

Testing Instagram

Capestone Project



Meta company

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# Chapter One: Test Plan

## **Introduction**

### **1.1 Purpose**

This test plan describes the testing approach and overall framework that will apply to Instagram Version 0.0.86 –instagram.com. It includes the scope of testing, objective, testing types, time estimation, pass/fail criteria, environment, and exit criteria. This document offers a comprehensive delineation of the test deliverables, outlining both the items included within the scope and those designated as outside the scope

### **1.2 About the project**

Instagram is a free website where you can upload and share posts with followers. They can also view, comment, and like posts shared by their friends on Instagram. Anyone who is aged 13 and over can create an account by registering an email address and selecting a username. In addition, it can let you make conversations with the followers, share reels and posts, post a story with them, and make voice calls and video calls. [1]

## **Scope of testing**

The scope of testing describes the features that will be tested, and will not be tested. [2]

**The interfaces that will be tested (In-scope):**

Table 1‑1 In-scope Features

|  |  |  |  |
| --- | --- | --- | --- |
| Interface | Description | Risk | Time Estimation ( In hours) |
| Sign up page | Signup to the website by email or mobile number, Full name, Username, and password. | High | Four hours |
| Log in page | The user is log in to his account by username or email or phone number and password, also he can reset the password if he forgot it. | High | Two hours |
| Home page | The user can watch the stories of their followers, watch the posts, and he can move to his profile page. From the home page, the user can move to the search, the reels, the messages, the notifications, the explore, and he can change the website’s language to the appropriate one for him. | High | One hour |
| Profile page | The user can see his posts, reels, and highlights, which the highlight appear in a new section on your profile below the user’s bio [3], also he can add and delete the highlight. The user can see what posts and reels have been saved, change his profile picture, and he can open the home page by the logo. | High | Two hours |
| Story | The user can add a story. | High | ½ an hour |
| Messages page | The user can see the messages, create new message (the message can be emoji, image, and text), and send it to the followers. | Medium | One hour |
| Search | The user can see the history of his searches, search for the user who is following and isn’t following, and clear the history. | Medium | One hour |
| Reels | The user can watch the reels and react to them by liking and commenting, also he can delete the comment, send it direct, and save it. | High | One hour and a half |
| Explore | The user can see the posts and reels, he can open the post and reel and can move to others by the next arrow and previous arrow. | Low | One hour |
| Notifications | The user can see who has followed him. | Medium | One hour |
| More list | The user can choose what can make him comfortable with the website’s dark or light appearance, see his collections of saved posts and reels, create a new collection, add to it the saved posts or reels, and see the activities of his account. | Low | Two hours and a half |
| Create | The user can create a post by sharing a photo or multiple photos with location, and caption, edit them by using filters, he can know the count of the likes, and views, hide them, hide the comments, and he can save the photo in the draft. | High | Two hours |
| Log out | This feature is in the More list, but the user can’t log out of his account without it. | High | ½ an hour |

**The feature that will not be tested (Out-of-scope):**

* Website security and performance.
* Software Interface.
* Browsers: Safari, Microsoft Edge, and Opera.

## **Objective**

The objectives of the test are to verify that the functionality of Instagram version 0.0.86 works according to the specifications:

* Validate user registration and log in functionality.
* Verify the ability to post photos.
* Test the visibility of stories and reels.
* Validate notifications and alerts.
* Test Instagram on different web browsers, operating systems, and devices to ensure compatibility.
* Verify that all features and functionalities work as expected on different platforms.
* Ensure the application functions correctly in different languages and cultures.

## **Testing types**

### **4.1 Smoke Testing**

**Purpose**: The testing aims to ensure the website’s main features work as expected.

**Participants**: The tester.

**Methodology**: The tester verifies the Sign up by testing the email, or phone number field, the Username field, and the password field, which fields are mandatory by filling in the invalid and valid input and making the Boundary Value Analysis (BVA) technique on the phone number and password that should have six digits or more. The Full name field is optional and it has accepted any input. The tester tests the log in by entering invalid and valid inputs for username, phone number, email field, and password field. In addition, the tester tests the profile page by creating a post, changing the profile picture, logging out of the account, and adding to the story.

