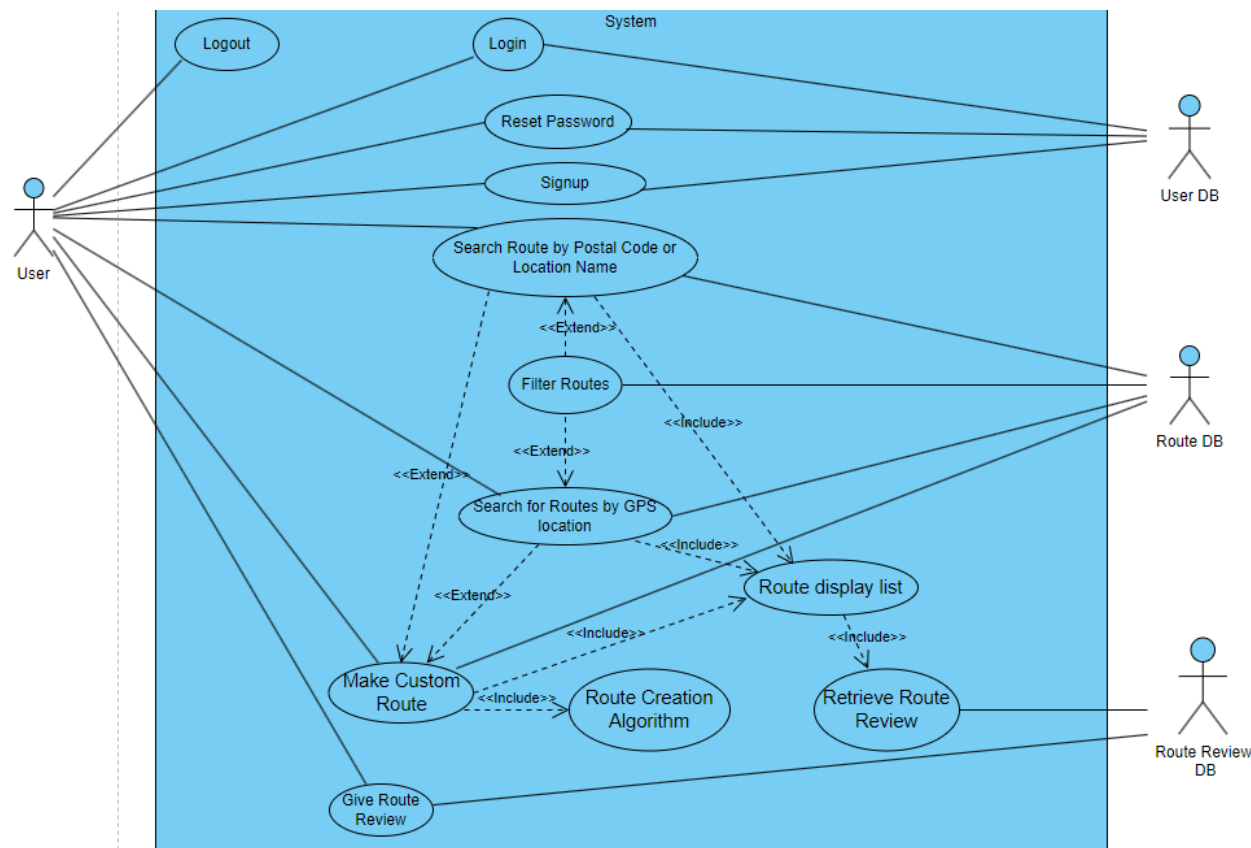


User Case Diagram



Use Case ID:	1.1		
Use Case Name:	Signup		
Created By:	Zi Lun	Last Updated By:	Zi Lun
Date Created:	07/02/2024	Date Last Updated:	07/02/2024

Actor:	User (Initiating Actor), User DB
Description:	Allows users to create an account
Preconditions:	The User does not already have an Account with User DB
Postconditions:	The User receives an Account or The User receives an explanation from the System why an Account

	could not be created
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. The User selects the option to sign up for an Account. 2. The System requests the input of the User's particulars 3. The User enters their particulars into all mandatory text fields 4. The System verifies that all text fields are filled with valid data 5. The System verifies that the User does not already have an account in User DB 6. The System creates an Account for the User
Alternative Flows:	<p>AF-S4: If the text fields contain invalid data</p> <ol style="list-style-type: none"> 1. The System displays the message "Invalid data. Please re-enter your particulars" for 2 seconds 2. The System highlights the text fields with invalid data 3. The System returns to the step 2 <p>AF-S5: If the User already has an Account in User DB</p> <ol style="list-style-type: none"> 1. The System displays the message "An account with this username already exists! Please try again!" for 2 seconds 2. The System returns to the step 2
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	1.2		
Use Case Name:	Login		
Created By:	Zi Lun	Last Updated By:	Zi Lun
Date Created:	07/02/2024	Date Last Updated:	07/02/2024

Actor:	User (Initiating Actor), User DB
Description:	Allows the User to login to their Account

Preconditions:	The User has created an Account before
Postconditions:	The User is logged into their Account
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. The User selects the option to login to their Account. 2. The System requests the input of the User's username and password 3. The User enters the username and password of their Account 4. The System verifies that the username and password is valid 5. The System logs the User into their Account
Alternative Flows:	AF-1: The username or password the User entered is invalid <ol style="list-style-type: none"> 1. The System displays the message "Invalid username or password! Please try again!" for 2 seconds 2. The System returns to the step 2
Exceptions:	EX1: If the User enters an invalid username or password for 5 times <ol style="list-style-type: none"> 1. The System displays the message "Your account has been temporarily frozen due to multiple unsuccessful login attempts. Please try again in 3 minutes." for 2 seconds 2. The System returns to the login screen
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	1.3		
Use Case Name:	Logout		
Created By:	Zi Lun	Last Updated By:	Zi Lun
Date Created:	07/02/2024	Date Last Updated:	07/02/2024

