**Purpose of the Document**

Use the Test Plan document to describe the testing approach and overall framework that will The Test Plan document serves as a comprehensive guide to outline the testing approach and framework that will govern the testing activities for the project. It provides clarity on how testing will be conducted, ensuring that all aspects of the project are thoroughly validated to meet quality standards and stakeholder expectations. Key purposes include:

* **Defining Testing Strategy**: Describing the overall strategy for testing including objectives, scope, and methodologies to achieve reliable results.
* **Setting Expectations**: Clarifying the roles, responsibilities, and tasks assigned to team members involved in testing activities.
* **Ensuring Coverage**: Outlining the scope of testing to ensure all functionalities, features, and scenarios are covered appropriately.
* **Managing Risks**: Identifying potential risks and dependencies that could impact testing timelines or quality, and outlining mitigation strategies.
* **Facilitating Communication**: Providing a structured framework for communication among stakeholders regarding testing progress, issues, and resolutions.
* **Supporting Quality Assurance**: Ensuring that the delivered product meets specified requirements and is of high quality through systematic testing processes.

By documenting the testing approach and framework in the Test Plan, stakeholders gain confidence that the project will undergo thorough testing to deliver a reliable and satisfactory product.

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# Introduction

## Purpose

The purpose of this test plan is to outline the test strategy, test approach, execution strategy, and test management for the Amazon shopping website. This plan aims to ensure that the website's functionalities are thoroughly tested to provide a seamless user experience.

## Project Overview

The Amazon shopping website is an e-commerce platform that allows users to browse, search, and purchase a wide variety of products online. The project involves testing the core functionalities of the website including user registration, product search, product details, shopping cart, checkout process, payment integration, order history, and user account management.

# Scope

## In-Scope

 **User Registration**: Validation of new user registrations including email verification.

 **Product Search and Navigation**: Ensuring users can search for products, filter search results, and navigate through product categories.

 **Product Details**: Verification of product details page, including images, descriptions, reviews, and ratings.

 **Shopping Cart**: Testing the addition, modification, and removal of items in the shopping cart.

 Checkout **Process**: Validation of the complete checkout process including shipping details, payment methods, and order confirmation.

 Payment **Integration**: Ensuring seamless integration with various payment gateways like credit/debit cards, PayPal, and Amazon Pay.

 Order **History and Tracking**: Verification of order history, tracking information, and order status updates.

 User **Account Management**: Testing functionalities related to user profiles, address book, payment methods, and preferences.

 Vendor **Integration**: Ensuring proper integration and data flow between Amazon and third-party vendors.

## Out-of-Scope

 **Internal Amazon Systems**: Testing of Amazon's internal systems and databases is out-of-scope.

 **Physical Logistics and Delivery**: Testing the logistics, delivery, and warehousing processes.

 **Performance Testing**: Detailed performance testing, stress testing, and load testing are excluded.

 Mobile **Applications**: Testing of Amazon's mobile applications for iOS and Android.

 Non**-core Features**: Testing of non-core features such as Amazon Prime Video, Amazon Music, and Alexa integrations.

# Testing Strategy

## Test Objectives

 Ensure that all functionalities of the Amazon shopping website are working as expected.

 Verify that the user experience is seamless and free of critical defects.

 Confirm that integrations with third-party services and payment gateways function correctly

**Tasks and Responsibilities:**

* **QA Team**: Develop and execute test cases, report defects, verify fixes, and ensure comprehensive test coverage.
* **Development Team**: Fix reported defects, support QA team during testing, and ensure timely delivery of builds.
* **Project Manager**: Oversee the testing process, ensure resources are available, and manage timelines and deliverables.

## Test Assumptions

 The test environment will be a close replica of the production environment.

 All necessary test data and access credentials will be provided to the QA team.

 Development teams will provide timely fixes for defects reported during testing.

 The third-party services and payment gateways used in the test environment will mimic the production environment closely.

## Data Approach

* **Test Data Creation**: Synthetic data will be created for user registration, product listings, and orders to ensure privacy and security.
* **Data Maintenance**: Test data will be maintained in the QA environment and refreshed periodically to ensure accuracy and relevance.
* **User Acceptance Testing (UAT)**: Realistic data scenarios will be created to mimic actual user behavior, enabling comprehensive user acceptance testing.
* **Data Privacy**: Ensure that all test data complies with data privacy regulations and does not contain any personally identifiable information (PII).

