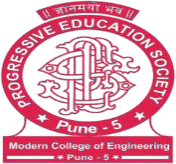
** Progressive Education Society's**

Modern College of Engineering, Pune

**MCA Department**

**A.Y.2024-25**

**410907: Computer Laboratory**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Class: SY-MCA Shift / Div : B Batch:S1 Roll Number : 52119**

**Name: Harsh Ghodke Assignment No : 1 Date of Implementation : 17/08/24**

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**Q1. Prepare Test plan for Online shopping system using MS word**

**Test Plan for Online Shopping System**

**1. Introduction**

* **Objective**: Define the scope, objectives, and goals of testing for the online shopping system.
* **Scope**: Outline the components of the system to be tested, including the web interface, shopping cart, payment gateway, etc.

**2. Test Items**

* **List of Features**: Enumerate the specific features and modules to be tested, such as user registration, product search, checkout process, etc.
* **Exclusions**: Mention any features that will not be tested.

**3. Features to be Tested**

* **Functional Features**: Detail the functional aspects of the system that will be tested.
* **Non-Functional Features**: Include performance, usability, security, and other non-functional requirements.

**4. Features Not to be Tested**

* **List of Features**: Identify the features that are out of scope for this test plan and provide reasons for their exclusion.

**5. Test Strategy**

* **Testing Levels**: Unit Testing, Integration Testing, System Testing, Acceptance Testing.
* **Test Types**: Describe the types of tests, such as functional, regression, load, stress, and security testing.
* **Automation**: Mention any tools or scripts that will be used for automated testing.

**6. Test Approach**

* **Testing Techniques**: Black box testing, white box testing, exploratory testing, etc.
* **Entry/Exit Criteria**: Define the conditions for starting and stopping testing.
* **Test Environment**: Describe the hardware, software, network configuration, and other aspects of the environment where testing will be conducted.

**7. Item Pass/Fail Criteria**

* **Criteria**: Define the criteria for a test case to be considered passed or failed, including specific conditions or thresholds.

**8. Test Deliverables**

* **Documents**: Test Plan, Test Cases, Test Scripts, Test Summary Report, Defect Reports, etc.
* **Tools**: List any tools that will be used for test management, defect tracking, etc.

**9. Testing Tasks**

* **Test Case Development**: Creation of test cases based on requirements.
* **Test Data Preparation**: Gathering and creating data required for testing.
* **Test Execution**: Running the test cases and logging defects.

**10. Environmental Needs**

* **Hardware**: List the hardware requirements for testing, such as servers, client machines, mobile devices, etc.
* **Software**: Include operating systems, databases, browsers, and other software needed.
* **Tools**: Any additional tools required, such as test management or automation tools.

**11. Responsibilities**

* **Test Manager**: Overall responsibility for test planning and execution.
* **Test Engineers**: Responsible for writing test cases, executing tests, and reporting defects.
* **Developers**: Responsible for fixing defects and providing support during testing.

**12. Staffing and Training Needs**

* **Team Composition**: Detail the testing team members and their roles.
* **Training Requirements**: Mention any training that testers need to effectively carry out their responsibilities.

**13. Schedule**

* **Timeline**: Provide a timeline for testing activities, including test case development, execution, and reporting.
* **Milestones**: Key dates for completion of specific testing phases.

**14. Risks and Contingencies**

* **Potential Risks**: Identify risks such as resource limitations, tight deadlines, or unexpected technical issues.
* **Mitigation Strategies**: Outline strategies to mitigate these risks, such as having backup resources or a contingency plan.

**15. Approvals**

* **Stakeholders**: List the stakeholders who need to approve the test plan.
* **Sign-Offs**: Provide space for signatures and dates from stakeholders, indicating approval.

**16. References**

* **Documents**: List any reference documents used in preparing the test plan, such as requirement specifications, design documents, etc.

**Q2. Prepare test plan for an identified Mobile Application- Banking App**

**Test Plan for Mobile Banking Application**

**1. Introduction**

* **Objective:** The objective of this test plan is to outline the testing strategy, scope, resources, and schedule for testing the mobile banking application. The goal is to ensure that the application meets the specified requirements and is free of defects.
* **Scope:** This test plan covers functional, non-functional, security, and performance testing of the mobile banking application on both iOS and Android platforms.

