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1. Introduction

Amazon, a leading global e-commerce platform, greatly simplifies our lives by providing a user-friendly and accessible shopping experience. With its widespread availability across multiple countries, Amazon offers the convenience of purchasing a wide array of products effortlessly. Navigating the website is a breeze, with a simple login process using either email or phone number. Once logged in, users can easily add desired items to their cart. The subsequent steps, including providing a delivery address, are straightforward, ensuring that the ordered products reach the user within a few days. Amazon significantly enhances the ease of our daily lives through its seamless and efficient shopping system.

2. Test Strategy

2.1 Define scope of testing

2.1.1 Features to be tested

The functional Requirement is given below:

2.1.1.1 Login and Registration Page:

- Verifying that a user register to amazon website and create an account successfully.
- Verifying that a register user can login with email or phone or password.
- Verify that the reset password button is working properly and sending OTP to the user.
- Checking whether there is special character in registration page “Your Name” placeholder. It will give error.
- Checking the email and the phone number is correct
- The password need at least six characters.

2.1.1.2 Homepage:

- Checking whether the amazon home logo is working or not.
- Checking the nav location button is working properly.
- Search bar is working properly verify it.
- Checking language button is working properly.
- Checking special product are showing properly.

- Checking the slider button is working properly.
- Checking the hamburg button is working properly.
- Checking the nav progressive content is showing and working properly.
- Checking Return and order button is working properly.
- Checking cart button is working properly.
- Checking nav footer button is working properly.
- Checking nav footer back to top button is working properly.
- Checking in navigation content all are working properly.

2.1.1.3 Product Search:

- Checking writing word on search bar it find the right product
- Checking if the product is not found it is showing the similar product.
- Checking the search bar give auto suggestion if a alphabet type in search bar.
- Checking in the search bar it recommended the famous product.

2.1.1.4 Product Catagories page:

- Checking the product are in right catagories and their description with price are given.
- Checking wishing to Add list button is working properly.
- Testing the add to cart functionalities.

2.1.1.5 Product Details page:

- Checking the product name and title
- Checking the product description
- Checking the product image
- Checking if product not found it will suggested same kind of products.
- Checking the product image is visible in all angles.

2.1.1.6 Shopping Cart:

- Checking add to cart button is working properly.
- Checking product quantities are showing properly.
- Checking if user mistakenly add extra item the delete button is working properly.
- Checking the price is showing correctly.

2.1.1.7 Proceed to check out:

- Verifying the shipping and billing information.
- Testing different payment methods (credit card, gift cards, Paypal, Bank accounts etc.).
- Giving the order confirmation text to the user mail or phone number.

2.1.1.8 User account managing:

- Verifying the user profile can be updated .
- Verifying the order and other history of the user in the profile.

2.1.1.9 Payment:

- After confirming the order the payment is correctly deducted from the user account.

2.1.2 Features Not to be tested:

The below features are not been tested. We neglected these features.

- User Interfaces
- Hardware Interfaces
- Software Interfaces
- Database testing
- Website Security
- Performance
- Time taken by the customer to order a product.
- Payment method
- Number of steps required to order a product.
- Personal details of customer
- Customer review on product

2.2 Identify testing types:

2.2.1 Testing Types and level:

2.2.1.1 Unit Testing: The primary goal of unit testing is to validate that each unit of the software performs correctly and produces the expected output for a given set of inputs. In e-commerce website like amazon, unit testing is like checking the quality of each website part separately. Testing product pages, cart steps, or payment flows individually finds bugs early, saving time and money. It ensures a seamless user experience and builds customer trust.

2.2.1.2 Usablity Testing: In online shopping, a tricky website can lead to lost sales. Usability testing watches how real users navigate your site, catching issues like confusing menu or hard-to-use searches before they bother customers. Fixing these things makes shopping easier, brings in more sales, and keeps customers happy. It's like giving your website a friendlier look for more sales and satisfied shoppers.

2.2.1.3 Security Testing: In online shopping, every click involves sensitive info like passwords and credit cards. Security testing acts as a digital bodyguard, finding and fixing spots where hackers could sneak in. It spots weaknesses, stopping data breaches and shielding your business and customers from costly attacks. It's like building a super-strong fortress around your online store for a safe and secure shopping experience.

2.2.1.4 Database Testing: An e-commerce website's database is very important because database stores vital customer info and order details. It checks data integrity, accuracy, and security. Imagine testing if customer details are saved correctly, orders are processed smoothly, and sensitive data stays protected. This prevents lost orders, frustrated customers, and potential security breaches.

