# Amazon Project

## AMAZON PROJECT

## SOFTWARE TEST PLAN

Version 1

Submitted By:

Team-9

13.02.2022

**Document Identification**

| **Amazon Project** | |
|---|---|
| **Content Summary** | The Amazon Project includes the planning of general testing activities |
| **Distribution** | Customer |
| **Document Identifier** | Amazon |
| **Document Name** | Amazon Project Software Test Plan |
| **Number of Pages** | |
| **Prepared By** | Team 9 |
| **Written Date** | 11.02.2022 |

**Document Approvals**

| | | |
|---|---|---|
| **QUALITY MANAGER** | | |
| **PROJECT MANAGER** | | |
| **CUSTOMER CONFIRM OF ACCEPTANCE** | | |

| Document Revision History | | | | | |
|---|---|---|---|---|---|
| **Date** | **Version** | **Description** | **Author** | **Reviewer** | **Approver** |
| 12 Feb 2022 | Version 1 | Planning general test functions of Amazon Project | Team 9 | | |
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## Contents



## 1. INTRODUCTION

Customers want a perfect Amazon website, which passed the full cycle of software testing. Amazon is an online shopping website, so the test plan is created to validate if the website meets the expected behavior.

The test plan will facilitate communication within the team members. This document includes the strategies and approach to testing of the "https://www.amazon.co.uk/ ". It includes the objectives, role and responsibilities, entry and exit criteria, scope, test environment and test tools. This document has clearly identified what the test deliverables will be, and what is deemed in and out of scope.

## 2. SCOPE

This test plan mainly targets UI Testing with validating data in the Requirement Specification provided by the Client.

**Features to be tested**
A customer can open a personal account.
A customer can see all shopping categories with links on Home Page.
A customer can make search.
A customer can add selected products to the basket.

**Features not to be tested**
A customer can select address
A customer can return products
A customer can see images on Home Page
A customer can navigate to other Amazon services

## 3. OBJECTIVES

Primary objective is to meet the requirements according to user expectation specified in Requirement Specification Document. User should be satisfied with the project at the end of the project development cycle.

In case of any changes, additions and deletions to requirements documents these will be documented and tested at the highest level considering the remaining time within the ability of the test team.

The secondary objectives of testing will be to: identify and expose all issues and associated risks, communicate all known issues to the project team, and ensure that all issues are addressed in an appropriate matter before release. As an objective, this requires careful and methodical testing of the application to first ensure all areas of the system are scrutinized and, consequently, all issues (bugs) found are dealt with appropriately.

## 4. ABBREVIATIONS

Explanations of all abbreviations used in the document are given below.
UAT: User Acceptance Test
US: User Story
PM: Project manager
BA: Business Analyst
QA: Quality Assurance
RTM: Requirements Traceability Matrix
UI: User Interface

## 5. TEST APPROACH

The approach, that used, Analytical therefore the analysis of the requirements specification document is the base for planning, estimating and designing tests. All test types are determined in Test Strategy. Team also must use experience-based testing and error guessing by using testers' skills and intuition, along with their experience with similar applications or technologies.

The project is using the Agile Methodology with two weekly sprints. During each sprint the requirements identified will be delivered to the team and will be tested within each sprint.

In this project smoke testing, unit testing, integration testing, regression testing and end to end testing, UAT will be done and the scope of these tests will be identified in the test plan.

All the application modules will be tested by the tests identified in Test Strategy.

## 6. ROLES AND RESPONSIBILITIES

| Role | Staff Member | Responsibilities |
|---|---|---|
| Project Manager | | 1. Acts as a primary contact for development and QA team.<br>2. Responsible for Project schedule and the overall success of the project. |
| QA Lead | | 1. Participation in the project plan creation/update process.<br>2. Planning and organization of test process for the release.<br>3. Coordinate with QA analysts/engineers on any issues/problems encountered during testing. |

| | | |
|---|---|---|
| QA | | 1. Understand requirements<br>2. Writing and executing Test cases<br>3. Preparing RTM<br>4. Reviewing Test cases, RTM<br>5. Defect reporting and tracking<br>6. Retesting and regression testing<br>7. Bug Review meeting<br>8. Preparation of Test Data<br>9. Coordinate with QA Lead for any issues or problems encountered during test preparation/execution/defect |

## 7. ENTRY AND EXIT CRITERIA

### 7.1. Entry Criteria

- All test hardware platforms must have been successfully installed, configured, and functioning properly.
- All the necessary documentation, design, and requirements information should be available that will allow testers to operate the system and judge the correct behavior.
- All the standard software tools including the testing tools must have been successfully installed and functioning properly.
- Proper test data is available.
- The test environment such as, lab, hardware, software, and system administration support should be ready.
- QA resources have completely understood the requirements
- QA resources have sound knowledge of functionality
- Reviewed test scenarios, test cases and RTM

### 7.2. Exit Criteria

- A certain level of requirements coverage has been achieved.
- No high priority or severe bugs are left outstanding.
- All high-risk areas have been fully tested, with only minor residual risks left outstanding.
- Cost – when the budget has been spent.
- The schedule has been achieved
- Testing will be complete when all the necessary parties from the technical and business side agree that the test results are satisfactory.

