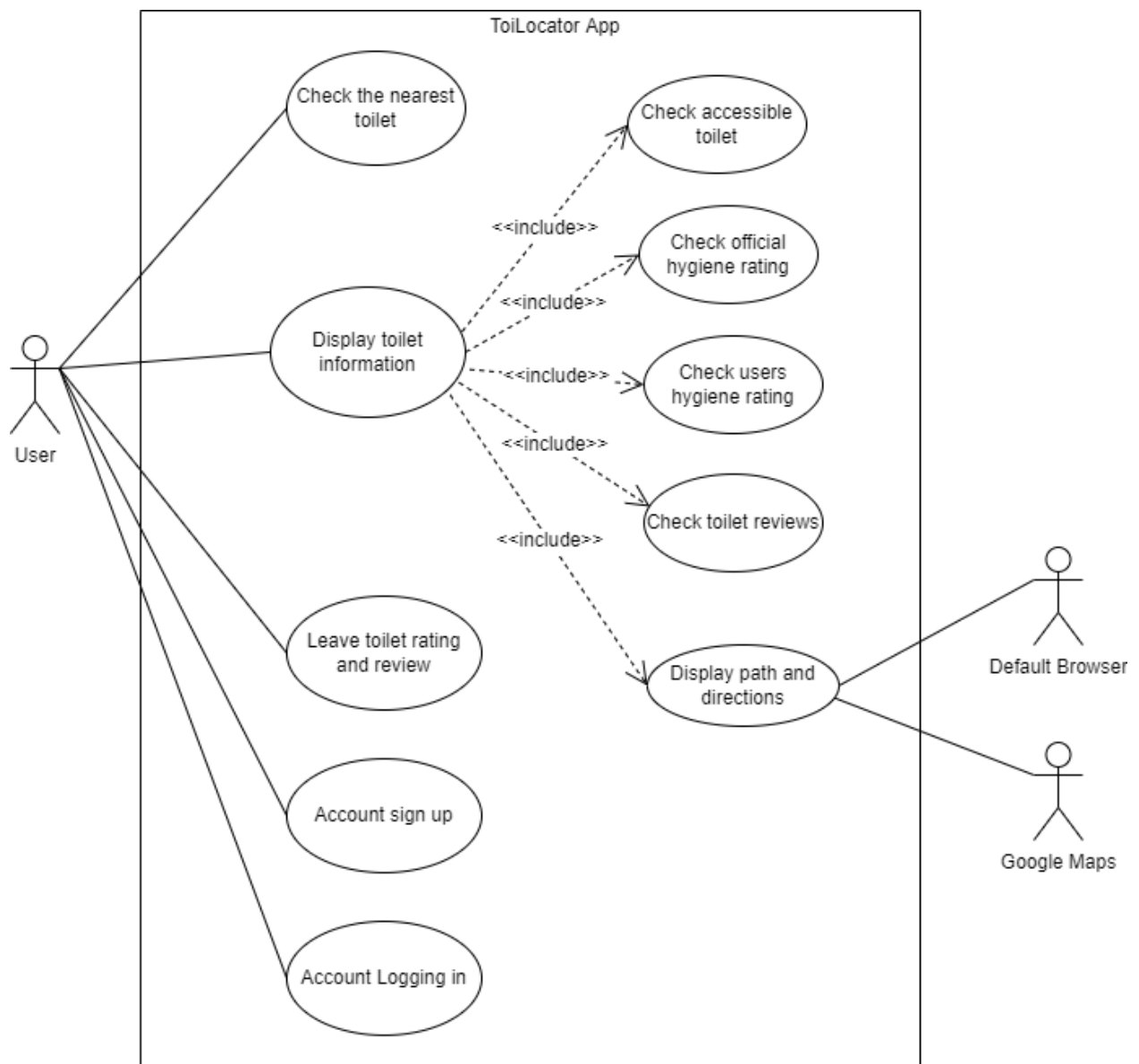


Use Case Diagram:



Use Case Descriptions

Use Case ID:	TL001		
Use Case Name:	Check the nearest toilet		
Created By:		Last Updated By:	
Date Created:		Date Last Updated:	

Actor:	User
Description:	This use case allows users to search for the nearest toilets around their desired location.
Preconditions:	User's device should have access to Internet The 'use current location' function is only accessible when users enable location retrieval User's device should have sufficient free memory available to launch this function

Postconditions:	All the toilets within 500m of the input location will be displayed in ascending proximity, with their exact addresses.
Priority:	High priority
Frequency of Use:	Not limited, upon user's request
Flow of Events:	<ol style="list-style-type: none"> 1. The user activates this function by <ol style="list-style-type: none"> 1.1 Entering desired location in the search bar <ol style="list-style-type: none"> 1.1.1 Keying in the name of the location 1.1.2 Clicking on the 'Current Location' dropdown option in the search bar <ol style="list-style-type: none"> 1.1.2.1 The system will send a message to request access to the user's current location 1.1.2.2 The user grants the access 2. The system will display all the toilets with their exact addresses within 500m radius of the location, in order of proximity

Alternative Flows:	<p>TL001.AC.1:</p> <p>Step 1.1.1 - If the user inputs an invalid location which cannot be found</p> <ol style="list-style-type: none"> 1. The system will pop-up a toast message 2. The user needs to enter the location again 3. Return to step 1.1.1 <p>TL001.AC.2:</p> <p>Step 1.1.2 - If the user wants to use 'use current location' function and has not turned on the GPS location</p> <ol style="list-style-type: none"> 1. The system will pop-up a message that reminds the user to turn on the GPS location on the device. User is required to press the "OK" to close the pop-up. 2. Return to step 1.1.2 <p>TL001.AC.3:</p> <p>Step 2 - If the system cannot find any toilets within 500m radius of the location</p> <ol style="list-style-type: none"> 1. The system will pop-up a toast message "There are no toilets nearby!". 2. Return to step 1
Exceptions:	
Includes:	None
Special Requirements:	
Assumptions:	<ol style="list-style-type: none"> 1. User has granted location access

Notes and Issues:	
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Use Case ID:	TL002		
Use Case Name:	Display toilet information		
Created By:		Last Updated By:	
Date Created:		Date Last Updated:	

Actor:	User
Description:	This use case allows users to check informations on the toilets displayed after use case TL001
Preconditions:	<p>User's device should have access to Internet</p> <p>User's device should have sufficient free memory available to load the information</p> <p>User should have a browser</p> <p>User must give permission to open other apps</p>
Postconditions:	Toilet information including official hygiene rating, user hygiene rating and reviews, accessibility, official images and the button for navigation
Priority:	High
Frequency of Use:	Not limited
Flow of Events:	<ol style="list-style-type: none"> 1. The user clicks on one of the toilets displayed 2. The system will display all the related informations (stated in postconditions) 3. The user can <ol style="list-style-type: none"> 3.1 Click "Back" to continue checking other toilets' information 3.2 Click "Directions" to check the path from the desired location to the toilet

	<p>3.2.1 The system will use deep links to open any (already installed) map application with the toilet location already entered</p> <p>3.2.2 The selected map application will help users navigate to the desired toilet</p>
Alternative Flows:	<p>TL002.AC.1:</p> <p>Step 3.2.1 - If the user does not have a map application installed</p> <ol style="list-style-type: none"> 1. The map will be opened instead in the user's default browser via Google Maps. 2. Return to step 3.2.2
Exceptions:	
Includes:	<ol style="list-style-type: none"> 1. Check accessible toilets 2. Check official hygiene rating 3. Check users hygiene rating 4. Check toilet reviews 5. Check the nearest path and directions
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	TL003		
Use Case Name:	Leave toilet ratings and reviews		
Created By:		Last Updated By:	
Date Created:		Date Last Updated:	

