# TEST PLAN

**iBnech.net**

<https://ibench.net>

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5. **INTRODUCTION**

The Test Plan has been created to facilitate communication within the team members. This document describes approaches and methodologies that will apply to the modules: “Main page”, “Sign Up”, “Log In”, “Playlist” of the website <https://ibench.net>.

This document has clearly identified sub-tasks of website's module testing, types of testing, what devices, environments and tools to be used. It includes test cases with expected and actual results, schedule and executing estimated time each of sub-tasks and entire project.

# SCOPE

The document mainly targets the GUI, Exploratory, Functional Positive, Negative and Ad-hoc testing of User’s Personal Account Address Menu, Performance and Security testing of the website.

# SUB-TASKS

* 1. **WEBSITE MANUAL TEST**

Execute manual testing for the User’s Personal Account Address Menu based on the next types of testing:

* GUI;
* Exploratory testing;
* Functional Positive testing:
* Functional Negative testing;
* Functional Ad-hoc testing.

# GUI Testing:

GUI testing includes testing the UI part. It covers look and feel, error messages, spelling mistakes, GUI guideline violations.

# Exploratory Testing:

Exploratory testing will includes a type of software testing where Test cases are not created in advance but QA check system on the fly.

# Functional Positive testing:

Checks whether an application behaves as expected with positive inputs.

# Functional Negative testing:

Invalid data is inserted to compare the output against the given input.

# Functional AD-hoc testing:

Includes an informal testing type with an aim to break the system.

# Environment Support:

* Laptop
* OS: Windows 11/ 64
* Browsers (latest versions): Google Chrome, Firefox Mozilla, Microsoft Edge

# The following test cases are covers these manual tests:

|  |  |  |
| --- | --- | --- |
| **TC** | **Test Action** | **Expected Results** |
| **POSITIVE TESTS** | | |
| 01 | The site must be accessible at the following URL: h ttps://open.spotify.com/ | Https protocol is active |
| 02 | Verify that the user can sign up into the site using a correct mail and password | The user successfully registered on the sites |
| 03 | Verify that the user can log into the site using an existing mail and password | The user successfully entered on the sites |
| 04 | Validate that menu links lead to the right pages (“Home”, “Search”, “Your Library”,  “Liked Songs”) | Each menu item is processed according to its name and URL |
| 05 | Verify that the user can find a specific query (artist, song, playlist, album) | Valid request found |
| 06 | Check that the user can create new “Playlist” | New playlist successfully created |
| 07 | Check that the user can change name of “Playlist” | Playlist name changed successfully |
| 08 | Check that the user can add item to a user's playlist | Item added to playlist successfully |
| 09 | Check that the user can remove item from a user's playlist. | Item deleted to playlist successfully |
| 10 | Check that the user can follow an existing playlist | Playlist successfully added in “Your Library” |
| 11 | Check that the user can unfollow an existing playlist | Playlist successfully deleted from “Your Library” |
| **NEGATIVE TESTS** | | |
| 12 | Verify that the Log in with invalid email address is not accepted | Got the error message: “Incorrect username or password.” |

|  |  |  |
| --- | --- | --- |
| 13 | Verify that the Log in with invalid password is not accepted | Got the error message: “Incorrect username or password.” |
| 14 | Verify that the Log in with empty email field is not accepted | Got the error message: “Incorrect username or password.” |
| 15 | Verify that the Log in with empty password field is not accepted | Got the error message: “Incorrect username or password.” |
| **AD HOC TESTS** | | |
| 16 | Verify that the registration with invalid (ad hoc) email address (test@mail.comtest@mail.com) is not  accepted | Got the error message: “Incorrect username or password.” |

**Testing Tools used:**

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | Microsoft Word, Microsoft Excel, JIRA |
| Test case tracking | Microsoft Word, Microsoft Excel, JIRA |
| Test case execution | Manual |
| Test case management | Microsoft Excel, JIRA |
| Test reporting | Microsoft Excel, JIRA |

* 1. **WEBSITE AUTOMATION TEST**

Automation tests are creates by using Selenium WebDriver Python UnitTest frameworks on the basis of Functional manual test cases and executes to check functionality of User’s Personal Account Address Menu.

# Environment Support:

* Laptop
* OS: Windows 11/ 64
* Browsers (latest versions): Google Chrome, Firefox Mozilla, Microsoft Edge

# The following test cases are covers automation tests:

|  |  |  |
| --- | --- | --- |
| **TC** | **Test Action** | **Expected Results** |
| **POSITIVE TESTS** | | |
| 01 | Verify that the user can log into the site using an existing mail and password | The user successfully entered on the sites |
| 02 | Verify that the user can find a specific query (artist, song, playlist, album) | Valid request found |
| 03 | Check that the user can create new “Playlist” | New playlist successfully created |
| 04 | Check that the user can change name of “Playlist” | Playlist name changed successfully |

|  |  |  |
| --- | --- | --- |
| 05 | Check that the user can add item to a user's playlist | Item added to playlist successfully |
| 06 | Check that the user can remove item from a user's playlist. | Item deleted to playlist successfully |
| 07 | Check that the user can follow an existing playlist | Playlist successfully added in “Your Library” |
| 08 | Check that the user can unfollow an existing playlist | Playlist successfully deleted from “Your Library” |
| **NEGATIVE TESTS** | | |
| 09 | Verify that the Log in with invalid email address is not accepted | Got the error message: “Incorrect username or password.” |
| 10 | Verify that the Log in with invalid password is not accepted | Got the error message: “Incorrect username or password.” |
| 11 | Verify that the Log in with empty email field is not accepted | Got the error message: “Incorrect username or password.” |
| 12 | Verify that the Log in with empty password field is not accepted | Got the error message: “Incorrect username or password.” |
| **AD HOC TESTS** | | |
| 13 | Verify that the registration with invalid (ad hoc) email address (test@mail.comtest@mail.com) is not  accepted | Got the error message: “Incorrect username or password.” |