## 8. SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

The test team decides whether to suspend the complete or the part of the software testing process. Suspension can occur when the external components are not readily available or when a serious defect is detected.

### 8.1. Suspension Criteria

- The build contains many serious defects which seriously or limit testing progress.
- Significant change in requirements suggested by client.
- Software/Hardware problems.
- Assigned resources are not available when needed by test team.
- If any critical or high level defect is found.
- If medium level defects is over 75% and it is not possible to test functionality of the system to be tested.
- Project manager has the right to suspend the tests when needed.

### 8.2. Resumption Criteria

As known that, it will always take place after the suspension process is invoked. It is valid if the defect which caused the suspension of the testing process gets fixed and the fix is verified by the testing team. Before invoking resumption, smoke testing needs to be performed and confirmed by the testing team once intimated by the owner of the issue, that the system is up and ready for testing.

Criteria to resumption/resume the testing process:

- Issue due to which suspension occurs gets resolved.
- Hardware or software resources are available as per the requirements.
- Output meets the expected.
- No further defect has been found in the resumption technique.

## 9. BUG SEVERITY AND PRIORITY DEFINITION

Bug Severity and Priority fields are both very important for categorizing bugs and prioritizing if and when the bugs will be fixed. The bug Severity and Priority levels will be defined as outlined in the following tables below. Testing will assign a severity level to all bugs. The Test Lead will be responsible to see that a correct severity level is assigned to each bug.

The QA Lead, Development Lead and Project Manager will participate in bug review meetings to assign the priority of all currently active bugs. The QA Lead is responsible for setting up these meetings on a routine basis to address the current set of new and existing but unresolved bugs.

### 9.1. Severity List

Within the Amazon project severities list below will be used and the testers entering a bug into JIRA is also responsible for entering the bug Severity.

| Severity ID | Severity | Severity Description |
|---|---|---|
| 1 | Critical | Amazon.com crashes or the bug causes non recoverable conditions. System crashes, database or file corruption, or potential data loss, program hangs requiring reboot are all examples of a Sev. 1 bug. |
| 2 | High | Major system component unusable due to failure or incorrect functionality in Amazon.com. Sev. 2 bugs cause serious problems such as a lack of functionality, or insufficient or unclear error messages that can have a major impact to the user, prevents other areas of the app from being tested, etc. Sev. 2 bugs can have a work environment, but this environment is inconvenient or difficult. |
| 3 | Medium | Defects that don't effect the direct usage of Amazon.com's but has some minor effects on some functions. |
| 4 | Minor | Defects that don't effect the functionality of Amazon.com but mostly related to visual defect, documentation errors or typing defect signed off severity 3 bugs. |

### 9.2. Priority List

| Priority | Priority Level | Priority Description |
|---|---|---|
| 1 | Must Fix | This bug must be fixed immediately; the product cannot ship with this bug. |
| 2 | Should fix | These are important problems that should be fixed as soon as possible. It would be an embarrassment to the company if this bug is not fixed. |
| 3 | Fix when have time | The problem should be fixed within the time available. If the bug does not delay release date, then fix it. |
| 4 | Low Priority | It is not important (at this time) that these bugs be fixed. Fix these bugs after all other bugs have been fixed. |

## 10. TEST STRATEGY

- **Understanding Requirements:**
    - Requirement specifications will be sent by client.
    - Understanding of requirements will be done by QA

- **Preparing Test Cases:**
  QA will be preparing test cases based on the exploratory testing. This will cover all scenarios for requirements.

- **Preparing Test Matrix:**
  QA will be preparing test matrix which maps test cases to respective requirement. This will ensure the coverage for requirements.
- **Reviewing test cases and Test Metrix:**
    - Peer review will be conducted for test cases and test matrix by QA Lead
    - Any comments or suggestions on test cases and test coverage will be provided by reviewer respective Author of Test Case and Test Matrix
    - Suggestions or improvements will be re-worked by author and will be send for approval
    - Re-worked improvements will be reviewed and approved by reviewer

- **Creating Test Data:**
  Test data will be created by respective QA on client's developments/test site based on scenarios and Test cases.