**4.2 NON-FUNCTIONAL TESTING**

**Purpose**: the purpose is to check the website’s characteristics.

**Participants**: The tester.

**Methodology**: The tester needs to ensure the website’s usability, and that it should be appropriate for all users and different cultures.

### **4.3 System-Integration Testing**

**Purpose**: System-integration testing lets the testers know if the systems link effectively.

**Participants**: The tester.

**Methodology**: The tester needs to sign up then, Instagram sent to the email that he filled in a confirmation code to let the user continue creating the account, it can be also by mobile number, but when the tester test resetting the password, the website sent to the email the confirmation code that let the user reset his password.

### **4.3 User Acceptance Testing (UAT)**

**Purpose**: This test aims to confirm that the system is ready for operational use.

**Participants**: The tester or the end-user.

**Methodology**: The tester uses the website, explores the features, and interacts with the website, during the User Acceptance Testing, the tester compares the system to its requirements.

### **4.4 Compatability Testing**

**Purpose**: The purpose is to ensure the software works across different environments.

**Participant**: The tester.

**Methodology**: The tester runs the website on different browsers and checks if it is working as expected.

## **Pass/Fail Criteria**

The pass/fail criteria are dependent on the testing types being performed. [3]

**Smoke Testing**

The pass/fail criteria of this testing are that the main features like Sign up, Log in, Create, change profile picture, and add story should work without any issues and all the test cases of the main features should be executed and passed.

**Non-Functional testing**

The pass/fail criteria for this testing is that the website should be easy to use for all types of human beings and can enjoy when they use it by selecting the appropriate language that let them interact and understand the website.

**System Integration testing**

The pass/fail criteria for this testing are that the integration should be efficient between Instagram and other websites because of the code confirmation sent to the emails and the phone numbers, if the code confirmation did not send to the email or sent incorrect code it may lead to failure because it is an essential feature.

**User Acceptance Testing (UAT)**

The pass/fail of this criteria is that each of the requirements is marked as ‘Not Accept’, once each requirement is implemented and the execution of its test case is successful, the status should be ‘Pass’ and marked ‘Accept’, and once the requirement is implemented and the execution of its test case is failed, the status should be ‘Fail’. The acceptance testing will be considered completed once the requirements and its test cases of high and medium priority are ‘Pass’ and ‘Accept’. In addition, the percentage of failed test cases should be under 20%.

**Compatibility testing**

The pass criteria for this testing is that the software system functions correctly and as intended across different browsers. In addition, the software system displays consistent and expected behavior across various web browsers and versions. The fail criteria for this testing are that the software experiences compatibility-related errors, or performance degradation in specific environments.

## **Environment**

Hardware:

* Dell-Laptop

System type: 64-bit.

Edition Windows: 10 Pro

Software:

* Firefox browser: (Latest).
* Google Chrome browser: (Latest).

## **Exit criteria**

* Verify if all test cases have been executed.
* Verify if all test types have been done.
* Verify if all defects and issues have been fixed.
* Verify if all high-risk features have been tested.

# Chapter Two: Test Cases and bug reports

# **Test Cases**

Test cases are the guideline for the testers to follow for testing, the test cases are in the file below.

[Test Cases-Firefox and Google Chrome](https://docs.google.com/spreadsheets/d/161WeHh0b-fJ0RcBZzjwPvOwZCZ5UEIdZ/edit#gid=990357120)

# **Bug Reports**

The bug reports have described the issue displayed during the testing and they help the developer fix it.

