SC2006 Use Case Descriptions

List of Use Cases
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Something the system must do but is not a use case, as it is not a performable action by the user
1. retrieve data from external sources, such as official database and API
2. compute the walking distance from one HDB unit to the nearest MRT exit; compute the walking time as well

Use Case ID:	UC.01
Use Case Name:	Login

Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025

Actor:	User
Description:	This allows a user to log in, so that they can access their profile
Preconditions:	1. The User has a profile 2. The User has their username and password
Postconditions:	The User logs in successfully, and has access to their profile OR The User does provide the correct credentials and is redirected to the previous page they were on
Priority:	High
Frequency of Use:	Low, once per user per hour
Flow of Events:	1. The User clicks on the "Log in" button 2. The system shows two blanks, one for username and one for password 3. The User enters the username and the password 4. The User clicks on the "Log in" button 5. The system shows the message "Login is successful!" 6. The system redirects the user back to the previous page they were on
Alternative Flows:	● UC.01.AC.01 – If the credentials are wrong, the system shows the message "You have entered wrong login credentials. Please try again" and redirects the user to the login page. The system then displays the option to log in again or to cancel login.
Exceptions:	NIL
Includes:	NIL
Special Requirements:	NIL
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	UC.02		
Use Case Name:	Create User Profile		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the user to create a profile, fill in their personal data and choose their username and password		
Preconditions:	The User is currently not logged in		
Postconditions:	The User has created a new profile, and is logged in to this profile		
Priority:	Medium		
Frequency of Use:	Low, once per user		
Flow of Events:	1. The User clicks on the button "Create New Profile" 2. The system redirects the User to the page where they can fill in their personal data and choose their username and passwords 3. The User has successfully created a profile		
Alternative Flows:	● UC.02.AC.01 – If the user is currently logged in, the system will display the message "You cannot create a new profile, as you are currently logged in" and redirects the user back to the previous page they were on.		
Exceptions:	NIL		
Includes:	NIL		
Special Requirements:	NIL		
Assumptions:	The User has never created any profile previously		
Notes and Issues:	NIL		

Use Case ID:	UC.03		
Use Case Name:	Edit User Profile		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the user to edit their personal data or delete their profile		
Preconditions:	The User is currently logged in		
Postconditions:	The User has successfully edited their profile		
Priority:	Medium		
Frequency of Use:	Low, once per session		
Flow of Events:	1. The User clicks on the button "Edit My Profile" 2. The system redirects the User to the page where they can edit their profile 3. The User has edited their profile successfully		
Alternative Flows:	NIL		
Exceptions:	NIL		
Includes:	UC.01 (Login)		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	The button "Edit My Profile" will not be displayed at all, if the user is not logged in		

Use Case ID:	UC.04		
Use Case Name:	View HDB Listings		
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User
Description:	Display a list of HDB units
Preconditions:	1. The system has retrieved all data from external sources 2. User must have an internet connection
Postconditions:	1. The User is able to view an accurate list of HDB units 2. The User is able to vertically scroll to view the HDB units
Priority:	High
Frequency of Use:	High – Estimated 5 to 10 times per user per hour
Flow of Events:	1. User opens the homepage 2. System loads the list of HDB units and shows result count 3. The User can choose to use UC.02 (Filter & Sort) to filter the listings and sort based on their preferences. If sorting is not selected, the default sort is by alphabetical order 4. The User can choose to directly search for the unit using UC.03 (Direct Search)

	5. User scrolls through the listings in search of a suitable HDB unit 6. The User can click on a particular HDB unit to view the full details via UC.09 (View HDB Details)
Alternative Flows:	NIL
Exceptions:	NIL
Includes:	NIL
Special Requirements:	1. First results visible ≤ 1.5s, first-time users should be able to perform a search within 2 minutes 2. Page should be able to display at least 10 listings at a time to reduce the need for excessive scrolling on the User's end
Assumptions:	1. The data from the dataset where HDB data is fetched from is up to date and accurate
Notes and Issues:	NIL

