

Use Case ID:	1		
Use Case Name:	Create Account		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor)
Description:	The user can create an account using their name, email and password. With an account created, the user can log in to the app to access its features
Preconditions:	<ol style="list-style-type: none"> 1. Device has an active internet connection 2. The user has not registered an account before
Postconditions:	The user's account is created, and they are logged in automatically. The user will be redirected to the home page.
Priority:	-
Frequency of Use:	Once for every user
Flow of Events:	<ol style="list-style-type: none"> 3. User selects "Create New Account" 4. User enters their name, email and password. 5. The system checks for email's uniqueness and validates the password 6. The system creates the account and logs the user in automatically
Alternative Flows:	-
Exceptions:	<p>E1: Email is already in use Application displays an "Email in use" message. The system prompts the user to enter a different email</p> <p>E2: Password does not meet security requirement Application displays a "Invalid password" message and prompts user to enter a valid password</p>
Includes:	-
Special Requirements:	The system must encrypt the password before storing it.
Assumptions:	User has a valid email account
Notes and Issues:	-

Use Case ID:	2		
Use Case Name:	Login		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor)
Description:	The user can log in using their email and password to access personalised features like adding carpark to their favourites
Preconditions:	<ol style="list-style-type: none"> 1. Device has an active internet connection 2. The user has already created an account with the application
Postconditions:	The user will be successfully logged in and be redirected to the home page where they can start searching for car parks
Priority:	-
Frequency of Use:	Once everyday
Flow of Events:	<ol style="list-style-type: none"> 1. User navigates to the login page. 2. User enters their email and password. 3. The system verifies the credentials. 4. The system logs the user in and redirects them to the home page.
Alternative Flows:	-
Exceptions:	<p>E1: Email and password do not match Application displays a "Wrong password" message.</p> <p>E2: Account does not exist Application displays an "Invalid account" message</p>
Includes:	-
Special Requirements:	The application must make sure the password is encrypted when stored in the database.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	3		
Use Case Name:	Log out		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor)
Description:	The user logs out of the application. The application ends the user session and redirects them to the login page
Preconditions:	1. The user is logged in
Postconditions:	The user session is terminated, and the user is redirected to the login page.
Priority:	-
Frequency of Use:	Once everyday
Flow of Events:	<ol style="list-style-type: none"> 1. User selects the “Log out” button 2. The application ends the user session 3. The system redirects the user to the login page
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	The system must securely terminate the session to prevent unauthorised access.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	4		
Use Case Name:	Search car park by location		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor), HDB, Google Maps
Description:	The user can search for car parks based on location or address.
Preconditions:	<ol style="list-style-type: none"> 1. Device has an active internet connection 2. The user is already logged in
Postconditions:	<ol style="list-style-type: none"> 1. The user receives a list of the nearby car parks in the specified location. 2. The system displays car park icons on the map and provides details when selected.
Priority:	-
Frequency of Use:	2 to 3 times a day
Flow of Events:	<ol style="list-style-type: none"> 1. User enters a location in the search destination bar. 2. The system processes the search query. 3. The system displays a list of nearby car parks in the location within a set distance. 4. The system displays car park icons on the map
Alternative Flows:	-
Exceptions:	E1: No carpark found in the radius of 1km of the location Application displays a "No results found" message.
Includes:	-
Special Requirements:	-
Assumptions:	The user provides a valid location and the system can access the required data sources.
Notes and Issues:	-

