Digital BlackSmiths: Thutong LMS

Testing Policy Documentation

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Definition of Testing

Purpose

Testing serves as the basic measure of progress within the software development process. Therefore without testing software throughout the development cycle there is no form of progress which prove that developers have made an attempt to solving the problems specified by the customer or user.

Also, in situations where products need to ensure compliance with regulatory requirements, software testing can safeguard the organization from legal liabilities by verifying compliance. Such as protecting user data.

Goal

The main goal to testing is ensuring that Thutong LMS system software fulfils its requirements as stipulated in the systems requirement documentation.

The requirements to be meet include both functional and non-functional requirements which might way down the performance, security or any other system qualities.

Testing Tools

- Moodle Benchmark
    - this tool is a Moodle plugin that performs various performance factors of the system such as Server, Processor, Hard drive, Database and Loading page speed
    - the tool is downloaded from the Moodle website and is added as plugin
      https://moodle.org/plugins/report_benchmark
    - The tool simply requires one to go to "Site Administration > Reports > Benchmark" and select "Run Test"

- PHPUnit
    - It is an advanced unit testing framework for PHP (Moodle is primarily coded using PHP)
    - It is installed by installing composer, described in the steps on
      https://docs.moodle.org/dev/PHPUnit
    - It comes with ready-made test for Moodle but also has allowance for creating customised tests.

Test Cases

The test cases are described by each major functionality of the system:

- Creating User
- Login
- Completing Lesson and Quiz
- Removing account
- Advertisement Rendering
- Discussion Boards

Testing Process:

- Unit tests are executed after a new use case, functionality or plugin is implemented, added or edited
- Overall system performance (Benchmark) test is done monthly