**Use Cases**

**for**

House Buying Guide

**Version 3.0 approved**

**Prepared by Corliss Lim**

**Meatballs**

**28/08/2020**

**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Duan Kai | 110820 | Reducing number of use cases | 2.0 |
| Corliss | 151020 | Added use case to update database | 3.0 |

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| Use Case ID: | 1 | | |
| Use Case Name: | Search historical data | | |
| Created By: | Duan Kai | Last Updated By: | Duan Kai |
| Date Created: | 28082020 | Date Last Updated: | 10092020 |

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| --- | --- |
| Actor: | **User** |
| Description: | Retrieve resale/private sale data according to user input parameters (location, property type, floor level, tenure, land area, price range (total), and price range ($psm), sale type, project name), with parameters displayed according to user’s intended purpose |
| Preconditions: | User inputs at least one search parameter among the six |
| Postconditions: | 1. System displays private houses sold according to search parameters 2. System displays average price of houses 3. System displays quarterly moving average price of houses sold over a three year period if price range is not input by user |
| Priority: | Highest |
| Frequency of Use: | 1000 times a week |
| Flow of Events: | 1. User selects option to *search historical data*, and may select to search as a buyer or seller 2. If buyer is selected, System displays parameters of location, property type, sale type, land area, floor range and price range(total). 3. If seller is selected, System displays parameters of location, property type, project name, land area, floor range and tenure. 4. System requests the input of at least one parameter to filter historical data 5. **User** enters at least one search parameter to filter historical data 6. System searches through the **Server database** for historical data matching input criteria 7. If price range is not given as input criteria, system calculates average price of all houses matching search criteria and displays it to **User** 8. If price range is not given as input criteria, system displays a quarterly moving average graph price graph of houses that match the search criteria over the last three years to **User** 9. System displays search results to **User** in order of closest match to search criteria, with the closest match highlighted |
| Alternative Flows: | 1.AC.S4: If System cannot find search criteria selected in database   1. System prompts user with an error message, and prompts user to enter another set of parameters 2. System returns to step 2 |
| Exceptions: | 1.EX.S4: If **Server database** is inaccessible or empty   1. System prompts user with an error message “server offline” 2. System returns **User** to the homepage |
| Includes: |  |
| Special Requirements: | 1. **User** may further filter search results by refining previous search criteria through returning to step 2/3 from step 8 |
| Assumptions: | **User** uses English |
| Notes and Issues: | N.A. |

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| Use Case ID: | 2 | | |
| Use Case Name: | Request financing guide | | |
| Created By: | Corliss | Last Updated By: | Duan Kai |
| Date Created: | 28082020 | Date Last Updated: | 10092020 |

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| Actor: | **User** |
| Description: | System suggests a financing plan based on user input parameters (price of housing, current available funds (downpayment), desired monthly repayment, desired repayment duration) |
| Preconditions: | N.A. |
| Postconditions: | 1. System displays financial guide according to user input parameters |
| Priority: | Medium |
| Frequency of Use: | 500 times a week |
| Flow of Events: | 1. **User** selects option to *request financing guide* 2. System requests users to fill in a form on personal details 3. User inputs information of residency, monthly fixed income, monthly variable income, cash towards down payment, CPF ordinary account, property type, repayment duration. 4. System calculates and displays to User the maximum affordable house price. |
| Alternative Flows: | 2.AC.S3: User does not enter all information   1. System prompts user with error message “insufficient information for calculation” 2. System returns to step 3 |
| Exceptions: | 2.EX.S4: If **Server database** is inaccessible or empty   1. System displays error message “server offline” 2. System returns **User** to the homepage |
| Includes: |  |
| Special Requirements: | N.A. |
| Assumptions: | **User** uses English |
| Notes and Issues: | N.A. |

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| Use Case ID: | 3 | | |
| Use Case Name: | Update database | | |
| Created By: | Corliss | Last Updated By: | - |
| Date Created: | 15102020 | Date Last Updated: | - |

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| --- | --- |
| Actor: | **User** |
| Description: | System makes a request to **API** and updates database with data returned by the **API** |
| Preconditions: | N.A. |
| Postconditions: | 1. SQL database is successfully updated with **API** data |
| Priority: | Low |
| Frequency of Use: | 1 time per month |
| Flow of Events: | 1. System makes a request to the **API** on the 15th of every month 2. The system updates the database with data returned by the **API** |
| Alternative Flows: | N.A. |
| Exceptions: | 3.EX.S42: If **API** is unavailable   1. System displays error message “API inaccessible” 2. System attempts steps 1-2 again |
| Includes: | N.A. |
| Special Requirements: | N.A. |
| Assumptions: | N.A. |
| Notes and Issues: | N.A. |