STEAM API & UI AUOMATION TESTING

SOFTWARE TEST DESCRIPTION

Document Change History

Version Number	Date	Contributor	Description
V1.0	20.3.2024	Jameel Nassar	

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1 Introduction

This test approach document delineates the methodological strategies employed in the management of Steam API & UI testing.

1.1 Overview

Steam by Valve is a digital distribution platform primarily designed for video games, though it also offers a wide range of other software and multimedia content. Launched in 2003, Steam has become one of the largest and most popular platforms for purchasing, downloading, and playing games on PC, with millions of active users worldwide. Here's an overview of Steam's key features:

1. Digital Storefront: Steam serves as a storefront where users can browse and purchase a vast library of games, ranging from indie titles to major AAA releases. Users can filter games by genre, popularity, release date, and various other criteria to discover new titles.
2. Game Library Management: Once purchased, games are added to the user's digital library, where they can be downloaded and played at any time. Steam provides features for organizing and categorizing games, making it easy for users to navigate their collections.
3. Automatic Updates: Steam automatically updates games in the user's library, ensuring they are always up-to-date with the latest patches, bug fixes, and new content releases. This feature helps streamline the gaming experience and ensures players have access to the most current version of their games.
4. Community Features: Steam offers robust community features, including forums, user reviews, and discussion boards for each game. Users can share tips, strategies, and opinions, as well as connect with other players who share similar interests.
5. Steam Workshop: Many games on Steam support user-generated content through the Steam Workshop. This feature allows players to create and share mods, custom maps, and other user-generated content, enhancing the longevity and replayability of supported games.
6. Social Features: Steam includes social features such as friends lists, chat functionality, and group creation. Users can connect with friends, join gaming communities, and coordinate multiplayer sessions directly through the Steam platform.
7. SteamVR: SteamVR is a component of Steam that supports virtual reality (VR) gaming. It provides access to a wide range of VR games and experiences, as well as features for managing VR hardware and settings.
8. Steam Cloud: Steam Cloud allows users to synchronize their game saves, settings, and other data across multiple devices. This feature ensures that users can pick up their progress from any supported device without losing their in-game achievements or progress.
9. Sales and Discounts: Steam regularly hosts sales events, such as the Steam Summer Sale and Steam Winter Sale, where users can purchase games at discounted prices. These sales events are highly anticipated by the gaming community and often feature significant discounts on a wide variety of titles.

Overall, Steam offers a comprehensive suite of features designed to enhance the gaming experience for PC users, making it a central hub for discovering, purchasing, and playing games, as well as connecting with other gamers around the world.

1.1.1 Features overview

The Steam Website and API Test Plan defines the approach for unit, integration, system, regression, and Client Acceptance testing. The test scope encompasses:

- Testing of all functional, application performance, security, and use case requirements outlined in the Steam Website and API Use Case document.
- Evaluation of quality requirements and fit metrics specific to the Steam platform.
- End-to-end testing and validation of interfaces with all systems that interact with the Steam website and API.
- Functional testing of website features such as user authentication, game browsing, purchasing, and community interactions.
- Functional testing of API endpoints including app details retrieval, store search, reviews management, and currency conversions.
- Testing of the Wishlist feature, search pages, and game review section.

2 UI Test Tree

2.1 Functional tests:

2.1.1 Login Page

2.1.1.1 Valid Login

- Login with valid username and password
- Login using third-party integration

2.1.1.2 Invalid Login

- Login using nonexistent email
- Login using existing email and wrong password

2.1.1.3 Restore password

2.1.2 Registration Page

2.1.2.1 Valid Registration

2.1.2.2 Invalid Registration:

- Registration with already registered email
- Registration with already registered username
- Registration with invalid email
- Registration with invalid password
- Registration with invalid username

2.1.3 Review Section

- Filter by review date
- Filter by review playtime
- Filter by min play time
- Filter by max play time

- Filter by range
- Filter review type
- Positive review
- Negative review

2.1.4 Search Page

- Search using valid keywords
- Search using a valid product name
- Search using a valid category name
- Search using invalid keywords
- Search empty space

2.1.5 Sorting Functionality

- Sorting by price descending order
- Sorting by price increasing order

2.1.6 Filters Functionality

- Filter using price slider
- Filter by manufacturer
- Filter by Rating
- Filter by using product page specific filters.

2.1.7 Cart Page

- Add Game to cart
- Remove game from cart

2.1.8 Wishlist Page

- Add Game to Wishlist
- Remove game from Wishlist

2.2 Non-Functional tests:

2.2.1 Compatibility Different browsers

- compatible with Google Chrome
- compatible with Microsoft Edge
- compatible with Safari
- compatible with Mozilla Firefox

2.2.2 Localization and Globalization

- changing the Website's Language
- change game prices currency
- change games reviews languages

2.2.3 Recovery Testing

- Reload the page and check user is still connected
- Reload the page and selected part in pc section are saved

3 API Test Tree

3.1 Functional Tests

Functional tests validate the behavior of various endpoints provided by the Steam API. These tests cover functionalities such as retrieving app details, searching the store, managing reviews, and handling currency conversions.

3.1.1 Search API:

- Search for game
- Auto completion functionality
- Empty search
- Sorting price by ascending order
- Sorting price by descending order

3.1.2 App details API

- Get game details

3.1.3 App Review API

- Change default review numbers
- Filter by playtime
    - Filter by max playtime
    - Filter by min playtime
    - Filter by playtime in range

3.2 Non-Functional Tests

Non-functional tests focus on aspects such as performance, compatibility, localization, globalization, and recovery of the Steam API.

3.2.1 App details API

- Get game details
- Change app price currency
    - ILS
    - USD
    - GBP

3.2.2 App Review API

- Change default review numbers
- Filter By review language
    - English
    - Russian
- Filter by playtime
    - Filter by max playtime
    - Filter by min playtime
    - Filter by playtime in range

3.3 Entry and Exit Criteria

3.3.1 Entry Criteria

- Passing the sanity tests
- The requirement document should be available.
- Complete understanding of the application flow is required.
- The Test Plan Document should be ready.
- Test case/scripts are available.
- Test environment is ready.

3.3.2 Exit Criteria

- No critical test fail
- No high test fail
- No more than 3 medium test fail
- No more than 5 Low test fail
- The software meets all functional and non-functional requirements
- Approval from all relevant Product Manager has been obtained
- All defects and issues identified during testing have been resolved
- Documentation is complete and up-to-date

3.4 Test Environments

During the testing phase of the PC Part Picker website, multiple test environments are utilized to facilitate thorough evaluation of the system across various configurations. These environments are meticulously set up to mimic the production environment as closely as possible while providing the necessary flexibility for testing activities. The following test environments are utilized:

- CI/CD Environment: GitHub Actions
- Report tool: Allure reports.
- Bug Reporting Tool: Jira
- Operating System: Windows 11 OS Build 22631.3085
- Browser 1: Google Chrome Version 121.0.6167.140
- Browser 2: Firefox Version V 122.0
- Browser 3: Microsoft Edge Version 121.0.2277.98
- Python 3.12
- Selenium 4.18.1
- Selenium server 4.18.1

4 Test Cases

- Test cases are attached in Test_Cases.csv

5 Time Table

Task	Start Date	End Date	Comments
STR Document	18.3.2024	20.3.2024	
STP Document	20.3.2024	26.3.2024	
STR Document	27.3.2024	28.3.2024	