Use Case ID:	UC.05		
Use Case Name:	Filter & Sort		
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User

Description:	Provide filtering options to narrow down displayed listings as well as sort options
Preconditions:	1. Homepage correctly displays the listings (UC.04) 2. The filter controls are properly rendered and visible to the User
Postconditions:	1. The User is able to see the list of HDB units which meet the constraints they have selected via the filters 2. The listing is correctly sorted according to the selected sorting method chosen by the User
Priority:	High
Frequency of Use:	Medium – Estimated 2 to 5 times per user per hour
Flow of Events:	1. User selects a few constraints (e.g. Region - North; Price - less than 1 million SGD; Flat type - 4-room) 2. System refreshes the listing to show only those that satisfy the constraint (e.g. Only show flats in the North etc.) 3. System updates the visible result count 4. User can choose to apply a sort to the results (e.g. Remaining Lease in descending order), if sorting is not selected, the default sort is by alphabetical order 5. System rearranges listings according to the sort that the User has applied, and display the listings in the sorted order
Alternative Flows:	● UC.05.AC.01 – User resets the Filter & Sort options. The System will show all the listings in a default view.

Exceptions:	● UC.05.EX.01 – User places constraints that are too stringent, resulting in zero results. The System visibly indicates that there are zero results for this particular query and prompts the User to loosen their requirements (possibly suggest the "problematic" constraint).
Includes:	NIL
Special Requirements:	1. Results visible ≤ 1.5s after filters or sort are applied
Assumptions:	1. The list of all available HDB units is too expansive and hence requires various constraints (based on User preference) for it to be manageable
Notes and Issues:	NIL

Use Case ID:	UC.06		
Use Case Name:	Direct Search		
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User
Description:	There is a field on the homepage where the User can directly enter the block/street/project to view a project, with auto-suggestions to complete the query.

Preconditions:	1. Search index exists (block, street, town, project). 2. User is able to interact with the search field
Postconditions:	1. Listing reflects the changes in the search query
Priority:	High
Frequency of Use:	Medium – 3 to 5 times per user per hour
Flow of Events:	1. User types in the search field 2. System offers auto-suggestions to complete the query 3. System refreshes the listings displayed based on the search
Alternative Flows:	· UC.06.AC.01 – 'Enter' pressed without any input. The System ignores the enter.
Exceptions:	· UC.06.EX.01 – User's search results in zero matches. Clearly show that the results of the search are zero matches, suggest units close to the query (might be misspelled).
Includes:	NIL
Special Requirements:	1. Enforce a minimum length to the query 2. Disable special symbols that should logically not be related to a HDB unit
Assumptions:	1. The User has a functioning internet connection 2. The User may already have a unit in mind and hence needs a direct search
Notes and Issues:	NIL

Use Case ID:	UC.07		
Use Case Name:	Shortlist Units		
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User
Description:	Add/remove flats to a shortlist for future review and comparison.
Preconditions:	1. The User has accesses to the HDB Listings Page 2. The System allows the User to add units to a temporary session-based shortlist (No User Account)
Postconditions:	1. User is able to add units to a recorded shortlist 2. User is able to remove added units from the shortlist 3. User is able to shortcut to the detailed view of the flat's attributes (UC.09)
Priority:	Medium
Frequency of Use:	Low – Estimated 1 to 2 times per user per hour

