**Use Case**: View Listing

**Iteration**: E2 **Date**: Sept 15, 2019

**Priority:** High **Version: 3**

**Description:** A Customer or Potential customer browses through the various listings of properties. Should he/she locate a listing that interests him/her, an agent may be contacted for more information or to book a showing appointment.

**Actor(s)**: Potential Customer / Customer

**Typical Course of Events:**

1. This use case begins when a potential customer enters the real estate site with the intention to view property listings
2. the potential customer enters search criteria such as a price range, geographical area (province and city), desired number of beds, desired number of baths and the view order (ascending or descending by price)
   1. **System Response:** all matching listingsdisplay in brief view… the results being summarized in the order requested with a maximum of 10 listings displaying at one time. Each brief listing will display a thumbnail of the main image, as well as the price, square footage and listing agent name.
3. the potential customer chooses a particular listing to view for more details
   1. **System Response:** a larger view of the main image of the requested property displays, as do any other available images that were provided (as thumbnails), all the pertinent listing details such as listing id, number of beds, number of baths, area of the city (West End, North End, etc), summary of property features, square footage, price, listing agent and his/her public contact information (first name, last name, email, cell phone, and office phone number)
4. the potential customer decides to speak to the agent about this listing by email (clicking on the email link) or by phone using the phone number provided.

**Alternative Course of Events:**

Line 2: there are no results returned for the given search criteria. Indicate the problem and prompt the customer to try again

Line 2: invalid or incomplete search criteria were provided. Indicate the error and prompt the user to correct the problem

Line 3: the potential customer decides to cease searching for property and the use case ends

Line 4: the potential customer decides to not contact the agent about the listing at this time

Line 4: a potential customer decides to book a showing appointment for the listing that is of interest. He/she will first need to become a customer by having his/her personal information recorded (See Create Customer Use Case) prior to an agency staff member implementing the Book Showing use case.

Line 4: a customer decides to book a showing appointment for the listing that is of interest. He/she will contact an agency staff member who must implement the Book Showing use case.

**Use Case**: Save Showing

**Iteration**: E2 **Date**: Sept 15, 2019

**Priority:** High

**Version: 3**

**Description/Overview:** A showing is an appointment for a customer to view a listing with a particular agent at a given date and period of time. The agency staff will enter new showing details into the system, and update changes to property showings as required.

**Actors**: Agency Staff Member

**Precondition:** Agency Staff Member must be logged in to the system and authorized

**Section: Main**

**Typical Course of Events**

1. This use case begins when an agency staff member chooses to save property showing information \***014, \*015**
   1. To book a new showing see section *Book Showing*
   2. To update showing details for an existing showing see section *Update Showing*
2. the agency staff member indicates that the entry is complete
   1. **System Response:** If no scheduling conflicts exist**,** a message confirms that the showing information has been successfully entered

**Alternative Course of Events**

Line 2: scheduling conflict detected. Either the agent is already showing another listing at that date and time, or the listing is being shown by another agent at that date and time. The system does not permit the save. The issue is displayed, and the user is prompted to retry.

**Section: Book Showing**

1. the agency staff member retrieves the customer that wants to view the listing (from the pool of existing customers)
2. the agency staff member enters the information pertinent to the showing including the date, start and end time of the showing, the appropriate agent , and any comments that may be of later use \***016**

**Alternative Course of Events**

Line 1: an agent was not selected for the showing. A showing appointment cannot be booked without an agent selected. \***002**

Line 1: the customer is not an existing customer – no showing is booked until the Create Customer use case is implemented.

Line 2: required data is missing or invalid (missing or invalid date, start or end time, missing which listing, missing a customer). Indicate the error, and prompt for retry

**Section: Update Showing**

1. the agency staff member performs a search using criteria such as date and/or agent
   * **System Response:** one or more showings matching the search criteria may display.
2. the agency staff member selects the correct showing that matches the desired criteria

* **System Response:** the showing details display

1. the agency staff member changes the information pertinent to the showing such as the agent, date, start or end time, the listing to be shown, the customer attending the showing, and any comments that may be of later use **\*002**

**Alternative Course of Events**

Line 1: invalid or missing search criteria provided. Indicate error and prompt for retry

Line 1: no showings to display that match the criteria provided. Indicate the problem and prompt for retry

Line 3: required data is missing or invalid (missing or invalid date and time, missing which listing, missing customer, missing agent**\*002**). Indicate error and prompt for retry

**Business Rule Applications**

\*002 – Agent Required

\*014 – Showing Appointment Authority

\*015 – Showing Appointment Travel Time

\*016 – Current Agent Booking Showing

**Use Case**: Upload Image

**Iteration #**: E2 **Date**: Sept 27, 2019

**Priority:** Medium **Version: 3**

**Description:** A staff member can upload appropriate images to the website such as listing images or agent photos. In addition to the physical image files being saved to the designated folder, metadata about each image will also be stored.

**Actor(s)**: Staff Member

Pre-Condition: Staff Member must already be logged in to the system

**Typical Course of Events:**

The use case begins when a staff member decides to upload an image to the web server.

1. The Staff Member enters the upload area of the website.
   1. **System Response**: the page contents display
2. The Staff Member browses for the image desired and indicates the desire to upload it to the web site \***012, \*013**
   1. **System Response**: the physical file is checked against file type and size restrictions, and it passes and is saved in the tempImages folder of the website.
   2. **System Response**: the metadata for each image such as: a unique id, the final file path and name, file description, alternative text, upload date and time, and staff member id is saved as is a flag that indicates the image has not yet been approved.
   3. **System Response**: a confirmation message indicates the file was uploaded successfully

**Alternative Courses of Events**

Line 2: The desired file is not an image of an approved type. An error message displays and the file is not uploaded nor is the metadata saved.

Line 2: The desired file is not within the file size guidelines. An appropriate error message displays and the image is not uploaded nor is the metadata saved.

Line 2 – The wrong image is saved. The staff member will have to implement the manage image data use case to modify or delete the image.

Line 2 – the image name already exists, allow the upload to take place but append a unique number to the image name of the physical file and ensure the metadata uses the re-factored name.

**Business Rule Applications**

012 – Image Security Policy

013 – Image Upload and Metadata

017 –Upload Authorization