- **Test Execution Process**
    - Once all Test cases are approved and the test environment is ready for testing, tester will start an exploratory test of the application to ensure the application is stable for testing.
    - Each Tester will be assigned to Test cases directly in JIRA.
    - Testers will be provided with necessary access to the testing environment.
    - Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in JIRA.
    - Tester will prepare a Run chart with day-wise execution details
    - If any failures, defect will be raised as per severity guidelines in JIRA tool.
    - Steps to simulate along with screenshots if appropriate.
    - Daily Test execution status as well as Defect status will be reported to all stakeholders.
    - Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
    - If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in JIRA and map it against the test case level or at the specific step that issue was encountered after confirming with Test Lead.

- During the subsequent sprint, any defects fixed applied will be tested and results will be updated in JIRA during the sprint.

As per Process, final sign-off or project completion process will be followed.

- **Retesting and Regression Testing:**
  Retesting for fixed bugs will be done by respective QA once it is resolved by respective developer and bug/defect status will be updated accordingly. In certain cases, regression testing will be done if required.

- **Deployment/Release:**
  - Once all bugs/defect reported after complete testing is fixed and no other bugs are found it is ready for release.

- **Bug/Defect Life Cycle**

It is expected that the testers execute all the scripts in each of the sprints described above. However, it is recognized that the testers could also do additional testing if they identify a possible gap in the scripts.

The defects will be tracked through JIRA only. The technical team will gather information on a daily basis from JIRA and request additional details from the Defect Coordinator. The technical team will work on fixes.

It is the responsibility of the tester to open the defects, link them to the corresponding script, assign an initial severity and status, retest and close the defect.

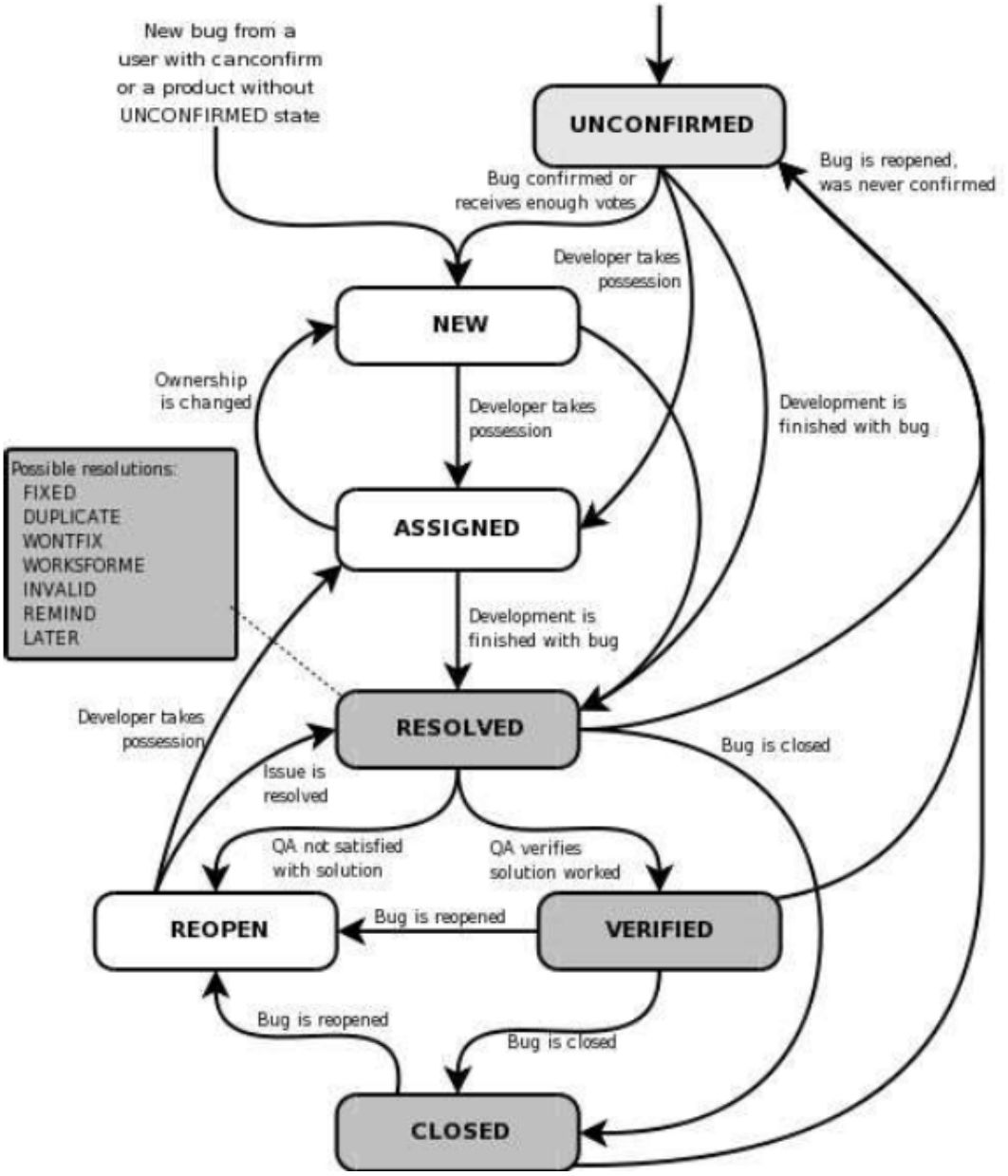
It is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the sprint.

