Test Approach for “Shop Apotheke” Web App

1. **Objective:**

The objective of this testing approach is to ensure the functionality, usability, performance & security of the “Shop Apotheke” web app and automate the app parts suitable, qualified & ready for automation. The testing process will cover various scenarios to identify and rectify defects before the application’s release to users.

1. **Scope**:

This testing approach covers functional, usability, performance security & automation testing of the App across multiple browsers (Google Chrome, Mozilla Firefox, Safari & Microsoft Edge), devices (desktops, tablets & mobile phones) and operating systems (MacOS, Windows, Linux, iOS & Android).

1. **Testing** **Phases**:
   1. Requirements Analysis:

* Review and analyze the project requirements, specifications, design documents.
* Consider comparing the app to other similar apps (Online pharmacies) or near-similar apps (Online shopping in general) in the market.
* Consider any prior/personal experience of the Tester.
* Identify test scenarios, acceptance criteria, and potential risks.
  1. Test Planning:
* Develop a detailed test plan outlining the testing scope, objectives, resources, schedule, and entry/exit criteria.
* Define the test environment, including hardware, software, and network configurations.
* Identify (in details) the testing tools and techniques to be used.
  1. Test Design:
* Develop high-level test cases for functional, usability, performance & security testing (taking into consideration the priority & severity for each).
* Depending on the time availability, develop detailed test cases for the (in scope) testing types.
* Create test data and identify preconditions for test execution.
* Design regression test suites for future releases & define their readiness for Automation.
  1. Test Execution:
* Execute test cases based on priority and severity.
* Log defects for any deviations from expected behavior.
* Perform regression testing (through test automation scripts) after bug fixes or feature enhancements.
  1. Usability Testing:
* May be conducted during the (Test Execution)
* Conduct usability testing with real users to evaluate the application’s user interface, navigation, and overall user experience.
* Gather feedback to make necessary improvements.
  1. Performance Testing:
* Conduct load testing (after the app functional verification) to assess the application’s behavior under normal and peak load conditions.
* Identify performance bottlenecks and optimize the app for scalability.
* Perform regression testing (through test automation scripts) after the performance optimization.
  1. Security Testing:
* Perform security testing (after the app functional verification) to identify vulnerabilities according to the “OWASP Top 10” list of security risks.
* Implement security best practices and encryption techniques.
* Perform regression testing (through test automation scripts) after the security optimization.

1. **Monitor & Reporting**:

* Document test results, including test case execution status, defects found, and performance/security/usability issues.
* Review the test objectives and coverage against the initial requirements.
* Prepare test summary reports and assess the overall testing process.
* Conduct a lessons learned session to improve future testing processes.
* Provide detailed reports to stakeholders regularly, highlighting progress and any concerns.

1. **Tools and Technologies:**

* Version Control: Git/Github
* Test Management: Jira, TestRail [or other Test Management tool].
* Test Automation: Cypress.
* Performance Testing: Apache JMeter [or other paid license tools].
* Security Testing: OWASP ZAP, Burp Suite [or other paid license tools].
* Browsers: Google Chrome, Mozilla Firefox, Safari, Microsoft Edge.

1. **Challenges and Risks:**

* Availability of diverse devices and browsers for testing.
* Availability of the needed human resources.
* Effect of bug fixes and retesting on the time schedule.
* Network issues affecting test execution.

1. **Conclusion**:

This test approach aims to ensure the “Shop Apotheke” web app's quality, functionality, and security before its release. Regular collaboration, continuous feedback, and a systematic testing approach will contribute to the successful delivery of a reliable web app.