# Ecommerce Website Search Engine Ranking Mechanism Test Plan

Introduction

The search engine ranking mechanism for the ecommerce website is crucial for providing relevant search results to users.

It determines the order in which online stores appear based on various parameters.

This test plan outlines test cases to verify the correctness and effectiveness of the ranking mechanism.

## System Under Test (SUT)

- Ecommerce website search engine ranking mechanism (For example: https://www.canadadealsonline.com/)

## Test Objectives

1. Validate the correctness of the ranking algorithm.

2. Ensure that related search terms appear in the dropdown as expected.

3. Verify the prioritization of ranking parameters.

4. Assess performance and boundary conditions.

### Preconditions:

1. The e-commerce website is accessible and operational.

2. The user has a valid internet connection.

### Test Cases

#### Sanity Test

|  |  |  |  |
| --- | --- | --- | --- |
| Sanity Test Case | Test Steps | Expected Result | Status |
| 1. | Open the web browser and navigate to the e-commerce website https://www.canadadealsonline.com/. | Browser is started as expected link opened |  |
| 2. | Wait for the website to load completely. | Site is loaded |  |
| 3. | Locate the search box on the homepage | Search box exist and functional |  |
| 4. | Enter a valid search term related to products available on the website (e.g., "electronics"). | Word electronics added to search box |  |
| 5. | Wait for the dropdown with related search terms to appear. | Dropdown appeared |  |
| 6. | Verify that the dropdown displays related terms related to the entered search term. | Appeared suggested results to word electronics |  |
| 7. | Select one of the related terms from the dropdown by clicking on it. |  |  |
| 8. | Wait for the search results page to load. | Opened page with suggested results to word electronics |  |
| 9. | Verify that the search results are displayed. | Search results are displayed and suggested to word electronics |  |

### 1. Functional Tests

##### Positive Scenarios:

1.1 **Search Term Ranking**:

- Input a search term.

- Verify that related terms appear in the dropdown.

- Confirm that the order of related terms aligns with the ranking mechanism.

1.2 **Seniority Ranking**:

- Add a new online store.

- Verify that the new store's seniority affects its ranking.

1.3 **Keyword Ranking**:

- Add an online store with multiple keywords.

- Check if the store's ranking improves based on the number of keywords.

1.4 **Reference Ranking**:

- Create references (links) to an online store from other websites.

- Confirm that the store's ranking increases accordingly.

##### Negative Scenarios:

1.5 **Invalid Search Term:**

- Enter an invalid or non-existent search term.

- Ensure that no related terms appear in the dropdown.

1.6 **Non-Existent Online Store:**

- Search for a store that does not exist.

- Verify that no results are displayed.

### 2. Boundary Tests

2.1 **Maximum Keywords:**

- Add an online store with the maximum allowed keywords.

- Verify that the ranking reflects the keyword count.

2.2 **Minimum Seniority:**

- Create a new store with minimal seniority (1 day).

- Confirm that it ranks lower than older stores.

### 3. Performance Tests

3.1 **Large Dataset:**

- Populate the system with a large number of online stores.

- Measure the response time for search queries.

3.2 **High Traffic Load:**

- Simulate concurrent search requests.

- Monitor system performance under load.

### 4. Pairwise tests

Will be tested using a next table with parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Description | Points |  |
| Seniority | Each day of existence adds 1 point. The older the online store, the higher its ranking. | 1 point/day |  |
| Keywords | Each keyword contributes 5 points. The more keywords an online store has, the higher the ranking. | 5 points/keyword |  |
| References | Each external link to the online store adds 15 points. Links from other websites boost ranking. | 15 points/link |  |
| Priority | Ranking priority: 1. References, 2. Keywords, 3. Seniority. Parameters are weighted accordingly. | N/A |  |

4.1 Test Case for Seniority and Keywords:

**Scenario**: An online store has been in existence for 50 days and has 5 unique keywords associated with its products.

**Expected Result**: The online store should receive a ranking score of 55 points (50 points for keywords + 5 points for seniority).

4.2 Test Case for Keywords and References:

**Scenario**: Another online store has 8 unique keywords associated with its products and has received backlinks from two reputable websites.

**Expected Result**: The online store should receive a ranking score of 70 points (40 points for keywords + 30 points for references).

4.3 Test Case for References and Seniority:

**Scenario**: A well-established online store (seniority of 200 days) has received backlinks from five different websites.

**Expected Result**: The online store should receive a ranking score of 215 points (200 points for seniority + 15 points for references).

### 5. Compatibility and Localization

#### 5.1 Browser Compatibility:

- Test the ranking mechanism across different browsers (Chrome, Firefox, Edge).

#### 5.2 Localization:

- Verify that the ranking works correctly for different languages and locales.

### 6. GUI Tests

6.1 **Dropdown Appearance:**

- Check the visual appearance of the search dropdown.

- Ensure it aligns with design specifications.

6.2 **Dropdown Interaction:**

- Click on related terms in the dropdown.

- Confirm that they trigger relevant searches.

## Conclusion

This test plan covers part of available tests

Specification was not enough detailed:

It does not explain how a tester needs to recognize all rank changes/appearances.

These issues will disterupt to create comprehensive test plan and test the rank feature

So, using Black Box system, I can't see ability to test the task 1