Flow of Events:	1. User clicks on a "Add to Shortlist" button 2. System updates the shortlist with the new unit 3. User clicks on "My Shortlist" button to view the units that they have added to the shortlist 4. System displays the units added to the shortlist in a vertical scrolling view 5. User clicks on one of the units in the shortlist 6. System directs User to the View Unit Details page (UC.09) 7. User able to perform a comparison amongst a maximum of 4 shortlisted units (UC.08)
Alternative Flows:	· UC.07.AC.01 – User is not logged in or does not have an account when clicking on "Add to Shortlist". The System creates a temporary session-based shortlist, but does not persist after the session is closed.
Exceptions:	· UC.07.EX.01 – Storage to shortlist fails. Show error message and prompt User to retry. · UC.07.EX.02 – Removal from shortlist fails. Show error message and prompt User to retry.
Includes:	NIL
Special Requirements:	1. Neat vertically scrollable view similar to homepage
Assumptions:	1. Reasonable cap to the number of shortlists (e.g. 30) 2. The User may not have decided wholeheartedly on a single flat, but may still hold some interest in several options. Shortlists allow registered Users to hold a few promising units in their arsenal while they continue looking for the perfect flat
Notes and Issues:	NIL

Use Case ID:	UC.08
Use Case Name:	Compare Shortlisted Units
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User
Description:	Comparison of up to four shortlisted flats across attributes, proximity, and affordability.
Preconditions:	1. Shortlist has at least 2 units stored (UC.07)
Postconditions:	1. User is able to use the comparison table to quickly point out the differences between each unit
Priority:	Medium
Frequency of Use:	Low – Estimated 1 to 2 times per user per hour
Flow of Events:	1. User clicks on "Compare" 2. The system displays up to 4 selected units in a table of comparison. Each unit occupies one column, and each attribute (such as price) occupies one row. 3. User adds and removes flats from the comparison view as needed
Alternative Flows:	NIL

Exceptions:	• UC.08.EX.01 – Missing data for a field. The System displays a "-" in that field and presents a tooltip that informs the User of the problem.
Includes:	UC.07 (Shortlist Units)
Special Requirements:	1. Neat and tidy structure 2. Responsive table 3. Render within 1.5s or less
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	UC.09		
Use Case Name:	View Unit Details		
Created By:	Kenny Lim	Last Updated By:	Kenny Lim
Date Created:	22/08/2025	Date Last Updated:	22/08/2025

Actor:	User
Description:	After the User clicks on a particular unit in UC.04 (View HDB Listings), a new page is opened in a new tab that shows full flat details (block, street, lease details, price, floor area, storey, flat type, etc.), carpark information (location, price, etc.), affordability flags, local amenities

Preconditions:	1. User selected a unit from the listing page (UC.04) or from their shortlist (UC.07) 2. Detailed attributes of the unit are retrievable
Postconditions:	1. User is able to view all the various attributes of the unit
Priority:	High
Frequency of Use:	High – Estimated 5 to 10 times per user per hour
Flow of Events:	1. User clicks on a unit from the listings page 2. A new page is opened in a new browser tab 3. System displays all the attributes of the corresponding unit 4. System displays the walking distance to the nearest MRT exit (UC.08) 5. System shows carpark information (UC.09) 6. System shows affordability assessment and flags if beyond budget (UC.12) 7. User shortlists and/or returns to the listing page to view other units
Alternative Flows:	NIL
Exceptions:	● UC.09.EX.01 – Details fetch fails. Show error message and prompt User to retry.
Includes:	UC.10 (View Local Amenities) UC.11 (Carpark Information) UC.12 (View Affordability) UC.13 (View Data Provenance)
Special Requirements:	1. Neat and tidy structure that has a logical flow 2. Data sources references (UC.13)
Assumptions:	1. Coordinates are available for proximity checks

Notes and Issues:	NIL

Use Case ID:	UC.10		
Use Case Name:	View Local Amenities		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the User to view on a map local amenities such as MRT exits, bus stops, schools, hawker centres, shopping malls, supermarkets, etc.		
Preconditions:	The User is currently on the page where they view unit details		
Postconditions:	The User can view local amenities on a map		
Priority:	High		
Frequency of Use:	High, estimated 5-10 times per user per hour		
Flow of Events:	1. The User selects a type of amenity they want to see on a map 2. Assuming the User chose "Transport" 3. MRT exits and bus stops within 5 km range of the HDB unit will be displayed on the map 4. the User hovers their mouse cursor over one particular MRT exit 5. The walking distance and walking time to that MRT exit is displayed		
Alternative Flows:	NIL		
Exceptions:	NIL		
Includes:	NIL		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	Available amenities include Transport (MRT and Bus), Education (schools), Food (hawker centres), Shopping (shopping malls and supermarkets)		

