TEST PLAN

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I/ Scope

This test plan should test an open-source software, that has been abandoned by its owner, and to see if the web server is stable enough to be used by a customer from Software Development Company (SDC). This web server will be used for Internet of Things applications.

Purpose - The purpose of this test plan is to know if the system fulfils the requirements as stated in the requirements and to make sure everyone outside the test team such as developers, business managers, and customers understand the details of testing.

Scope - Manual Testing will be used to test the different scenarios and use cases and Load Testing will be used to check if the web server can work under high load.

Goal - The goal of this test plan is to see if the server is suitable for SDC and find any kind of bugs that exists in the webserver.

II/ Test requirements

1. The web server should be responsive under high load.

2. The web server must follow minimum requirements for HTTP 1.1

3. The web server must work on Linux, Mac, Windows*.

4. The source code should be released under GPL-2.0.

5. The access log should be viewable from a text editor.

NOTE: Requirement 3 **will not** be tested on all Operating Systems.

III/ Test Approach

1) Test-level

The plan for this iteration is to perform manual tests to verify the current state of the web server application.

a) Compatibility Testing

Goal: The web server works on all the different operating systems in the requirements.

Approach: Deploy My Web server on three different operating systems.

Stop Condition: My Web server works in all of the operating systems.

b) Acceptance Testing

Goal: The web server should comply with the test requirements and should tell if the server is ready for deployment.

Approach: Run the web server and deploy the website

Stop Condition: All found issues have been addressed and solved.

c) Stress Testing

Goal: The web server works under heavy load.

Tool: JMeter.

Approach: Use JMeter to test the server under heavy load.

Stop Condition: When all tests have been executed under an acceptable time and all have been exposed.

d) Manual Testing

Goal: To find new bugs that only manual tests can.

Approach: Go through all the test cases.

Stop Condition: Every test case is completed and successful.

e) Unit Testing

Goal: To make sure functionality through JUnit

Approach: Execute each JUnit test suite.

Stop Condition: Each planned test have been executed and all issues have been exposed

2) Types of Testing

Manual Testing, Non-functional testing (Stress and Load Testing using JMeter, Compatibility Testing), JUnit testing

IV/ Roles and responsibilities of each team member

a) Test leader

Builds up and leads the Testing Team to a successful project, defining the scope of testing, deploying and managing resources for testing including test strategy and test plan.

b) Software Tester (x3)

Reads all the documents and understands what needs to be tested. Is responsible for conducting the testing, thereafter, analyse the results and then submit his observations to the development team and informs the Test Leader about what resources will be required for software testing.

V/ Risk Analysis

Risks:

1. The team has not enough knowledge on the web server.
2. Someone in the team gets sicks and slows down the working pace.
3. Only using manual testing can be more time consuming and sometimes more reckless where some bugs might not be spotted.
4. The human factor in the test executor can complicate the testing process.

A contingency plan to avoid risks:

1. Make sure that every single member in the team, gets their homework and research done beforehand.
2. Make sure that if you are sick get better as soon as possible and keep communicating to your team to see if someone can help you catch up or even fill in for you.
3. Make sure you use all the available tools and don't limit yourself to manual test cases.
4. Make sure that everybody inputs their own ideas and points of view so no mistakes are made because overthinking or lack of communication.

VI/ Prioritization

The testing team should first focus on the most important requirements that are necessary for the web server to work. The most important requirements, are first to try the internal system with Unit testing. Then the requirements 1, 2, 3 and 5 are the most important to check with the different possible use cases for instance that the web server should return an error message or specific messages that the company wants.