[Bug Reports-Firefox and Google Chrome](https://docs.google.com/spreadsheets/d/1qRC5WXaJqHseGXdvSSiW_R-JgvIXIO17IYj5X8hoA9E/edit#gid=1765032460)

# Chapter Three: Test summary report

**Project Overview**

Table 3‑1 Overview of the project

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Overview | | | | |
| Project Name | Testing Instagram | | | |
| Name of Product | Instagram website | | | |
| Product Description | The main goal of the testing is to verify the website’s quality and ensure that the website’s released without any defects. | | | |
| Project type | Testing/Verification | | |
| Project Duration | Start date | 04/05/2023 | End date | 21/05/2023 |

## **Objective**

The test summary report's primary goal is to give stakeholders a comprehensive overview of the testing outcomes and identified defects. By conveying the quality status, it enables relevant stakeholders to make informed decisions and take necessary corrective actions if needed. Furthermore, the report assists in determining the readiness of the software for deployment or shipment.

## **Statistics of the test cases**

**Test Cases for Firefox:**

Table 3-2 Statistics of Firefox test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases Planned | Test cases Executed | Pass test cases | Fail test cases |
| 156 | 156 | 134 | 22 |

**Test Cases for Google Chrome:**

Table 3-3 Statistics of Google Chrome test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases Planned | Test cases Executed | Pass test cases | Fail test cases |
| 156 | 156 | 136 | 20 |

## **Statistics of the bug reports**

**Priority Bugs and their Status for Firefox:**

Table 3-4 Statistics of Firefox priority bug reports

|  |  |  |  |
| --- | --- | --- | --- |
|  | High | Medium | Low |
| Opened | 10 | 2 | 7 |
| Closed | 2 | 1 | 0 |

**Severity Bugs and their Status for Firefox:**

Table 3-5 Statistics of Firefox severity bug reports

|  |  |  |  |
| --- | --- | --- | --- |
|  | High | Medium | Low |
| Opened | 16 | 2 | 1 |
| Closed | 3 | 0 | 0 |

**Priority Bugs and their Status for Google Chrome:**

Table 3-6 Statistics of Google Chrome priority bug reports

|  |  |  |  |
| --- | --- | --- | --- |
|  | High | Medium | Low |
| Opened | 9 | 2 | 8 |
| Closed | 0 | 1 | 0 |

**Severity Bugs and their Status for Google Chrome:**

Table 3-7 Statistics of Google Chrome severity bug reports

|  |  |  |  |
| --- | --- | --- | --- |
|  | High | Medium | Low |
| Opened | 16 | 2 | 1 |
| Closed | 1 | 0 | 0 |

Defects distribution – module-wise for Firefox

Table 3-8 Defects distribution – module-wise for Firefox

|  |  |  |  |
| --- | --- | --- | --- |
| Interface | Number of defects | Interface | Number of defects |
| Signup | 1 | Reels | 3 |
| Log in | 6 | Notifications | 1 |
| Home | 1 | More | 5 |
| Profile | 3 | Create | 1 |
| Story | 1 | **Total** | **22** |

Defects distribution – module-wise for Google Chrome

Table 3-9 Defects distribution – module-wise for Google Chrome

|  |  |  |  |
| --- | --- | --- | --- |
| Interface | Number of defects | Interface | Number of defects |
| Log in | 6 | Reels | 3 |
| Home | 1 | Notifications | 1 |
| Profile | 2 | More | 5 |
| Story | 1 | Create | 1 |
| **Total** | **20** | | |

## **Graph of Metrics**

Metrics in a test summary report serve several purposes and provide valuable insights into the testing process and the quality of the software being tested.[4]

**Graph for test cases-Firefox:**

Figure 4-1 Graph of Firefox test cases

**Graph for test cases-Google Chrome:**

Figure 4-2 Graph of Google Chrome test cases

**Graph priority Bugs and their Status for Firefox:**

Figure 4-3 Graph priority bugs for Firefox

**Graph severity Bugs and their Status for Firefox:**

Figure 4-4 Graph severity bugs for Firefox

**Graph priority Bugs and their Status for Google Chrome:**

Figure 4-4 Graph priority bugs for Google Chrome

**Graph severity Bugs and their Status for Google Chrome:**

Figure 4-5 Graph priority bugs for Google Chrome

Defects distribution – module-wise for Firefox

Figure 4-6 Defects distribution – module-wise for Firefox

Defects distribution – module-wise for Google Chrome

Figure 4-7 Defects distribution – module-wise for Google Chrome

# Chapter Four: Methodologies

The model that is used is Agile, this methodology focuses on response to changes rather than following the plan, the changes can be made at any time because of the flexibility in Agile.

