p> <p>User has finished the Last Mile journey.</p> <p>User has arrived at final destination.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System detects when the User has completed the Last Mile journey and arrived at the end of the Last Mile journey, which is User's final destination.</li> <li>2. System displays information that the User has reached the end of the Last Mile journey and has successfully completed the Last Mile journey.</li> <li>3. System displays route completion screen with a return to home button.</li> </ol>
Alternative Scenario	



Postcondition	System displays route completion screen with a return to home button. ( <a href="#">UC2.0</a> )
Priority	High

## Canvas

Use Case Diagram 4.0



#### UC4.0 - Create Canvas

Use Case ID	4.0
Use Case Name	Create Canvas
Actors	User
Preconditions	User successfully logged in. User has entered Landmark area. ( <a href="#">UC3.1</a> ) User clicked on the create new Canvas button.
Main Success Scenario	<ol style="list-style-type: none"><li>1. System displays create Canvas screen to User, with options to take a photo, input the Canvas title and description.</li><li>2. User takes a photo through the native Camera UI, and inputs the Canvas title and description.</li><li>3. User clicks to draw on the Canvas photo.</li><li>4. User clicks on save Canvas drawing button.</li><li>5. User chooses to set edit permissions (Only for Self, Open to Public) for the Canvas.</li><li>6. User clicks on submit Canvas button to save the Canvas and its details.</li><li>7. System saves Canvas and Canvas details.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>2a. User discards photo taken.<ol style="list-style-type: none"><li>i. System discards photo.</li><li>ii. System returns User to camera UI.</li></ol></li><li>3a. User discards drawing edits to the Canvas photo.<ol style="list-style-type: none"><li>i. System discards changes to Canvas photo.</li></ol></li></ol>
Postcondition	Canvas is created. System redirects User to Landmark area screen. ( <a href="#">UC3.1</a> )
Priority	Medium

#### UC4.1 - View Canvas

Use Case ID	4.1
Use Case Name	View Canvas
Actors	User
Preconditions	User successfully logged in. User has entered Landmark area. ( <a href="#">UC3.1</a> ) There are pre-existing Canvases at the Landmark.
Main Success Scenario	<ol style="list-style-type: none"><li>1. User clicks on a Canvas.</li><li>2. System displays information of the Canvas including the title, description, location of the landmark at which the Canvas was created, picture of the Canvas drawing, and option for User to upvote or downvote the Canvas.</li><li>3. System also displays comments on the Canvas by other Users as well as a textfield to leave a comment.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>1a. User clicks on back button.<ol style="list-style-type: none"><li>i. User is returned to Landmark area screen. (<a href="#">UC3.1</a>)</li></ol></li><li>3a. User inputs comment into the textfield and clicks on the post comment button.<ol style="list-style-type: none"><li>i. System adds comment to the canvas.</li></ol></li></ol>
Postcondition	System displays details of the Canvas.
Priority	Medium

#### UC4.1.1 - Rate Canvas

Use Case ID	4.1.1
Use Case Name	Rate Canvas

Actors	User
Preconditions	User successfully logged in. User is viewing the Canvas ( <a href="#">UC4.1</a> )
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on the button to upvote or downvote the Canvas.</li> <li>2. System saves the rating of the Canvas</li> </ol>
Alternative Scenario	
Postcondition	System shows the updated Canvas rating.
Priority	Medium

#### UC4.1.2 - Edit Canvas Details

Use Case ID	4.1.2
Use Case Name	Edit Canvas Details
Actors	User
Preconditions	User successfully logged in. User selected the View Canvas screen. ( <a href="#">UC4.1</a> ) User has appropriate edit permissions to edit the Canvas Details.
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on edit Canvas details button.</li> <li>2. System displays editable input fields for Canvas title and description.</li> <li>3. User edits details of Canvas.</li> <li>4. User clicks on save button.</li> </ol>

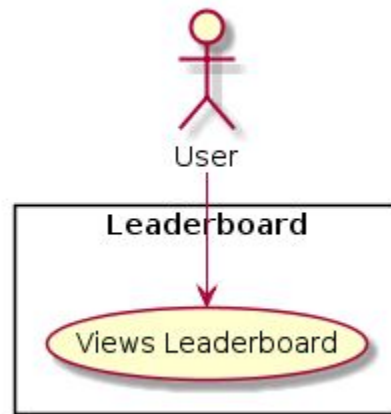
Alternative Scenario	<p>2a. System displays additional field for User who is the creator of the Canvas to update edit permissions for the Canvas.</p> <p>i. User edits edit permissions.</p> <p>4a. User clicks on cancel button.</p> <p>ii. System discards changes.</p> <p>iii. System returns User to view Canvas screen. (<a href="#">UC4.1</a>)</p>
Postcondition	System updates Canvas.
Priority	Medium