**2. Test Items**

* **Application Features:** The main features to be tested include user registration and login, account management, fund transfers, bill payments, transaction history, notifications, and customer support.
* **Supported Platforms:** Testing will be conducted on various devices running iOS and Android with different screen sizes and OS versions.

**3. Features to be Tested**

* **Functional Features:**
  + User registration and authentication (login/logout)
  + Account balance inquiry and transaction history
  + Fund transfers between accounts
  + Bill payments and mobile recharge
  + Customer support via chat or call
  + Notifications and alerts
* **Non-Functional Features:**
  + Performance testing (load time, response time)
  + Usability testing (user interface, navigation)
  + Security testing (data encryption, secure login, and logout)
  + Compatibility testing (across different devices and OS versions)

**4. Features Not to be Tested**

* **Exclusions:**
  + Third-party integration tests (e.g., with payment gateways) as they are assumed to be tested independently.
  + Backend database testing, as this is covered under the server-side testing.

**5. Test Strategy**

* **Testing Levels:**
  + Unit Testing: Conducted by developers on individual components before integration.
  + Integration Testing: Focus on interactions between different modules.
  + System Testing: End-to-end testing of the entire application.
  + User Acceptance Testing (UAT): Conducted by end-users to validate the application meets their requirements.
* **Test Types:**
  + Functional Testing: Verification of all features as per the requirements.
  + Regression Testing: Ensuring that new changes do not adversely affect existing functionality.
  + Performance Testing: Load, stress, and scalability testing.
  + Security Testing: Focus on ensuring data protection, secure transactions, and vulnerability assessments.
  + Compatibility Testing: Testing on various devices, screen sizes, and OS versions.
  + Usability Testing: Evaluating the user interface and experience**.**

**6. Test Approach**

* **Testing Techniques:**
  + Black Box Testing: Focused on inputs and outputs without knowledge of internal code.
  + Manual Testing: Test cases executed manually by testers.
  + Automated Testing: Automation scripts for regression and performance testing.
* **Entry/Exit Criteria:**
  + Entry Criteria: Test environment setup, test data available, and application build received.
  + Exit Criteria: All test cases executed, all critical defects resolved, and test summary report prepared.
* **Test Environment:**
  + Devices: Multiple iOS and Android devices with varying screen sizes.
  + Network: Testing on different network conditions (Wi-Fi, 4G, 5G).
  + Tools: Use of tools like Appium for automation, JIRA for defect tracking, and Jenkins for CI/CD integration.

**7. Item Pass/Fail Criteria**

* **Criteria:**
  + A test case passes if the actual result matches the expected result.
  + A test case fails if the actual result does not match the expected result or if a critical defect is found.

**8. Test Deliverables**

* **Documents:**
  + Test Plan Document
  + Test Cases and Test Scripts
  + Test Execution Report
  + Defect Reports
  + Test Summary Report
* **Tools:** JIRA (for test management and defect tracking), Appium (for automation), Postman (for API testing), etc.

**9. Testing Tasks**

* Test Case Development: Writing detailed test cases covering all functional and non-functional aspects.
* Test Data Preparation: Gathering necessary test data for different scenarios.
* Test Execution: Executing test cases and logging defects.
* Defect Reporting: Logging defects with detailed steps to reproduce and severity levels.
* Regression Testing: Re-executing tests after fixes to ensure no new defects were introduced.

**10. Environmental Needs**

* Hardware: A variety of mobile devices (both Android and iOS) with different screen sizes and processing capabilities.
* Software: Necessary mobile operating systems, app versions, test management tools, and automation tools.
* Network: Simulate different network conditions, such as slow internet or no internet.

**11. Responsibilities**

* Test Manager: Responsible for overall test planning, resource allocation, and communication with stakeholders.
* Test Engineers: Write and execute test cases, log defects, and perform regression testing.
* Automation Engineers: Develop and execute automated test scripts.
* Developers: Fix defects and support the testing team during the testing process.
* UAT Team: Conduct User Acceptance Testing.