Use Case ID:	5		
Use Case Name:	View car park details		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor), HDB
Description:	The user can view detailed information about a selected car park, including car park address, total lots, available lots, car park rates, and operating hours.
Preconditions:	The user has selected a car park from the search results or map view.
Postconditions:	The user sees detailed information about the selected car park.
Priority:	-
Frequency of Use:	-
Flow of Events:	<ol style="list-style-type: none"> 1. User searches for car park by location 2. The application will return a list of nearby car parks 3. User selects a car park. 4. The application retrieves detailed information. 5. The application displays car park details to the user.
Alternative Flows:	A1: User filters car park details based on preferences (e.g., lowest rates, availability).
Exceptions:	E1: Details are unavailable. The system displays a message indicating that car park details could not be retrieved.
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	6		
Use Case Name:	Get directions to location		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor), Google maps
Description:	The user can obtain real-time directions to the selected car park after performing a search by location using google maps.
Preconditions:	The user has performed a search for car parks by location and selected a car park from the results.
Postconditions:	The user will be directed to Google maps with the starting location being the current location the user is in and the end destination set to the selected car park.
Priority:	-
Frequency of Use:	2 - times a day
Flow of Events:	<ol style="list-style-type: none"> 1. Users will search for car parks by location. 2. Application returns a list of car parks. 3. User selects a car park and clicks on the get directions icon . 4. Application retrieves the user's current location using Google Maps. 5. Application generates a route to the selected car park. 6. Application displays the route and step-by-step directions.
Alternative Flows:	A1: User do not require Google Maps for navigation and remains in the app
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	7		
Use Case Name:	Check in at car park		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor)
Description:	The user checks in at a car park to start a parking session, creating a time log.
Preconditions:	The user has arrived at a car park and selected the "Check In" option.
Postconditions:	The system logs the check-in time and begins tracking the parking session.
Priority:	
Frequency of Use:	2 to 3 times a day
Flow of Events:	<ol style="list-style-type: none"> 1. User selects a car park and chooses "Check In" upon reaching the car park 2. The system logs the time and starts tracking the parking session.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	8		
Use Case Name:	Check out of car park		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User (Initiating actor)
Description:	The user checks out of a car park to end a parking session, and the system calculates the expense based on the duration and rates.
Preconditions:	The user has checked in at a car park.
Postconditions:	The system logs the check-out time, calculates the expense, and saves the parking event.
Priority:	
Frequency of Use:	2 to 3 times a day
Flow of Events:	<ol style="list-style-type: none"> 1. User selects the “Check Out” option. 2. The system logs the time and ends the parking session. 3. The system calculates the expense and saves the parking event to history.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	9		
Use Case Name:	Add car park to favourites		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User
Description:	The user can add a specific car park to their list of favourites for quick access in future sessions.
Preconditions:	1. The user is logged in
Postconditions:	The selected car park is added to the user's list of favourites.
Priority:	-
Frequency of Use:	Occasionally
Flow of Events:	2. User searches for the desired carpark 3. Application returns a list of car parks 4. User selects the "Add to Favourites" icon for a car park. 5. The application saves the car park to the user's favourites list.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	10		
Use Case Name:	View parking expense dashboard		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User
Description:	The user can view a dashboard that plots their parking expenses over a one year period. The dashboard will also include the total current expenditure up till date and also display the average expenditure a month.
Preconditions:	The user is logged in
Postconditions:	The user views their parking expense summary on the dashboard.
Priority:	-
Frequency of Use:	-
Flow of Events:	<ol style="list-style-type: none"> 1. User navigates to the expense dashboard. 2. The system retrieves the user's parking transaction data.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	11		
Use Case Name:	View parking history		
Created By:	Resa	Last Updated By:	Resa
Date Created:	02/09/2024	Date Last Updated:	02/09/2024

Actor:	User
Description:	Users can view a dashboard containing a history of parking events. Each parking event includes details about the parking name, address, check-in time, check-out time, and cost. If there is a “check out” button on a parking event, it means that the parking event has not been checked out.
Preconditions:	The user is logged in
Postconditions:	The user views their parking history on the dashboard.
Priority:	-
Frequency of Use:	-
Flow of Events:	<ol style="list-style-type: none"> 1. User navigates to the expense dashboard. 2. The system retrieves the user's parking transaction data.
Alternative Flows:	-
Exceptions:	-
Includes:	-
Special Requirements:	-
Assumptions:	-
Notes and Issues:	-

Use Case ID:	12		
Use Case Name:	Change password		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User
Description:	The user can change their account password after logging into the application.
Preconditions:	The user is logged in
Postconditions:	The user's password is successfully updated, and a "Password changed successfully message" will be shown.
Priority:	-
Frequency of Use:	-
Flow of Events:	<ol style="list-style-type: none"> 1. User navigates to the "Edit particulars" tab. 2. User enters the current password, the new password, and confirms the new password. 3. The system verifies the current password 4. The application verifies the new password and confirm new password are the same and it meets the security criteria 5. The system updates the password and displays a success message
Alternative Flows:	-
Exceptions:	<p>E1: Current password is incorrect. The system displays an error message and prompts the user to re-enter the correct password.</p> <p>E2: New password does not meet security requirements. The application displays a warning message and prompts the user to enter a valid password.</p>
Includes:	-
Special Requirements:	Passwords stored should be encrypted.
Assumptions:	-
Notes and Issues:	-

Use Case ID:	13		
Use Case Name:	Submit Feedback		
Created By:	Victor	Last Updated By:	Victor
Date Created:	26/08/2024	Date Last Updated:	26/08/2024

Actor:	User
Description:	The user submits feedback about the application, optionally attaching images or videos.
Preconditions:	The user is logged in
Postconditions:	The system receives and stores the feedback and notifies the user that it has been successfully submitted.
Priority:	-
Frequency of Use:	-
Flow of Events:	<ol style="list-style-type: none"> 1. User selects the "Feedback" option. 2. User enters their feedback and optionally attaches images or videos. 3. User submits the feedback. 4. The system confirms submission and stores the feedback.
Alternative Flows:	A1: User cancels feedback submission and returns to the previous page.
Exceptions:	-
Includes:	-
Special Requirements:	Passwords stored should be encrypted.
Assumptions:	-
Notes and Issues:	-