A testing technique that will be implemented is Black box testing, which is test the website from the user’s perspective, it is focused on the input that goes into the website and the output that is produced, this testing doesn’t cover the internal structures in this testing. [5]

Boundary Value Analysis (BVA) is a black box technique that applies to the input with a wide range to cover all cases.

Test levels that will be used:

1. System-Integration Testing: to make sure that the links between the systems are working.
2. User Acceptance Testing: to ensure that interactions between the software’s functionality and the end user’s requirements are met.

Test management tools that will be used:

* Write the test cases and bug tracking in Google Sheets because it is easy to use, a free tool, the best way to store data, and I’m advanced in it. And I downloaded a FileDrop to connect with Google Sheets to upload videos in the bug reports.
* Write the test summary in Word because it is a free tool, does not need a download, easy tool, and contains tools for data analysis. In addition, it helps the tester in writing, for example, it alerts the error mistake by underlining the error with red color.
* Powersoft free online screen recorder website it’s quickly recording for videos, free, and easy to use, and Movavi Screen Recorder 23 application which has a free trial, easy to use, has a clear resolution for the videos and there are features like the day in start date and the languages display in this application but doesn’t display in the website.

The test case template will use:

* Project Name: Helps in organizing and managing test cases effectively, especially in larger projects or when multiple projects are being worked on simultaneously.
* Test designed by and test executed by: Help in identifying the individual or team responsible for designing the test cases and allows for better collaboration and communication within the testing team.
* Environment: Provide context and ensure that the test case is executed under the intended conditions.
* Software Version: Helps in ensuring that the test case is executed against the intended version of the software and allows for better traceability and identification of any version-specific issues.
* Date: Helps in tracking the freshness and relevance of the test case and assists in managing the test case
* ID: Helps to make traceability and helps in organizing and managing test cases.
* Test Suit: Group the test cases into suites to make it easier to manage them.
* Title: Describe the feature that the test is verifying.
* Steps: Provide clear, detailed instructions for executing the test case.
* Test Data: Provide specific inputs and conditions that are used to validate the behavior and functionality of the system being tested.
* Expected result: Define the desired outcome of a test step or test case execution.
* Actual result: Represents the actual behavior of the system under test when the specified actions are performed.
* Status: provide clear visibility and tracking of the progress and outcomes of the testing process.

# References:

[1] “About Instagram”, [Online]. Available: <https://help.instagram.com> [Accessed: May 4, 2023].

[2] “Template of Scope”, [Online]. Available: [https://www.guru99.com](https://www.guru99.com/test-plan-for-project.html) [Accessed: May 7, 2023].

[3] T. Geery, M. Hickson, C. Klimkowsky and E. Nelson, “Pass/Fail Criteria”, *Test Plan  
Co-op Evaluation System,* [Online document]. Available: [https://www.se.rit.edu](https://www.se.rit.edu/~co-operators/Semester2/TestPlan.pdf)

[Accessed: May 12, 2023].

[4] “Metrics”, [Online]. Available: [https://www.browserstack.com/guide](https://www.browserstack.com/guide/how-to-write-test-summary-report) [Accessed: May 15, 2023].

[5] “Black Box technique”, [Online]. Available: [https://www.imperva.com/Black-box-testing](https://www.imperva.com/learn/application-security/black-box-testing/) [Accessed: May 16, 2023].