2.2.1.5 API Testing: In e-commerce, APIs act as behind-the-scenes bridges linking different website parts. API testing ensures these connections are strong. It checks if data moves seamlessly between product listings, shopping carts, and payment gateways. It also test if product details update instantly, items add to carts correctly, and payments process securely. This avoids errors, stock issues, and transaction failures, ensuring a smooth process for the user.

2.2.1.6 User Acceptance Testing: Once all the testing is done, before launching the project, we perform acceptance testing to make sure the software meets the requirements and is ready for use. This testing helps find any mistakes in how we expected the software to work versus how it actually behaves. It's like a final check to ensure everything is working correctly before releasing it to users.

2.2.1.7 Performance Testing: When a user logs in, navigates through the website, and interacts with its features, everything works smoothly and quickly. The site is responsive, loads pages without delays, and provides a positive overall experience for the users.

2.2.1.8 Black Box Testing: In manual testing, black box testing is crucial. It lets a QA tester check if a website or app function works correctly without knowing the technical backend details. The tester acts like a regular user, focusing on whether the features provide the right results. They don't need to understand the coding part; their job is to make sure the website or app does what it's supposed to do for users. This type of testing ensures everything works well without delving into the complex coding behind the scenes.

2.3 Risk and mitigation:

Risk	Mitigation
1.In a office if the employee has the lack of knowledge and skill required for testing website.	1.Training your employee and then enlarge their skill for testing website. If they can not update their skill after skill training then sack from your office.
2.It is always tuff to complete the project in time because the schedule time and delivery is very small.	2.Always give mental support to the employee and talk to them how they can complete the project within this time. Identify the priority and prerequisite first to complete the project in a short time.
3.Testing team lead has the lack of knowledge	3.Give advance leadership training to the team lead. Otherwise, it will difficult to finish the project.

4.Wrong budget estimation by the employee.	4.Before working on the project give proper time on project planning. Wrong budget plan can destroy a company with in a second.
5. API call Failure	5.Proper way to called API.

2.4 Create test logistic:

2.4.1 Who will Test?

- QA engineers.
- Tester.
- QA lead.

2.4.2 When will the test occur?

- When testing Environment is build.
- When enough employee is hired.
- When test case, test strategy and test specification is ready.

3.Define Test Objective

- The primary testing goals are to confirm the functionality of the Amazon website. The project will emphasize key operations such as login, registration, homepage navigation, payment processing, product details accuracy, and the functionality of the shopping cart. The aim is to ensure that all these operations perform seamlessly in a real business environment, providing users with a reliable and efficient online shopping experience.

4.Define Test Criteria

4.1 Suspension criteria:

- If team members indicate a 40% failure rate in test cases, it is advisable to stop testing temporarily. Testing should remain suspended until the development team addresses and resolves all the failed test cases.

4.2 Exit criteria:

- **Successful completion of a test phase is contingent on specific criteria:**
  - ✓ It is mandatory that all planned test cases are executed, reaching a run rate of 100%. Any deviation from this completeness requires a well-defined and justified reason.
  - ✓ The pass rate, indicating the percentage of test cases that pass successfully, must be at least 80%. Achieving this pass rate is compulsory for considering the test phase successfully completed.

5. Resource Planning

5.1 Human resource:

Member	Task
1.Test Manager	Test manager manages the whole project and give direction to the junior employee how to complete the projects.
2.Developer	Developer create code for the website and also fix bugs of the website.
3.Iteration Manager	The role of an Iteration Manager, often associated with Agile methodologies, involves facilitating and coordinating the iterative development and testing cycles within a QA team.
4.Business Analyst	Analyze project requirements to prepare user stories.
5.QA	❖ QA members justify whether the testing process is meeting specified requirement. ❖ QA members do the payment, database and API testing.

	❖ QA members verify the test case of the project.
6.Test Administrator	Test administrator works and build the test environment for the tester to work smoothly.

5.2 System resource:

Resources	Description
1.Server	For website, we need a database server to host the project and database can be MySQL, Mongo Db etc.
2.Network	To do the project there need a strong internet connection other wise there will be problem.
3.Test Tool	Develop a Test tool which can auto generate the test result to the predefined form and automated test execution.
4.Computer	At least 5-6 computers needed to work comfortably for the employee and the computer need high configuration.

6.Test Plan Environment and Tools

6.1 Identical to the production environment, including hardware, software, and network configuration.

- ✓ Hardware:
  - ❖ Laptop/Desktop
  - ❖ Mouse
  - ❖ Modem
  - ❖ CPU
  - ❖ RAM
  - ❖ Storage
- ✓ Software:
  - ❖ Microsoft Office

- Web Server
- Database
- Application server

- Network Configuration:
  - Replicate production network settings, including firewalls, load balancers, and network topology.