Actor:	User (Initiating Actor)
Description:	Allows the User to logout of their Account

Preconditions:	The User is logged into their Account
Postconditions:	The User is logged out of their Account
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. The User selects the option to logout of their Account. 2. The System prompts the user for logout confirmation 3. The User confirms that they want to logout 4. The System logs the User out of their Account
Alternative Flows:	
Exceptions:	EX1: The User confirms that they do not want to logout <ol style="list-style-type: none"> 1. The System returns the User to the home page
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	1.4		
Use Case Name:	Reset Password		
Created By:	Zi Lun	Last Updated By:	Zi Lun
Date Created:	07/02/2024	Date Last Updated:	07/02/2024

Actor:	User (Initiating Actor), UserDB
Description:	Allows the User to reset the password of their Account
Preconditions:	The User has created an Account before
Postconditions:	The User's Account password is changed
Priority:	
Frequency of Use:	

Flow of Events:	<ol style="list-style-type: none"> 1. The User selects the option “Forget password” to reset their Account’s password 2. The System requests the input of the User’s Account’s email address 3. The User inputs their Account’s email address 4. The System verifies that the email address is valid 5. The System sends an email with a link to the User’s email address to verify and reset their password 5. The User goes to the link in the email 6. The System requests the input of the User’s Account’s new password and confirmation of their new password 7. The User inputs their new password, and re-enters their new password for confirmation 8. The System verifies the input of the User’s new password and that it matches their confirmation 9. The System changes the password of the User’s Account to the new password 		
Alternative Flows:	<p>AF-1: The email address is invalid</p> <ol style="list-style-type: none"> 1. The System displays the message “Invalid email address! Please try again!” for 2 seconds 2. The System returns to the step 2 <p>AF-2: The new password and the confirmation do not match</p> <ol style="list-style-type: none"> 1. The System displays the message “Password does not match! Please try again!” for 2 seconds 2. The System returns to the step 6 		
Exceptions:			
Includes:			
Special Requirements:			
Assumptions:			
Notes and Issues:			

Use Case ID:	2.1		
Use Case Name:	Search route by postal code or location name		
Created By:	Javen Ong Jing Hian	Last Updated By:	Javen Ong Jing Hian
Date Created:	08/02/2024	Date Last Updated:	09/02/2024

Actor:	User(Initiating Actor), Route Database
Description:	
Preconditions:	User is logged into their account
Postconditions:	User gets a list of routes according to search
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. User chooses Route Discovery option on the system 2. System shows Route Discovery page 3. User chooses the option to search route by postal code or location name 4. User may enters at least 1 of the text fields: start location, end location, desired distance 5. System retrieves the list of routes with relevant details according to what user has entered in the text fields
Alternative Flows:	AF1: User searches without entering any of the text fields <ol style="list-style-type: none"> 1. System notifies user to fill at least 1 of the text fields
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	2.2		
Use Case Name:	Search for routes by GPS location services		
Created By:	Javen Ong Jing Hian	Last Updated By:	Javen Ong Jing Hian
Date Created:	08/02/2024	Date Last Updated:	09/02/2024

Actor:	User(Initiating Actor), Route Database
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Description:	
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into their account 2. User has given permission for system to access his device's location services 3. Location services must be available
Postconditions:	User gets a list of routes nearest to his current GPS location
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. User chooses Route Discovery option on the system 2. System shows Route Discovery page 3. User chooses the option to search route by GPS location 4. System retrieves the list of routes with starting points within 1km of user's GPS location
Alternative Flows:	<p>AF-1: Location services not available</p> <ol style="list-style-type: none"> 1. System notifies user there's no location services <p>AF-2: No permission to use location services on user's device</p> <ol style="list-style-type: none"> 1. System notifies user to enable location services via their device's settings
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	3.1		
Use Case Name:	Make custom route		
Created By:	Javen Ong Jing Hian	Last Updated By:	Javen Ong Jing Hian
Date Created:	08/02/2024	Date Last Updated:	09/02/2024

Actor:	User(Initiating Actor), Route Database, Route Creation Algorithm
Description:	
Preconditions:	User is logged into their account
Postconditions:	User's created route is stored in route database
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. User selects custom route creation option on the system 2. System shows route creation page 3. User enters either a start and end point of the route or a particular map segment for the route or both 4. System uses route creation algorithm to suggest at least 1 running route based on the points 5. User chooses the route recommended by the system 6. User submits route by clicking submit 7. Route is created and uploaded to the route database
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	4.1		
Use Case Name:	Give route review		
Created By:	Javen Ong Jing Hian	Last Updated By:	Javen Ong Jing Hian
Date Created:	08/02/2024	Date Last Updated:	09/02/2024

Actor:	User(Initiating Actor), Route Review Database
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Description:	
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into their account 2. User has chosen a route to give a review on
Postconditions:	User's review is stored in the route review database
Priority:	
Frequency of Use:	
Flow of Events:	<ol style="list-style-type: none"> 1. System shows route review page 2. User rates the route on a scale from 1 to 5 3. User inputs up to 1000 characters on the comment for the route 4. User submits the review by clicking submit 5. Review is created for the particular route and stored in the route review database
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	