**12. Staffing and Training Needs**

* Team Composition: Includes Test Manager, Test Engineers, Automation Engineers, and UAT Team.
* Training Requirements: Training on specific tools (e.g., Appium), testing strategies, and domain knowledge related to banking.

**13. Schedule**

* **Timeline:**
  + Test Case Development: [Start Date] to [End Date]
  + Test Execution: [Start Date] to [End Date]
  + Regression Testing: [Start Date] to [End Date]
  + UAT: [Start Date] to [End Date]
* **Milestones:** Completion of test case writing, completion of test execution, defect fixing, and UAT sign-off.

**14. Risks and Contingencies**

* **Potential Risks:**
  + Delays in receiving the application build.
  + Incompatibility issues with certain devices.
  + Resource unavailability during critical phases.
* **Mitigation Strategies:**
  + Maintain a buffer time in the schedule.
  + Prioritize critical device testing first.
  + Have backup resources and devices available.

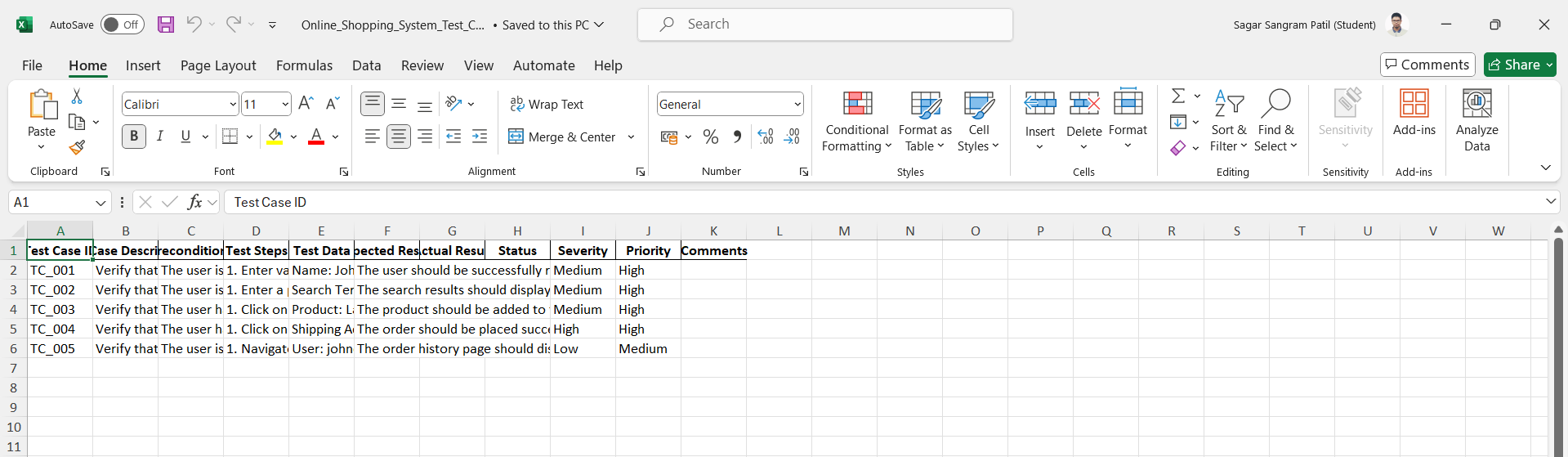
**15. Approvals**

* **Stakeholders:**
  + Test Manager
  + Project Manager
  + Development Team Lead
  + UAT Team Lead
* **Sign-Offs:** Signature and date from stakeholders indicating approval of the test plan.

**16. References**

* **Documents:**
  + Requirements Specification Document
  + Design Specification Document
  + Previous Test Plans
  + Regulatory Compliance Guidelines

**Q3. Create manual Test cases for Online Shopping system using Excel**

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**Q4. Create manual Test cases for Mobile Application – Banking App using Excel**

**A screenshot of a computer

Description automatically generated**