Actor:	User
Description:	This use case allows the user to leave their ratings and reviews for the toilets
Preconditions:	User's device should have access to Internet
Postconditions:	User's rating and reviews will be displayed on the toilet's information page
Priority:	Medium High
Frequency of Use:	A few times a day
Flow of Events:	<ol style="list-style-type: none"> 1. The user clicks on "Leave Rating/Reviews" button 2. The system will provide a text box and rating system for the user to input 3. The user chooses the target (via a check box) such as male toilet, female toilet, accessibility toilet or nursing room 4. The user rates the toilet in a scale of 1 to 5, with 5 as the best score 5. The user types the reviews in the text box provided 6. The user clicks on "submit" 7. The system will record the rating and review into the database 8. The system will display the rating and review on the toilet's information page
Alternative Flows:	TL003.AC.1: If the user does not have an account

	<ol style="list-style-type: none"> 1. The system will display a message "Please register before rating and reviewing!" for 2 seconds 2. The user needs to click on "Users and Accounts" to create an account 3. Creates a valid account <p>TL003.AC.2: If the user has not logged into the account</p> <ol style="list-style-type: none"> 1. The system will display a message "Please log in before rating and reviewing!" for 2 seconds 2. The user needs to click on "Users and Accounts" to log in 3. The system will display the login page 4. The user needs to enter the username and password 5. Once logged in successfully, return to step 2
Exceptions:	
Includes:	None
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	TL004		
Use Case Name:	Account Logging In		
Created By:		Last Updated By:	
Date Created:		Date Last Updated:	

Actor:	User
Description:	This use case allows the user to log in into the account
Preconditions:	User's device should have access to Internet User should have an account stored in the database
Postconditions:	User's account is successfully logged in
Priority:	High
Frequency of Use:	Multiple Times

Flow of Events:	<ol style="list-style-type: none"> 1. Account details (email and password) is entered into the login page 2. Upon successful login, the system will display a toaster popup indicating "Login Successful!" 3. The user will be brought back to the map start-up screen
Alternative Flows:	<p>TL004.AC.1: If the entered details does not match what is currently in the database</p> <ol style="list-style-type: none"> 1. The system will return to step 1, with an error message stating "Incorrect email/password!".
Exceptions:	
Includes:	None
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case ID:	TL005		
Use Case Name:	Account Sign Up		
Created By:		Last Updated By:	
Date Created:		Date Last Updated:	

Actor:	User
Description:	This use case allows the user to create a new account
Preconditions:	User's device should have access to Internet
Postconditions:	User's account is successfully created User's account is successfully added into the database
Priority:	High
Frequency of Use:	Once at most

Flow of Events:	<ol style="list-style-type: none"> 1. The user clicks on "Sign Up" 2. The system changes into an expanded form with fields to enter "Name", "Email", "Password", "Confirm Password" and "Gender" 3. System verifies the validity of the information 4. The user click on "Sign Up"
Alternative Flows:	<p>TL005.AC.1: Entered username/password is too short</p> <ol style="list-style-type: none"> 1. Raise error and tell user to retype <p>TL005.AC.2: Entered email is invalid</p> <ol style="list-style-type: none"> 1. Raise error and tell user to retype <p>TL005.AC.3: Username already exists in the database</p> <ol style="list-style-type: none"> 1. Raise error and tell user to retype <p>TL005.AC.4: Reconfirmation password does not match</p> <ol style="list-style-type: none"> 1. Raise error and tell user to retype password <p>TL005.AC.5: Entered email already exists</p> <ol style="list-style-type: none"> 1. Raise error and ask user to sign in instead/retype <p>TL005.AC.6: Entered gender is invalid</p> <ol style="list-style-type: none"> 1. Raise error and ask user to retype one of the binary options: M/F
Exceptions:	
Includes:	None
Special Requirements:	

Assumptions:	
Notes and Issues:	