## Level of Testing

*List the types of testing to be performed*.

|  |  |  |
| --- | --- | --- |
| **Test Type** | **Description** | **Responsible Parties** |
| Unit Testing | Testing individual components or modules of the website to ensure they work correctly in isolation. | Developers |
| Integration Testing | Testing the integration and interaction between different modules and components of the website. | QA Team and Developers |
| Functional Testing | Verifying that the website functions according to the specified requirements and performs expected tasks. | QA Team |
| Regression Testing | Ensuring that new changes or enhancements do not adversely affect existing functionalities. | QA Team |

## Unit Testing

*Specify what features are to be tested.*

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
|  |  | Test Manager |
|  |  | Test Lead |
|  |  | Test Analyst |

## Functional Testing

*Specify what features are to be tested.*

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
|  |  | Test Manager |
|  |  | Test Lead |
|  |  | Test Analyst |

## User Acceptance Testing

*Specify what features are to be tested.*

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
|  |  | Test Manager |
|  |  | Test Lead |
|  |  | Test Analyst |

## Regression Testing

*Specify what features are to be tested.*

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
|  |  | Test Manager |
|  |  | Test Lead |
|  |  | Test Analyst |

# Execution Strategy

## Entry Criteria

* *The entry criteria refer to the desirable conditions in order to start test execution*
* *Entry criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Entry Criteria** | **Test Team** | **Technical Team** | **Notes** |
| *Test environment(s) is available* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| *Test data is available* |  |  |  |
| *Code has been merged successfully* |  |  |  |
| *Development has completed unit testing* |  |  |  |
| *Test scripts are completed, reviewed and approved by the Project Team* |  |  |  |

## Exit criteria

* *The exit criteria are the desirable conditions that need to be met in order proceed with the implementation.*
* *Exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Criteria** | **Test Team** | **Technical Team** | **Notes** |
| *100% Test Scripts executed* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |  |
| *90% pass rate of Test Scripts* |  |  |  |
| *No open Critical and High severity defects* |  |  |  |
| *All remaining defects are either cancelled or documented as Change Requests for a future release* |  |  |  |
| *All expected and actual results are captured and documented with the test script* |  |  |  |
| *All test metrics collected based on reports from daily and Weekly Status reports* |  |  |  |
| *All defects logged in Defect Tracker/Spreadsheet* |  |  |  |
| *Test environment cleanup completed and a new back up of the environment* |  |  |  |

## Validation and Defect Management

* *Specify how test cases/test scenarios should be validated*
* *Specify how defect should be managed*
  + *It is expected that the testers execute all the scripts in each of the cycles described above.*
  + *The defects will be tracked through Defect Tracker or Spreadsheet.*
  + *It is the responsibility of the tester to open the defects, retest and close the defect.*

Defects found during the Testing should be categorized as below:

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| *1 (Critical)* | * *Functionality is blocked and no testing can proceed* * *Application/program/feature is unusable in the current state* |
| *2 (High)* | * *Functionality is not usable and there is no workaround but testing can proceed* |
| *3 (Medium)* | * *Functionality issues but there is workaround for achieving the desired functionality* |
| *4 (Low)* | * *Unclear error message or cosmetic error which has minimum impact on product use.* |

# Environment Requirements

## Test Environments

* **Development Environment**:
  + **Requirements**: Access to version control (e.g., Git), development IDEs, and CI/CD tools.
* **QA Environment**:
  + **Requirements**: Latest stable builds, test management tools, multiple browsers (Chrome, Firefox, Safari, Edge), various OS (Windows, macOS, Linux), mobile devices/emulators, and network configurations.
* **Staging Environment**:
  + **Requirements**: Production-like database, integration with third-party services (sandbox), and secure configurations.

#### Security Requirements

* **Data Security**: Anonymization of test data to avoid PII exposure.
* **Access Control**: Strict access controls to prevent unauthorized entry.
* **Network Security**: Secure protocols (e.g., HTTPS) for data protection.
* **Compliance**: Adherence to data protection regulations (e.g., GDPR, CCPA).
* **Vulnerability Testing**: Regular security assessments and scans for risk mitigation.
* *.*

# Significantly Impacted Division/College/Department

|  |  |  |
| --- | --- | --- |
| **Business Area** | **Business Manager** | **Tester(s)** |
|  |  |  |
|  |  |  |
|  |  |  |

# Dependencies

 **Test-Item Availability**: Testing depends on availability of the latest builds of the Amazon shopping website, including all planned features and functionalities.

 **Testing-Resource Availability**: The timely availability of skilled QA testers and necessary testing tools (e.g., test management software, browsers, devices) is crucial for executing the test plan effectively.

 **Deadlines**: Testing timelines are dependent on development milestones and release schedules to ensure alignment with project deadlines and go-live dates.

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