
Use Cases

for

HouseSense

Version 1.0 approved

Prepared by Group 4

Group 4

8th Feb 2025

Revision History

Name	Date	Reason For Changes	Version
Yee Yong Khang	8 th Feb	Initial edit	1.0

Use Cases

Use Case ID:	U1		
Use Case Name:	View Flat Recommendations		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User
Description:	This use case allows user to view a list of flats that matches their input preferences
Preconditions:	- User has submitted preferences in their profile
Postconditions:	- User is shown a list of recommended flats
Priority:	High
Frequency of Use:	High
Flow of Events:	<ol style="list-style-type: none"> 1. The user navigates to recommendation page 2. System retrieves flat listing from API 3. The system displays flats that matches the user's preference
Alternative Flows:	If no flats match preferences <ol style="list-style-type: none"> 1. The system notifies the user and suggests broadening the preference criteria
Exceptions:	None
Includes:	<ul style="list-style-type: none"> - Retrieve Flat Listings - Filter Results
Special Requirements:	- Must generate recommendations within 3 seconds
Assumptions:	None
Notes and Issues:	

Use Case ID:	U2		
Use Case Name:	Filter Results		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User
Description:	This use case enables users to view recommendation for resale flats based on their input preferences, such as budget, flat size, floor level, and proximity to facilities.
Preconditions:	<ul style="list-style-type: none"> - User is logged in - Historical resale flat data is retrieved from HDB Flat API
Postconditions:	<ul style="list-style-type: none"> - Users are presented with a list of flats that meet their specified preferences
Priority:	High
Frequency of Use:	High
Flow of Events:	<ol style="list-style-type: none"> 1. The user navigates to recommendation page 2. The user inputs their preferences 3. System retrieves relevant data from database/HDB Flat API 4. System filters result based on preferences 5. System generates a list of recommended flats and displays them
Alternative Flows:	None
Exceptions:	If HDB Flat API is unavailable <ol style="list-style-type: none"> 1. System notifies the user and uses only locally stored data
Includes:	<ul style="list-style-type: none"> - Retrieve Flat Listings - Filter Results
Special Requirements:	<ul style="list-style-type: none"> - Must generate recommendations within 3 seconds
Assumptions:	<ul style="list-style-type: none"> - User inputs valid input during preference prompt
Notes and Issues:	

Use Case ID:	U3		
Use Case Name:	Resale Flat Comparison		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User
Description:	This use case allows users to compare up to 5 resale flats based on various attributes, such as location, size, price, and proximity to facilities
Preconditions:	User has selected at least 1 flat to compare
Postconditions:	A comparison table is generated highlighting differences between selected flats
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	<ol style="list-style-type: none"> 1. User selects flats to compare 2. System retrieves data for the selected flats 3. System generates a comparison table highlighting key differences between the various flats
Alternative Flows:	If no flats are selected <ol style="list-style-type: none"> 1. The system prompts the user to select at least two flats
Exceptions:	None
Includes:	<ul style="list-style-type: none"> - Display Flat Information - Highlight key differences
Special Requirements:	Must display comparison within 5 seconds under peak load
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U4		
Use Case Name:	Submit Review and Rating		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User with Account
Description:	This use case allows verified users to submit reviews and rating for resale flats that they have interacted with
Preconditions:	- The user is logged in and verified
Postconditions:	- The user's review and ratings are stored in the database
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	<ol style="list-style-type: none"> 1. The user selects a flat to review 2. The user inputs their review and rating 3. The system goes into Verify User for Review and validates the user's verification status 4. The system stores the review and rating in the database
Alternative Flows:	If the user is not verified <ol style="list-style-type: none"> 1. The system prompts the user to complete verification before submitting the review
Exceptions:	
Includes:	Verify User for Review
Special Requirements:	Review and rating submissions must be processed within 2 seconds
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U5		
Use Case Name:	Create Account		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User
Description:	This use case allows users to create an account to save preferences, submit reviews, and access personalized recommendations
Preconditions:	- User must provide valid credentials, including email or phone number
Postconditions:	- The user account is created and stored in the database, the credentials are securely stored.
Priority:	High
Frequency of Use:	Low (only once for each new user)
Flow of Events:	<ol style="list-style-type: none"> 1. User navigates to the account creation page 2. User inputs required details (e.g. username, email, password) 3. The system verifies the email or phone number 4. The system securely stores the user's credentials and creates the account
Alternative Flows:	If the email is already registered <ol style="list-style-type: none"> 1. The system notifies the user and prompts for login instead
Exceptions:	
Includes:	Verify User for Review
Special Requirements:	None
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U6		
Use Case Name:	View Profile		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User with Account
Description:	This use case allows user to view their profile
Preconditions:	- The user must be logged in
Postconditions:	- System will display user's profile
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	<ol style="list-style-type: none"> 1. The user navigates to the profile page 2. System retrieves the user's information from the database 3. System displays user's profile
Alternative Flows:	None
Exceptions:	None
Includes:	Change Preferences Edit Personal Information
Special Requirements:	None
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U7		
Use Case Name:	Edit Personal Information		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User with Account
Description:	This use case allows verified users to edit their personal information
Preconditions:	- The user must be logged in with an account
Postconditions:	- The user account's personal information will be updated and reflected in the database
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	<ol style="list-style-type: none"> 1. User goes to view profile and click "Edit Personal Information" 2. System prompts user for the fields that they want to edit 3. User inputs the subsequent changes and click "SAVE" 4. System updates the database with the new input information
Alternative Flows:	User clicks "CANCEL" <ol style="list-style-type: none"> 1. User clicks on "CANCEL" 2. System goes back to View Profile
Exceptions:	None
Includes:	View Profile
Special Requirements:	None
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U8		
Use Case Name:	Change Preferences		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User with Account
Description:	This use case allows verified users to change their flat preferences
Preconditions:	- The user must be logged in with an account
Postconditions:	- The user account's flat preferences will be updated and reflected in the database
Priority:	Medium
Frequency of Use:	Medium
Flow of Events:	5. User goes to view profile and click "Change Preferences" 6. System prompts user for the fields that they want to change 7. User inputs the subsequent changes and click "SAVE" 8. System updates the database with the new preferences
Alternative Flows:	User clicks "CANCEL" 3. User clicks on "CANCEL" 4. System goes back to View Profile
Exceptions:	None
Includes:	View Profile
Special Requirements:	None
Assumptions:	None
Notes and Issues:	None

Use Case ID:	U9		
Use Case Name:	Verify User for Review		
Created By:	Yee Yong Khang	Last Updated By:	Yee Yong Khang
Date Created:	8 Feb 2025	Date Last Updated:	11 Feb 2025

Actor:	User with Account
Description:	This use case ensures that only verified users can submit reviews and ratings, preventing spam and unauthorized activities
Preconditions:	<ul style="list-style-type: none"> - The user must be logged in - The user have submitted a review
Postconditions:	<ul style="list-style-type: none"> - The user's verification status is confirmed
Priority:	High
Frequency of Use:	Low (depending on how frequent the user make multiple reviews)
Flow of Events:	<ol style="list-style-type: none"> 1. The user initiates account creation or submits a review 2. System sends a verification email or SMS to the user 3. The user verify their account using link or code provided 4. System updates the user's profile as verified
Alternative Flows:	Verification fails <ol style="list-style-type: none"> 1. System notifies the user to retry verification Verification timeout or link expires <ol style="list-style-type: none"> 1. User request for a new link/code
Exceptions:	None
Includes:	Submit Review and Rating
Special Requirements:	None
Assumptions:	None
Notes and Issues:	None