

Use Case ID:	UC001		
Use Case Name:	Loading The Website		
Created By:		Last Updated By:	
Date Created:	03/02/2020	Date Last Updated:	

Actor:	User
Description:	Application is initiated
Preconditions:	<ol style="list-style-type: none"> 1. The user must have access to the internet. 2. The user must allow the browser to access their location
Postconditions:	<ol style="list-style-type: none"> 1. Brings user to the login page
Priority:	High
Frequency of Use:	Twice a day
Flow of Events:	<ol style="list-style-type: none"> 1. User type the website on the browser's search bar. 2. Application launched and proceeds to landing page
Alternative Flows:	-
Exceptions:	EX1: User fails to launch application <ol style="list-style-type: none"> 1. Webpage displays that an error has occurred.
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC002		
Use Case Name:	Login		
Created By:		Last Updated By:	
Date Created:	03/02/2020	Date Last Updated:	

Actor:	User
Description:	Executes login procedure to connect the account with the database
Preconditions:	<ol style="list-style-type: none"> 1. Application must be running. 2. The user must have an email account registered in the database.
Postconditions:	<ol style="list-style-type: none"> 1. User shall be logged in and moved to the landing page. 2. Favourite locations shall be retrieved. 3. User profile shall be retrieved.
Priority:	High
Frequency of Use:	Once every instance of loading the application
Flow of Events:	<ol style="list-style-type: none"> 1. When the application is loaded, the user will be directed to the login page. 2. The user will enter the email account and password. 3. When login information is validated, the account will load the main page of the application.
Alternative Flows:	<p>AF1: User has already logged in when starting the application and information has been cached in browser information.</p> <ol style="list-style-type: none"> 1. User will be directed to the landing page. <p>AF2: Account does not exist in the database.</p> <ol style="list-style-type: none"> 1. Alert the user of "Incorrect Username/Password" at the top of the login page. 2. Application returns to step 2. <p>AF3: User enters the wrong data input.</p> <ol style="list-style-type: none"> 1. Alert the user of "Incorrect Username/Password" at the top of the login page. 2. Application returns to step 2.
Exceptions:	EX1: Failure to connect to the Database.

	1. The webpage will prompt the user that the server is down.
Includes:	-
Special Requirements:	The application must be able to retrieve login information and favourites within 5 seconds.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC003		
Use Case Name:	Sign Up		
Created By:		Last Updated By:	
Date Created:	03/02/2020	Date Last Updated:	

Actor:	User
Description:	User wants to create an account.
Preconditions:	<ol style="list-style-type: none"> 1. Application must be running. 2. The user must not have an existing account.
Postconditions:	<ol style="list-style-type: none"> 1. User shall be logged in and moved to the landing page. 2. User profile shall be created and saved in the database.
Priority:	High
Frequency of Use:	The first time the user uses the application.
Flow of Events:	<ol style="list-style-type: none"> 1. The user shall enter the email account, password and email. 2. Application verifies if data inputs are in the correct format. 3. Application creates and stores user profile successfully into the Database. 4. Application shall automatically log in for the user and bring the user to the landing page.
Alternative Flows:	<p>AF1: Email addressed exist in the database.</p> <ol style="list-style-type: none"> 1. After step 3, the application will redirect the user back to the "Sign Up" page and display the message "Email Already Used" at the top. 2. Application returns to step 1. <p>AF2: User key in invalid inputs.</p> <ol style="list-style-type: none"> 1. After step 3, the application brings scroll to the particular input field with incorrect input format, with a message "Enter the Correct Format" above the input field. 2. User input data in the right format. 3. Application returns to step 3
Exceptions:	EX1: User wants to log in into his existing account:

	<ol style="list-style-type: none"> 1. Click "Login". 2. Application redirects users to the "Login" page.
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC004		
Use Case Name:	Select Car Park		
Created By:		Last Updated By:	
Date Created:	17/02/2020	Date Last Updated:	

Actor:	User
Description:	The user chooses which car park to park based on price and distance from the destination. Prices and car park locations are retrieved from their respective APIs.
Preconditions:	1. The user must be logged in.
Postconditions:	1. The application generates options of car parks for the user to choose.
Priority:	High
Frequency of Use:	Twice a day
Flow of Events:	<ol style="list-style-type: none"> 1. The user inputs the Starting Point. (Option of "Your Location" will be displayed when clicked on the search bar) 2. The user input destination location. 3. The application generates choices of car parks with the display of parking price and distance from the destination. 4. The user selects the car park that he or she wishes to park his or her car. 5. Application brings the user to Navigate (UC005).
Alternative Flows:	-
Exceptions:	<p>EX1: User did not enable location service for the application and selected the option of "Your Location" at step 1.</p> <ol style="list-style-type: none"> 1. Application display alert " Please enable location service for your browser" with the option "Dismiss".
Includes:	Login
Special Requirements:	1. The user must enable location service for the application.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC005		
Use Case Name:	Navigate		
Created By:		Last Updated By:	
Date Created:	17/02/2020	Date Last Updated:	

