Task 2-Create STLC for any software product

Let's create a Software Testing Life Cycle (STLC) for an e-commerce web application. The STLC involves several phases to ensure that the software is thoroughly tested and meets the required quality standards. Here’s an outline of the STLC:

**1. Requirement Analysis**

**Objective:** Understand the testing requirements and identify the testable aspects of the application.

* **Activities:**
  + Analyze business and functional requirements.
  + Identify testable requirements.
  + Engage with stakeholders for requirement clarification.
* **Deliverables:**
  + Requirement Traceability Matrix (RTM).
  + List of queries and clarifications.

**2. Test Planning**

**Objective:** Develop the test strategy and plan the testing activities.

* **Activities:**
  + Define the scope of testing.
  + Identify test objectives.
  + Estimate test effort and resources.
  + Define roles and responsibilities.
  + Select testing tools.
  + Plan for test environment setup.
* **Deliverables:**
  + Test Plan document.
  + Test effort estimation.
  + Test schedule.

**3. Test Case Design**

**Objective:** Design detailed test cases and prepare test data.

* **Activities:**
  + Design test cases and test scripts.
  + Identify test data requirements.
  + Create test data.
  + Review and baseline test cases.
* **Deliverables:**
  + Test cases.
  + Test data.

**4. Test Environment Setup**

**Objective:** Set up the testing environment where the testing will be executed.

* **Activities:**
  + Prepare hardware and software requirements.
  + Install and configure the test environment.
  + Validate the environment setup.
  + Prepare environment setup guide.
* **Deliverables:**
  + Test environment setup.
  + Environment setup guide.

**5. Test Execution**

**Objective:** Execute test cases and log defects.

* **Activities:**
  + Execute test cases as per the plan.
  + Log defects for any deviations from expected results.
  + Retest defects after fixes.
  + Update test cases and test scripts if needed.
* **Deliverables:**
  + Test execution results.
  + Defect logs.

**6. Test Cycle Closure**

**Objective:** Conclude testing and provide test summary reports.

* **Activities:**
  + Conduct test cycle closure meeting.
  + Analyze test results and metrics.
  + Document lessons learned.
  + Archive test artifacts.
* **Deliverables:**
  + Test summary report.
  + Test metrics.
  + Lessons learned document.

**Example: E-commerce Web Application**

**1. Requirement Analysis**

* **Requirement:** Users should be able to search for products.
* **Testable Requirements:** Search functionality, product display, filter options.

**2. Test Planning**

* **Scope:** Functional testing, usability testing, performance testing.
* **Tools:** Selenium for automation, JMeter for performance testing.
* **Schedule:** 4 weeks for test design, 2 weeks for test execution.

**3. Test Case Design**

* **Test Case:** Verify that searching for a product by name returns the correct results.
* **Test Data:** Product names (e.g., "Laptop", "Smartphone").

**4. Test Environment Setup**

* **Environment:** Web server with the latest build of the application, test database with sample data.

**5. Test Execution**

* **Execution:** Run the test cases for the search functionality.
* **Defect Logging:** Log defects for any issues found (e.g., incorrect search results, slow response time).

**6. Test Cycle Closure**

* **Summary Report:** 90% of test cases passed, 5 defects found and fixed.
* **Lessons Learned:** Need to improve search algorithm for better accuracy.

This structured approach ensures that all aspects of the e-commerce web application are thoroughly tested, leading to a high-quality product release.

Top of Form

Bottom of Form