#### UC4.1.3 - Edit Canvas Drawing

Use Case ID	4.1.3
Use Case Name	Edit Canvas Drawing
Actors	User
Preconditions	<p>User successfully logged in.</p> <p>User is viewing the Canvas. (<a href="#">UC4.1</a>)</p> <p>User has appropriate edit permissions to edit the Canvas drawing.</p>
Main Success Scenario	<ol style="list-style-type: none"> <li>1. User clicks on edit Canvas drawing button.</li> <li>2. System displays the Canvas to draw on.</li> <li>4. User edits the Canvas drawing.</li> <li>5. User clicks on save Canvas drawing button.</li> <li>6. System saves the changes made to the Canvas drawing.</li> </ol>
Alternative Scenario	<p>4a. User discards changes to Canvas</p> <p>i. System discards changes made to Canvas</p>

Postcondition	System saves changes made to the Canvas drawing and returns user to view Canvas screen ( <a href="#">UC4.1</a> )
Priority	Medium

## Leaderboard

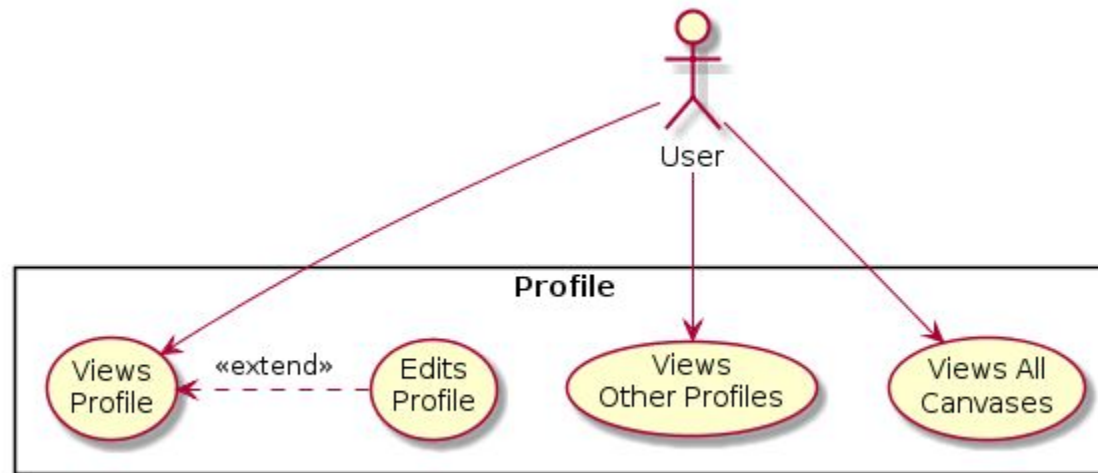


### UC5.0 - View Leaderboard

Use Case ID	5.0
Use Case Name	View Leaderboard
Actors	User
Preconditions	User successfully logged in. User clicks on Leaderboard option from menu.

Main Success Scenario	1. Systems displays the daily leaderboard for the top 5 Canvas with the highest Canvas rating score alongside its title, picture, description, Canvas rating score and Landmark location at which the Canvas was created at.
Alternative Scenario	<p>2a. User selects the weekly leaderboard.</p> <p>i. Systems displays the weekly leaderboard for the top 5 Canvas with the highest Canvas rating score alongside its title, picture, description, Canvas rating score and Landmark location at which the Canvas was created at.</p> <p>2b. User selects the all time leaderboard.</p> <p>i. Systems displays the all time leaderboard for the top 5 Canvas with the highest Canvas rating score alongside its title, picture, description, Canvas rating score and Landmark location at which the Canvas was created at.</p>
Postcondition	System displays overall leaderboard.
Priority	Medium

## Profile



### UC6.0 - View My Profile

Use Case ID	6.0
Use Case Name	View My Profile
Actors	User
Preconditions	User successfully logged in. User clicked to view their profile screen from menu.
Main Success Scenario	1. System displays the User's profile screen showing the User's name, age, sex, and commute method. System displays a limited number of the User's created Canvases with an option to go to a separate screen to view all Canvases created by the User. System also displays interesting statistics about the User (number of Landmarks visited, number of Canvas created, Personal rating score).



