System Test Specification

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Why do we need tests?

- To demonstrate that our software product matching its requirement specification
- To be ensured that the product will not crash during the usage
- To point out the defects and errors that were made during the development phases.

What kind of tests we will use

- Both white box and black box testing methodologies, because we need to use different testing levels
- Unit tests to check functionality of different system's components
- System testing to validate that the hole system works as it has to and as user expects it to work

Our testing plan

- Our development and testing process will be divided into 2 separate stages. Each of them will use suitable level of testing:
  - Active development of the system. On this stage mostly automatic unit tests will be used to check important project functions and security level
  - Alpha/Beta testing. On this stage the whole system will be examined for any error, security or performance problem using system testing

Unit testing

- Created using embed tool of Eiffel Studio
- Executed using Eiffel Studio
- Used to examine system's components
- Checks that system will not crash if user will pass incorrect input data
- Checks correctness of component's output

System testing

- Used on Alpha/Beta test stage
- Performed by real people
- Their goal is to use product in the worst case
- Used to examine product in overall
- Helps to find performance, UX and security problems

System’s aspects which we will test

- Performance - all queries and pages has to be processed in reasonable time
- Security - SQL queries escaping, admin’s site security
- Reliability - user shouldn’t meet any system crashes
- Correctness – all functions works as they have to
- Functionality – there are enough opportunity for user to use our product properly

Why exactly this plan of testing?

- There are many reasons. Here are some of them:
  - Cost. Our testing plan doesn’t require to spend money
  - Simplicity. It doesn’t require to learn any complex techniques
  - Reliability. Such plan of testing will cover almost the hole system
  - TDD. Usage of unit tests gives us an opportunity to use Test-driven development approach