

System Test Specification

Malyutkin Sergey
Arsenina Anna
Parkhomin Bogdan

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