

# Test Plan

**Note:** Additional information can be found in the document: strategy.pdf.

## How will the tests be conducted?

- By looking at the requirements and Use Cases for the application, and then deriving test cases for them where each scenario is evaluated from a quality assurance perspective. Besides having the main scenarios tested, the alternative scenarios will also be evaluated to have a good understanding of the fail-safe coverage of the application.

## What is deemed as a successful test?

- When the requirement in the use case scenarios are fulfilled and work as intended. There might be some occasions where a use case may have one or several alternative paths, and those will too be evaluated according to the specs.

## How is testing done? (Techniques, motivation)

- Test if the software fulfills the requirements by performing:
  - **Black box testing** which helps find out how the server works without knowing the implementation details. It is also used in the sense of discovering issues of the application with the use of a web browser. An example of this is to use the knowledge of relative urls to try to access hidden resources (e.g., the file "secret.html").
  - **White box (glass box) testing**, which means looking at the source code to figure out how to emulate certain responses. For example, by finding out how to intentionally cause a "400 Bad Request" error by looking at the classes at the location: "se.lnu.http.response".
  - **Stress/load testing** to see how the software handles concurrent requests in different quantities.
  - **API testing** to evaluate the HTTP responses when sending HTTP requests, such as deliberately causing a "400 Bad Request" with the knowledge of white/glass box testing as described above.
  - **Explorative testing**, meaning that while evaluating the software and looking at the source code, new knowledge is acquired, and that knowledge will be used to write additional tests, which in its turn again gives us even better understanding of the system to derive further use cases.
  - **Write manual test cases** based on the knowledge gained from the above steps.
  - **Conduct the manual test cases and report all the results** in a test matrix in a separate document (testReport) which also includes a summary of the tests.
- **The testing level depends on the requirements.**

**Who tests**

- A single individual tester. Responsible for all testing activities, writing use cases etc.

**What is the general structure of the testing activity?**

- The file testCases.pdf will contain all test cases which are based upon the requirements that describes how each scenario is to work in optimal circumstances.
- When all necessary test cases have been added to the test cases document and are ready to be evaluated, the file testReport.pdf will contain the results of these tests. It will describe what test case was evaluated, what was the inputs, what was the outputs and if it succeeded or not. A summary of all test case results will be documented.

**What requirements will be tested?**

- All of those provided in the document [1].
- Additional use cases derived from the requirements.
- Further use cases derived from explorative testing.

**What requirements will NOT be tested?**

- All requirements will be tested, but if they are not applicable, for example in the case of a requirement needing a specific operative system, then they will be reported as "unknown". See the document: testCases.pdf for more information.

**How will the tests be conducted?****Discovery**

- By looking at the attributes of the requirements we can derive test cases for for example preconditions and postconditions, and also specific steps in scenarios - such as user input, which may be part of an use case (if applicable). In essence, the functionality to be tested will be based on how the software is expected to operate on a day-to-day basis.

**Delegation of work**

- When the test cases has been decided upon, one (in this case) or multiple testers will be assigned different test cases to verify its intended behavior.

**Reporting results**

- After all tests have been conducted, the results will be reported and will contain information such as which test cases were executed and the score of them (pass/fail).

**What are the test priorities?**

- First and foremost, the primary provided requirements must be fulfilled.

**Test schedule**

<b>Task to be completed</b>	<b>Estimated time of completion</b>
Organization and planning	6 hours
Write manual test cases	4 hours
Execution of tests incl. regression testing	5 hours
Resolving issues incl. debugging	6 hours
Additional time for unforeseen problems	2 hours

**References**

[1]: [https://docs.google.com/document/d/1fgQngHIZ4\\_aGIeB2S9YOBCghcBN9EEKBiaN-71MbGac/edit#](https://docs.google.com/document/d/1fgQngHIZ4_aGIeB2S9YOBCghcBN9EEKBiaN-71MbGac/edit#)