6.2 Test management tool, defect tracking tool, automation framework, web browser developer tools.

- ✓ Test management Tool:
  - Jira
  - Test rail
  - QA Touch
  - Test Collab
  - Zephyr
- ✓ Defect Tracking Tool:
  - Jira
  - Bugzilla
  - Asana
  - Monday.com.
- ✓ Automation Framework:
  - Appium
  - Junit
  - Selenium
  - Cypress
- ✓ Web browser developer tools:
  - Chrome Browser
  - Brave Browser
  - Mozilla Firefox Browser

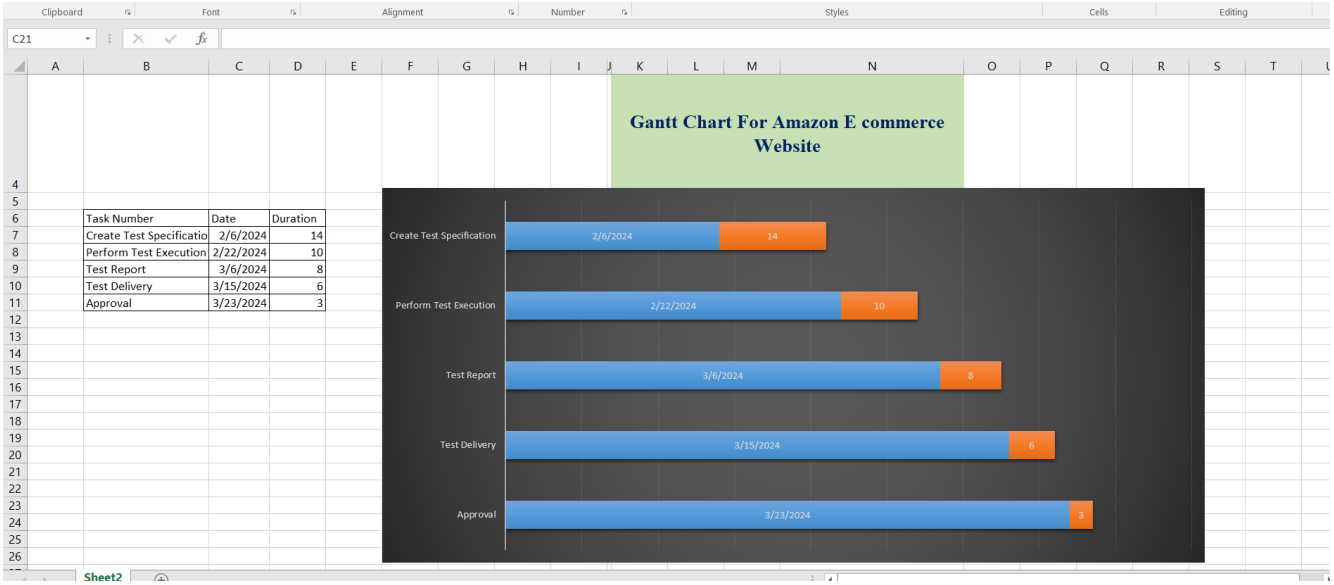
- Chrome Dev Tools

7. Schedule and Estimantion

7.1 All project Task and Estimation:

Task	Member	Estimate time
Create Test Specification	Test Manager, Test Designer	200 hours
Perform Test Execution	QA Engineers	100 hours
Test Report	Tester, QA Engineers	50 hours
Test Delivery	QA lead, Test Manager	25 hours
Approval	QA lead, Lead Developer, Project Manager	5 hours
Total		380 hours

7.2 Gantt Chart of the project:



8. Test Delivariable

8.1 Before testing:

- Test plans document.:
  - ✓ Introduction and purpose
  - ✓ Objective

- ✓ Testing Aproach
- ✓ Feature to be tested and not to be tested
- ✓ Test Environment
- ✓ Test Schedule etc.

❖ Test cases documents.

❖ Test Design specifications.

8.2 During the testing:

❖ Test Tool

❖ Simulators

❖ Test Data

❖ Test Trace-ability Matrix

❖ Error logs and execution logs.

8.3 After the testing:

❖ Test Results

❖ Bug Report

❖ Installation guidelines step by step

❖ Working on release note

9. Approval

Team Member	Approval
Project Manager	Approved.
Lead Developer	Approved.
QA Lead	Approved.