### Manual Test Cases for CRUD Operations for Pet Owners

| Test Case ID | Test Case Description | Preconditions | Test Steps | Expected Result |
| --- | --- | --- | --- | --- |
| TC\_001 | Create Pet Owner - Happy Path | Application is running | 1. Navigate to the "OWNERS" menu and select "REGISTER".  2. Fill in all required fields (e.g., first name, last name, address, city, telephone).  3. Click the "Submit" button. | New pet owner is successfully created and listed in the "OWNERS" page. |
| TC\_002 | Create Pet Owner - Sad Path (Validation) | Application is running | 1. Navigate to the "OWNERS" menu and select "REGISTER".  2. Leave one or more required fields blank.  3. Click the "Submit" button. | Validation error messages are displayed for the missing fields. |
| TC\_003 | Create Pet Owner - Edge Case | Application is running | 1. Navigate to the "OWNERS" menu and select "REGISTER".  2. Enter special characters or lengthy data in fields (e.g., first name, last name, address).  3. Click the "Submit" button. | System successfully handles special characters or lengthy data without errors. |
| TC\_004 | Retrieve Pet Owner - Happy Path | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name to view their details. | Details of the selected pet owner are displayed accurately. |
| TC\_005 | Retrieve Pet Owner - Sad Path (Non-existent) | No pet owners exist | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Attempt to search for a non-existent pet owner by name or ID, in the “Search Filter” text box. | System displays appropriate screen indicating that no owners are found. |
| TC\_006 | Update Pet Owner - Happy Path | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Edit Owner" button.  4. Modify the fields and click "Submit". | Pet owner's details are successfully updated and saved in the system. |
| TC\_007 | Update Pet Owner - Sad Path (Concurrency) | At least one pet owner exists, same record accessed | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Two users access the same pet owner's details.  3. User A updates the details and saves.  4. User B tries to update as well. | System detects concurrency issue and prompts user to reload the page or resolve conflicts. |
| TC\_008 | Delete Pet Owner - Expected to Fail | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Look for an option to delete the owner. | There is no option to delete a pet owner. This should be logged as a missing feature/bug. |

### Manual Test Cases for Create, Retrieve, and Update Pets

| Test Case ID | Test Case Description | Preconditions | Test Steps | Expected Result |
| --- | --- | --- | --- | --- |
| TC\_009 | Create Pet - Happy Path | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Add New Pet" button.  4. Fill in all required fields (e.g., name, birth date, type).  5. Click on the “Submit” button | New pet is successfully added and listed under the pet owner’s details. |
| TC\_010 | Create Pet - Sad Path (Validation) | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Add New Pet" button.  4. Leave one or more required fields blank.  5. Click on the “Submit” button | Validation error messages are displayed for the missing fields. |
| TC\_011 | Create Pet - Edge Case | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Add New Pet" button.  4. Enter special characters or lengthy data in fields (e.g., name, type).  5. Click on the “Submit” button | System successfully handles special characters or lengthy data without errors. |
| TC\_012 | Create Pet - Future Birthdate | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Add New Pet" button.  4. Enter a future birthdate for the pet.  5. Click on the “Submit” button | System allows or rejects future birthdate based on implemented validation rules. |
| TC\_013 | Create Pet - Historical Birthdate | At least one pet owner exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click the "Add New Pet" button.  4. Enter a historical birthdate (e.g., year 1538)  5. Click on the “Submit” button | System should reject unrealistic historical dates and prompt appropriate error message. |
| TC\_014 | Retrieve Pet - Happy Path | At least one pet exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click on a pet's name to view its details. | Details of the selected pet are displayed accurately. |
| TC\_015 | Update Pet – Format Exploit | At least one pet exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click on the "Edit Pet" button next to a pet's details.  4. Modify the “Name” field with a javascript injection (e.g. “<script>alert('Hi')</script>”)  5. Click on the "Submit" button. | System displays an appropriate validation message on the “Name” field. |
| TC\_016 | Update Pet - Happy Path | At least one pet exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click on the "Edit Pet" button next to a pet's details.  4. Modify the fields and click "Submit". | Pet's details are successfully updated and saved in the system. |
| TC\_017 | Update Pet - Sad Path (Concurrency) | At least one pet exists, same record accessed | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Two users access the same pet's details.  3. User A updates the details and saves.  4. User B tries to update as well. | System detects concurrency issue and prompts user to reload the page or resolve conflicts. |
| TC\_018 | Update Pet - Past Visit Date | At least one pet exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click on the "Add Visit" button next to a pet's details.  4. Enter a past visit date. 5. Click on “Add New Visit”. | System should reject dates that are unrealistic or prompt an appropriate message if visits to the past are not allowed. |
| TC\_019 | Update Pet – Distant Future Visit Date – Edge Case | At least one pet exists | 1. Navigate to the "OWNERS" menu and select "ALL".  2. Click on an existing pet owner's name.  3. Click on the "Add Visit" button next to a pet's details.  4. Enter a future visit date (e.g., year 3024) 5. Click on “Add New Visit”. | System allows future visit dates based on implemented rules. |