Alternative Scenario	
Postcondition	System display User profile page
Priority	Medium

#### UC6.0.1 - View Others' Profile

Use Case ID	6.0.1
Use Case Name	View Others' Profile
Actors	User
Preconditions	User successfully logged in. User clicked to view another User's profile screen.
Main Success Scenario	<ol style="list-style-type: none"> <li>1. System displays the selected User's profile screen showing the selected User's name, age, sex, and commute method depending on selected User's privacy visibility setting for each field. System also displays a limited number of the selected User created Canvases with an option to go to a separate screen to view all Canvases created by the selected User. System also displays interesting statistics about the User (number of Landmarks visited, number of Canvas created, Personal rating score).</li> </ol>
Alternative Scenario	
Postcondition	System display User profile page
Priority	Medium

## UC6.1 - Edit Profile

Use Case ID	6.1
Use Case Name	Edit Profile
Actors	User
Preconditions	User successfully logged in. User is viewing own profile. ( <a href="#">UC6.0</a> )
Main Success Scenario	<ol style="list-style-type: none"><li>1. User clicks on edit profile button.</li><li>2. System displays text fields to allow editing of password, name, age, sex, and commute method.</li><li>3. User can change the details of the profile.</li><li>4. User can change the individual visibility settings (Public viewing, private viewing) of name, age, sex and commute method.</li><li>5. User clicks on save button.</li><li>6. System saves the settings.</li></ol>
Alternative Scenario	<ol style="list-style-type: none"><li>5a. User clicks on cancel button.<ol style="list-style-type: none"><li>i. System returns to view profile page. (<a href="#">UC6.0</a>)</li></ol></li><li>5b. User enters invalid information in the text fields.<ol style="list-style-type: none"><li>i. Systems displays validation message accordingly.</li></ol></li></ol>
Postcondition	System displays updated information on view profile page. ( <a href="#">UC6.0</a> )
Priority	Medium

## UC6.2 - View All Canvases

Use Case ID	6.2
Use Case Name	View all Canvases
Actors	User
Preconditions	User successfully logged in. User clicked on view all Canvases in selected User's profile page.
Main Success Scenario	1. System displays a list of all Canvases created by the selected User, with the ability to search and filter through them.
Alternative Scenario	
Postcondition	
Priority	Medium

## Non-Functional Requirements

### Platform Compatibility

The System should be developed for both Android and iOS mobile devices.

### Portability

The system should be easy to install and update for the users.

### Reliability

The application should have an uptime of at least 98% with a maximum of 2% unplanned monthly downtime.

### Responsiveness

The application should respond quickly to User input with a response time not exceeding 1 second.

In the event of any delay due to loading, the User should be made aware of it through the form of User feedback.

### Scalability

The System should prevent unauthorised or unintended access to User accounts.

The System should ensure confidentiality of User's sensitive data at Storage phase.

### Security

The System should prevent unauthorised access to the database.

The System should ensure confidentiality of User's sensitive data at Storage phase.

## User Experience

The application should be fun and feels like a game.

# Glossary

## **Canvas**

A canvas consists of a canvas drawing, with a title, description, location of the landmark at which the canvas was created.

## **Canvas Drawing**

A canvas drawing consists of a picture taken at a Landmark, with drawings/scribbles done by the Users layered upon the picture.

## **First Mile/Last Mile (FMLM)**

Imagine a commuter who usually gets to work by MRT every morning. After waking up and getting ready, the commuter typically has to either walk or cycle to the train station. This portion of the journey of getting from home to the MRT train station is an example of a First Mile (FM). Conversely, when the train arrives at the destination station, the commuter then needs to walk from the station to the office location, and this is the Last Mile (LM).

## **First Mile (FM)**

The journey from the User's current location to the location where the User boards a public transport vehicle.

## **Last Mile (LM)**

The journey from the location where the User alights from a public transport vehicle to their final destination.

## **Journey**

The process of following a defined route from one point to another point on the map.

## **Landmark**

Designated areas dotted around Singapore where users who are within a certain distance from the area can view canvas created in that landmark or create their own canvas.

**Landmark rating score**

Users are able to give a rating from 0 - 5 for any particular landmark. The landmark rating would be the combined average rating from all the users that ever rated that particular landmark.

**Canvas rating score**

Users will be able to rate a Canvas by upvoting or downvoting on it. The number of upvotes and downvotes will contribute to a final rating score attributed to the Canvas, making it the Canvas rating score.

**Personal rating score**

A score determined by the combined value of all the upvotes on all the canvas created by the user divided by the combined value of all the downvotes on all the canvas created by the user.

**Route**

A defined path for the User to follow between any number of points on the map.

**System**

This refers to the Amble application.