Use Case ID:	UC.11		
Use Case Name:	View Carpark Information		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the User to view nearby carpark information		
Preconditions:	The User is currently on the page where they view unit details		
Postconditions:	The User can view carpark information successfully		
Priority:	High		
Frequency of Use:	High, estimated 5-10 times per user per hour		
Flow of Events:	1. The User scrolls down on unit details page 2. The User sees the section on carpark 3. The System displays nearby carparks on a map 4. The User clicks on one carpark 5. The System displays the price, distance to the HDB unit, opening hours		
Alternative Flows:	NIL		
Exceptions:	NIL		
Includes:	NIL		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	NIL		

Use Case ID:	UC.12		
Use Case Name:	View Affordability		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the User to view affordability of the HDB unit		
Preconditions:	The User is currently on the page where they view unit details		
Postconditions:	The User can view affordability successfully		
Priority:	High		
Frequency of Use:	High, estimated 5-10 times per user per hour		
Flow of Events:	1. Assuming that the User is currently not logged in, the System displays the total price, downpayment, monthly installment		
Alternative Flows:	● UC.12.AC.01 – If the user is logged in, and has filled in their personal data, including household monthly income, the System displays whether or not it is affordable for the User		
Exceptions:	NIL		
Includes:	NIL		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	NIL		

Use Case ID:	UC.13		
Use Case Name:	View Data Provenance		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the User to view data provenance		
Preconditions:	The User is currently on the page where they view unit details		
Postconditions:	The User can view data provenance successfully		
Priority:	High		
Frequency of Use:	High, estimated 5-10 times per user per hour		
Flow of Events:	1. The User clicks on the button "View Data Provenance" located below the unit details section on the page 2. The System displays a new window which shows the source of the unit details, the URL to the source, the time when these details were last retrieved		
Alternative Flows:	NIL		
Exceptions:	NIL		
Includes:	NIL		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	NIL		

Use Case ID:	UC.14		
Use Case Name:	Get Recommendation		
Created by:	Wang Cheng	Last Updated by:	Wang Cheng
Date Created:	25/08/2025	Date Last Updated:	25/08/2025
Actor:	User		
Description:	This allows the User to rank their priorities and see one most recommended unit		
Preconditions:	The User has applied filters, and is seeing a list of filtered units		
Postconditions:	The User sees one most recommended unit		
Priority:	Medium		
Frequency of Use:	Medium, estimated 3 times per user per hour		
Flow of Events:	1. The User has applied filters, and is seeing a list of filtered units 2. The User clicks on the button "Get Recommendation" 3. The System displays a new window, where the User can select their priorities 4. The User selects "Price" as the 1st priority 5. The User selects "Carpark" as the 2nd priority 6. The User clicks "Get Recommendation" 7. The System computes and displays one most recommended unit		
Alternative Flows:	NIL		
Exceptions:	NIL		
Includes:	UC.05 (Filter & Sort)		
Special Requirements:	NIL		
Assumptions:	NIL		
Notes and Issues:	The System does the recommendation by assigning different weights to the User's different priorities. According to these weights, each unit on the list gets a score. The unit with the highest score is the most recommended unit.		

Use Case ID:	Empty table template		
Use Case Name:			
Created by:		Last Updated by:	
Date Created:		Date Last Updated:	
Actor:			
Description:			
Preconditions:			
Postconditions:			
Priority:			
Frequency of Use:			
Flow of Events:			
Alternative Flows:			
Exceptions:			
Includes:			
Special Requirements:			
Assumptions:			
Notes and Issues:			