Actor:	User
Description:	The user wants to navigate to his destination and park his or her car.
Preconditions:	<ol style="list-style-type: none"> 1. The user must be logged in. 2. The user must have selected the car park that he or she wishes to park the car.
Postconditions:	<ol style="list-style-type: none"> 1. Application provides instructions to guide the user to drive to the selected car park.
Priority:	High
Frequency of Use:	Twice a day
Flow of Events:	<ol style="list-style-type: none"> 1. The user starts the navigation process. 2. The application calls Google Map API to provide navigation instructions based on the user's real-time location.
Alternative Flows:	-
Exceptions:	<p>EX1: The user did not enable location service for the application and selected the option of "Your Location" at step 1.</p> <ol style="list-style-type: none"> 1. Application display alert " Please enable location service for your browser" with the option "Dismiss". <p>EX2: The user has a change of plan during the drive.</p> <ol style="list-style-type: none"> 1. The user cancels the navigation process. 2. Application returns to Select Car Park (UC004). <p>EX3: The selected car park runs out of parking slots</p> <ol style="list-style-type: none"> 1. Application goes to Reroute (UC006).
Includes:	Select Car Park
Special Requirements:	<ol style="list-style-type: none"> 1. User must enable location service for their browser

Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC006		
Use Case Name:	Reroute		
Created By:		Last Updated By:	
Date Created:	17/02/2020	Date Last Updated:	

Actor:	User
Description:	The selected car park runs out of parking slots. Application provides a reroute option for the user.
Preconditions:	<ol style="list-style-type: none"> 1. The user must be logged in. 2. The user must be navigating towards the selected car park location.
Postconditions:	<ol style="list-style-type: none"> 1. The application displays options for the user to continue driving to the same car park or to choose other car parks with available parking slots.
Priority:	High
Frequency of Use:	Twice a day
Flow of Events:	<ol style="list-style-type: none"> 1. The application prompts the user that the car park that the user is going to has no more parking slots. 2. The user chooses another available car park. 3. The application will generate a new route for the user to go towards the newly selected car park. 4. The application provides navigation instructions based on the user's real-time location.
Alternative Flows:	<p>AF1: The user chooses to continue his or her journey to the previously selected car park.</p> <ol style="list-style-type: none"> 1. Application continues to provide navigation instructions based on the user's real-time location to the same car park.

Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC007		
Use Case Name:	Save Favourite Locations		
Created By:		Last Updated By:	
Date Created:	03/02/20	Date Last Updated:	04/02/20

Actor:	User, Database, APIs
Description:	User adds a location to a list of "Favourites" locations.
Preconditions:	<ol style="list-style-type: none"> 1. The user must be logged in. 2. User's favourite locations must be retrieved.
Postconditions:	<ol style="list-style-type: none"> 1. Current location shall be successfully added to Favourites.
Priority:	Medium
Frequency of Use:	Every time a location is searched for in the navigation page.
Flow of Events:	<ol style="list-style-type: none"> 1. The user searches for a location, either in the starting point field or destination field before selecting car park (UC004). 2. The user chooses to add that location to Favourites. 3. Popup appears that prompts the user to enter the name of the location to be saved. 4. Location is saved to the user's Favourites and the database is updated.
Alternative Flows:	-
Exceptions:	EX1: Unable to update "Favourites" from Database <ol style="list-style-type: none"> 1. Application displays alert "Unable to save location to Favourites"

	2. Application returns to step 1.
Includes:	Login
Special Requirements:	The application shall update favourites within 5 seconds.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC008		
Use Case Name:	User removes a location to the list of "Favourites" locations.		
Created By:		Last Updated By:	
Date Created:	04/02/20	Date Last Updated:	04/02/20

Actor:	User, Database, APIs
Description:	The user wants to remove a location from Favourites.
Preconditions:	<ol style="list-style-type: none"> 1. The user must be logged in. 2. User's favourite locations must be retrieved.
Postconditions:	<ol style="list-style-type: none"> 1. The application shall remove the select locations from Favourites.
Priority:	Medium
Frequency of Use:	Every time a location is searched for in the navigation page.
Flow of Events:	<ol style="list-style-type: none"> 1. The user visits the list of favourite locations. 2. User selects locations to remove. 3. The application asks for confirmation. 4. The location is removed from the list of favourites and the database is updated.
Alternative Flows:	AF1: The user selects the wrong location to remove. <ol style="list-style-type: none"> 1. User click "Cancel" in step 3. 2. The application returns to step 2.
Exceptions:	EX1: Unable to update "Favourites" to Database <ol style="list-style-type: none"> 1. .Application display alert "Unable to remove location from

	Favourites” 3. Application returns to step 1.
Includes:	Login
Special Requirements:	The application shall update favourites within 5 seconds.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	UC009		
Use Case Name:	Log Out		
Created By:		Last Updated By:	
Date Created:	17/02/2020	Date Last Updated:	

Actor:	User
Description:	The user wants to log out of his or her account.
Preconditions:	1. The user must be logged in.
Postconditions:	1. The user shall be logged out.
Priority:	Medium
Frequency of Use:	Low probability of occurring.
Flow of Events:	<ol style="list-style-type: none"> 1. The user selects the option to log out. 2. The application asks for confirmation. 3. The user is logged out.
Alternative Flows:	-
Exceptions:	-
Includes:	Login
Special Requirements:	-

Assumptions:	-
Notes and Issues:	-