It is the responsibility of the technical team to review JIRA on a daily basis, ask for details, if necessary, fix the defect, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Bug/defect life cycle will be as following:

- Start Testing
- Tester reports defects
- Test Lead validates defects
- Dev Lead assigns defects
- Developer fixes defects
- Tester retests the product
- If Resolved Close defect

Bug life cycle for this project is as follows:




**Testing Types:**

- Black Box Testing

Black Box Testing is a software testing method in which the functionalities of software applications are tested without having knowledge of internal code structure, implementation details and internal paths. Black Box Testing mainly focuses on input and output of software applications and it is entirely based on software requirements and specifications.

- Smoke Test

Smoke testing is preliminary testing to reveal simple failures severe enough to, for example, reject a prospective software release. Smoke tests are a subset of test cases that cover the most important functionality of a component or system, used to aid assessment of whether main functions of the software appear to work correctly.

- Integration Test

Test communication paths between different parts of the module done by the test department or by developers to show that all modules work correctly together.

- User Acceptance Test

The purpose behind user acceptance testing is to conform that system is developed according to the specified user requirements and is ready for operational use.

- **Test Reports**

The results of all tests performed within the scope of the Amazon.com project will be reported. Until the completion criteria of the tests are met, a separate Test Result Report will be prepared for each test.

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics:

| Report | Description | Frequency |
|---|---|---|
| Test preparation & Execution Status: | To report on % complete, %Work in Progress, % Pass, % Fail<br><br>Defects severity wise Status – Open, closed, any other Status | Weekly / Daily (optional) |
| Daily execution status | To report on Pass, Fail, Total defects, highlight critical defects | Daily |
| Project Weekly Status report | Project driven reporting (As requested by PM) | Weekly – If project team needs weekly update apart from daily and there is template available with project team to use. |

- **Test Deliverables**

| Deliverable Name | Author | Reviewer |
|---|---|---|
| Test Plan | Test Lead | PM/ Business Analyst |
| Functional Test Cases | Test Team | BA |
| Logging Defects | Test Team | Test Lead |
| Daily/weekly status report | Test Team | Test Lead/ Project Manager |
| Test Closure Report | Test Lead | Project Manager |

- **Training**
  Within the scope of Amazon.com project there is no need for special education for test team.

## 11. RESOURCE AND ENVIRONMENT NEEDS

### a. Testing Tools

| Process | Tool |
|---|---|
| Test Case Creation | Microsoft Excel |
| Project Management Tool | JIRA 8.21 (2022) |
| Test Framework | Selenium 3.14.0 - Cucumber 3.1.2 |
| Version Control | GitHub 2.9.12 (2020) |
| Continuous Integration | Jenkins 2.324 (2021) |
| Programing Language | Java 17 (2021) |
| IDE | IntelliJ |

### b. Test Environment

**Hardware**

Include the minimum hardware requirements that will be used to test the Application. Testing will have access control to one or more application/database servers separate from any used by non-test members of the project team. Testing will also have access control to an adequate number of variously configured PC workstations to assure testing a range from the minimum to the recommended client hardware configurations listed in the project's Requirements, Functional Specification and Design Specification documents.

**Software**

Above specified versions of testing tools and browsers below will be used for test the Application.

Windows 10: Edge, Chrome (latest), Firefox (latest), Safari (latest)

Mac OS: Chrome (latest), Firefox (latest), Safari (latest)

Linux Ubuntu: Chrome (latest), Firefox (latest)

## 12. SCHEDULES

| Task Name | Start Date | Finish Date | Effort | Comments |
|---|---|---|---|---|
| **Create the Test Specification** | 12/02/2022 | 16/02/2022 | | |
| **Perform Test Execution** | 16/02/2022 | 26/02/2022 | | |
| **Test Report** | By 4th of March | | | |
| **Test Delivery** | By 11th of March | | | |