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| Use Case: | Simple House Search |
| ID: | 101 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Perform a quick search with limited parameters. |
| Primary Actor: | User |
| Supporting Actors: | Zillow API, Google Maps API |
| Stakeholders: | Admins, Users |
| Generalization: |  |
| Include: | Display Homes |
| Extend: |  |
| Precondition: | User knows required parameters. |
| Trigger: | User clicks search button. |
| Normal Flow: | 1. The User inputs required parameters. 2. The User clicks search button. 3. Makes API call with specified parameters. 4. Receives list of houses from Zillow API. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: | 1A. Simple Search parameters are filled from saved default parameters.   1. User verifies default search parameters. 2. Returns to step 2 of normal flow.   2A. Required parameters are not given, “field required” prompt is shown.   1. Returns to step 1 of normal flow. |
| Post-Condition: | The list of houses is passed to the Display Homes use case. |
| Open Issues: |  |

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| Use Case: | Advanced House Search |
| ID: | 102 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Perform a search with more specific parameters than a simple search. |
| Primary Actor: | User |
| Supporting Actors: |  |
| Stakeholders: |  |
| Generalization: | Simple Search |
| Include: | Display Homes |
| Extend: |  |
| Precondition: | User knows required parameters. |
| Trigger: | User clicks search button. |
| Normal Flow: | 1. User selects advanced search. 2. User inputs required parameters and any optional parameters. 3. User clicks search button. 4. Makes API call with specified parameters. 5. Receives list of houses from Zillow API. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: | 2A. Advanced Search parameters are filled from saved default parameters.   1. Returns to step 2 of normal flow.   3A. Required parameters are not given, “field required” prompt is shown.   1. Returns to step 2 of normal flow. |
| Post-Condition: | The list of houses is passed to the Display Homes use case. |
| Open Issues: |  |

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| Use Case: | Display Homes |
| ID: | 201 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Displaying results of a search by specified criteria. |
| Primary Actor: | User |
| Supporting Actors: |  |
| Stakeholders: |  |
| Generalization: |  |
| Include: |  |
| Extend: | Organize Housing List |
| Precondition: | A valid search has been initiated. |
| Trigger: | The API returns a housing list. |
| Normal Flow: | 1. The set of listings are retrieved from API call and loaded into a list of House objects. 2. Commuting cost for each house is calculated iteratively. 3. Estimated total monthly cost is calculated iteratively from available insurance, tax, mortgage and commuting cost estimates for each house. 4. The listings are sorted and filtered in the list based on the specified parameters. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: | 1E. The house list is empty.   1. Display “no results found” message. 2. End normal flow.   3A. If insurance, tax or mortgage estimates are unavailable for a given house.   1. Create a set of parameters that will capture houses similar to the one in question ( +/- 10% ). 2. Call the Advanced House Search use case with approximating parameters, i.e. location, square footage, lot size, number of bedrooms. 3. Find missing estimate based on an average of the estimates from other similar houses.   4E. No house listings meet the specified criteria.   1. Displays “no listings found” message. 2. Ends normal flow.   4A. User has specified no sorting or filter parameters.   1. Sort Housing List use case defaults to sorting by listing price. 2. List remains unfiltered. 3. Return to step 5 of normal flow.   4B. The User executes the Sort Housing List use case.   1. User selects sorting parameter from a drop-down list. 2. List is sorted based on specified parameter. 3. Return to step 5 of normal flow.   4C. User executes the Filter Housing List use case.   1. User selects filter parameter(s) from a collection of checkboxes. 2. User inputs any necessary data into filter fields (i.e. range, minimum, maximum). 3. List is filtered based on specified parameters. 4. Return to step 5 of normal flow. |
| Post-Condition: | Displays the list of homes on the webpage. |
| Open Issues: |  |

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| Use Case: | Organize Housing List |
| ID: | 202 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Sort list based on the parameter selected within the “Sort” drop-down box. |
| Primary Actor: | User |
| Supporting Actors: |  |
| Stakeholders: | Admins, Users |
| Generalization: | Sort Housing List, Filter Housing List |
| Include: |  |
| Extend: |  |
| Precondition: | A set of results is already displayed. |
| Trigger: | User activates the Sort Housing List or Filter Housing List use case. |
| Normal Flow: | 1. Allows user to organize the housing list by sorting or filtering. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: |  |
| Post-Condition: | The organized list of houses is returned to the Display Homes use case. |
| Open Issues: |  |

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| Use Case: | Filter Housing List |
| ID: | 203 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Filters list based on further parameters specified on the results page. |
| Primary Actor: | User |
| Supporting Actors: |  |
| Stakeholders: | Admins, Users |
| Generalization: |  |
| Include: |  |
| Extend: |  |
| Precondition: | A set of results is already displayed. |
| Trigger: | User selects a filter and hits the “Apply” button. |
| Normal Flow: | 1. User selects desired filters by clicking their respective checkboxes. 2. User defines the parameters for selected filters. 3. User clicks the “Apply” button. 4. Filter the list based on selected filter conditions and parameters. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: | 4A. Parameters are not given for some or all selected filters.   1. Runs filter only with selected and defined parameters.   4E. No filters are selected.   1. Ends normal flow, no change takes place. |
| Post-Condition: | The filtered list of houses is returned to the Organize Housing List use case. |
| Open Issues: |  |

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| Use Case: | Sort Housing List |
| ID: | 204 |
| Scope: | House Hustler |
| Priority: | High |
| Summary: | Sort list based on the parameter selected within the “Sort” drop-down box. |
| Primary Actor: | User |
| Supporting Actors: |  |
| Stakeholders: | Admins, Users |
| Generalization: |  |
| Include: |  |
| Extend: |  |
| Precondition: | A set of results is already displayed. |
| Trigger: | User selects sorting parameter from a drop-down list. |
| Normal Flow: | 1. User selects a sorting parameter from a drop-down list. 2. The housing list is sorted by selected parameter. |
| Sub Flows: |  |
| Alternate Flow/ Exceptions: | 1E. Sorting parameter cannot be found within any of the house listings.   1. Ends normal flow, no change takes place.   2A. Sorting parameter is missing from some of the house listings.   1. Sort listings that have specified sorting parameter, sending them to the top of the list. |
| Post-Condition: | The sorted list of houses is returned to the Organize Housing List use case. |
| Open Issues: |  |