**Note: For ease of perception, the tests are numbered starting from the first, separately from manual tests.**

**Testing Tools used:**

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | PyCharm, Selenium |
| Test case tracking | PyCharm, Browsers |
| Test case execution | Automation |
| Test case management | PyCharm |
| Test reporting | HTML reports, Allure reports |

**Additional automation tests execute on the cloud platform “Browserstack” :**

* OS: Windows 10 (Browsers (latest versions): Google Chrome, , Firefox Mozilla, Microsoft Edge)
* OS: macOS Big Sur (Browsers: Safari, version 14.1)

# Testing Tools used:

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | PyCharm, Selenium |
| Test case tracking | Browserstack.com |
| Test case execution | Automation |
| Test case management | PyCharm |
| Test reporting | Video files (mp4) |

Test results are the same as on local device.

# WEBSITE API TEST

|  |  |  |
| --- | --- | --- |
| **TC** | **Test Action** | **Expected Results** |
| **POSITIVE TESTS** | | |
| 19 | POST. Create new Playlist | Status: 201 Created |
| 20 | PUT. Change Playlist Details | Status: 200 OK |
| 21 | POST. Add Items to Playlist | Status: 201 Created |
| 22 | DEL. Remove Playlist Items | Status: 200 OK |
| 23 | PUT. Follow Playlist | Status: 200 OK |
| 24 | DEL. Unfollow Playlist | Status: 200 OK |
| 25 | GET. Get Specific User's Playlists | Status: 200 OK |
| **NEGATIVE TESTS** | | |
| 26.1 | POST. Create playlist with invalid name format | “Error parsing JSON.” Status: 400 Bad Request |
| 26.2 | POST. Create playlist with invalid public status format | "Error parsing JSON ." Status: 400 Bad Request |
| 27.1 | PUT. Change Playlist Details in invalid name format | “Error parsing JSON.” Status: 400 Bad Request |
| 27.2 | PUT. Change playlist details in invalid description format | “Error parsing JSON.” Status: 400 Bad Request |
| 27.3 | PUT. Change playlist details in invalid public status format | “Boolean value must be either true or false” Status: 400 Bad Request |
| 28.1 | POST. Add items to playlist with invalid data in body | “Error parsing JSON.” Status: 400 Bad Request |
| 28.2 | POST. Add items to playlist with invalid uris (resource identifier) | “Invalid track uri: spotify:track:(invalid data).” Status: 400 Bad Request |
| 29.1 | DEL. Delete Playlist Items with invalid uris | “JSON body contains an invalid track uri: spotify:track:(invalid data).”  Status: 400 Bad Request |
| 29.2 | DEL. Delete Playlist Items with invalid data in body | “JSON body doesn't conform to specification” Status: 400 Bad Request |
| 29.3 | DEL. Delete Playlist Items with empty data in body | “JSON body contains a track without URI.” Status: 400 Bad Request |
| 30.1 | PUT. Follow Playlist with empty data in body | “Insufficient scope” Status: 403 Forbidden |
| 30.2 | PUT. Follow Playlist with invalid public data | “JSON body does not adhere to the defined endpoint parameters”  Status: 400 Bad Request |

API tests execute to determine whether the APIs that are developed meet expectations when it comes to functionality, performance, reliability and security for website.

# Environment Support:

* Laptop
* OS: Windows 11/ 64
* Browsers (latest versions): Google Chrome (DevTools)

# The following test cases are covers API tests:

(There are main tests results in the table)

# Testing Tools used:

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | Postman, Chrome DevTools |
| Test case tracking | Postman |
| Test case execution | Automation |
| Test case management | Postman |
| Test reporting | Newman |

* 1. **WEBSITE AUTOMATION PPERFORMANCE TEST**

Performance automation tests execute for measures the speed, responsiveness and stability of the tested website. Tests execute in incognito environments.

After testing reports were generate.

# Testing Tools used:

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | Google Lighthouse, GTMetrix, Webpagetest, BrowserStack-  SpeedLab |
| Test case tracking | Google Lighthouse, GTMetrix, Webpagetest BrowserStack-  SpeedLab |
| Test case execution | Automation |
| Test case management |  |
| Test reporting | txt -, html -, pdf - files |

* 1. **WEBSITE AUTOMATION SECURITY TEST**

Security automation tests execute to reveal potential flaws or weaknesses of software and website. Testing focuses on whether the application is designed and configured correctly.

Tests execute in incognito environments. After testing reports were generate.

# Testing Tools used:

|  |  |
| --- | --- |
| **Process** | **Tools** |
| Test case creation | Mozilla Observatory, Snyk |
| Test case tracking | Mozilla Observatory, Snyk |
| Test case execution | Automation |
| Test case management |  |
| Test reporting | txt -, html -, pdf - files |

1. **TESTS SCHEDULE AND ESTIMATED TIME**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sub-Task Name** | **Start** | **Est. time (hours)** | **Finish** |
| Manual Testing |  |  |  |
| Automation Testing |  |  |  |
| API Testing |  |  |  |
| Performance testing |  |  |  |
| Security testing |  |  |  |

**Test Execution**

QA -

Test phase - Status -

APPROVALS:

|  |  |  |
| --- | --- | --- |
|  | Project Manager | QA Lead |
|  |  |  |
| Signature |  |  |