

### SE 318 – SOFTWARE VERIFICATION AND VALIDATION

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UNIT TEST DOCUMENT

Version 2.0 05/01/2017

# **VERSION HISTORY**

There are three version of test cases.

You can see our progress below.

Version 2.0 were applied on our software which was Quiz Maker version 2.0.

Version 1.0 was our first try for test cases. It was the initial test runs.

Version 1.1 was enhanced of version 1.0. There is a minor difference between them.

Version 2.0 is our official test cases for the project. As we said above, it was used on the Quiz Maker ver. 2.0.

| Version<br># | Implemented<br>By | Revision<br>Date | Approved<br>By    | Approval<br>Date | Reason           |
|--------------|-------------------|------------------|-------------------|------------------|------------------|
| 1.0          | Onur Durukan      | 04/16/2017       | Batuhan Canlıtürk | 04/16/2017       | Test Cases draft |
| 1.1          | Begüm Özceylan    | 04/31/2017       | Onur Durukan      | 04/31/2017       | Drafts revision  |
| 2.0          | Batuhan Canlıtürk | 05/01/2017       | Begüm Özceylan    | 05/01/2017       | Final change on  |
|              |                   |                  |                   |                  | test cases       |

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|   |         |                                   |     |
|   | 001101  | HOLON                             | 4.0 |

#### 1 INTRODUCTION

#### 1.1 PURPOSE OF THE TEST CASE DOCUMENT

The Test Case document documents the functional requirements of the *Quiz Maker's* test cases. The intended audience is the project manager, project team, and testing team. Some portions of this document may on occasion be shared with the client/user and other stakeholder whose input/approval into the testing process is needed.

The Test Case documents are the main sources for keeping track of the test cases and for their results. They can be used for the future test.

#### 1.2 CONSTRAINTS

Quiz Maker version 2.0 is based on Java. Therefore, JUnit were used during the test runs.

#### 2 UNIT TEST FRAMEWORK: JUNIT

JUnit is a simple, open source framework to write and run repeatable tests. It is an instance of the xUnit architecture for unit testing frameworks. JUnit features include:

- Assertions for testing expected results
- Test fixtures for sharing common test data
- Test runners for running tests

It is already situated on Eclipse.

## 3 TEST CASES

| Test Case 1                              |            |  |
|--|------------|--|
| Test Definition                          |            |  |
| Testing getAnswer method of Answer class |            |  |
| Expected Value                           |            |  |
| Set value : "A"                          |            |  |
| Actual Value                             |            |  |
| "A"                                      |            |  |
| Result of Test Case                      | SUCCESSFUL |  |

| Test Case 2                          |            |  |
|--------------------------------------|------------|--|
| Test Definition                      |            |  |
| Testing getName method of Exam class |            |  |
| Expected Value                       |            |  |
| Set name: "Begum"                    |            |  |
| Actual Value                         |            |  |
| "Begum"                              |            |  |
| Result of Test Case                  | SUCCESSFUL |  |

| Test Case 3                        |            |  |
|------------------------------------|------------|--|
| Test Definition                    |            |  |
| Testing getID method of Exam class |            |  |
| Expected Value                     |            |  |
| Set ID: 318                        |            |  |
| Actual Value                       |            |  |
| 318                                |            |  |
| Result of Test Case                | SUCCESSFUL |  |

**Test Definition** 

Testing getPaper method of Exam class

**Expected Value** 

**Set paper to other exam paper (exam1)** 

**Actual Value** 

Exam1 paper

**Result of Test Case** 

SUCCESSFUL

**Test Case 5** 

**Test Definition** 

Testing getQuestions method of Exam class

**Expected Value** 

Set questions to exam1's questions

**Actual Value** 

**Exam1 questions** 

**Result of Test Case** 

SUCCESSFUL

**Test Case 6** 

**Test Definition** 

Testing getQuestionOrder method of Exam class

**Expected Value** 

Set questions to exam1's questions order

**Actual Value** 

**Exam1 questions order** 

Result of Test Case SUCCESSFUL

**Test Definition** 

Testing getMyAnswers method of Exam class

**Expected Value** 

Set answers to A, B, C, D, and E respectively.

**Actual Value** 

A, B, C, D, E

**Result of Test Case** 

SUCCESSFUL

**Test Case 8** 

**Test Definition** 

Testing solveExam method of Exam class

**Expected Value** 

After the exam is prepared, it should provide environment for solving exam.

**Actual Value** 

It runs and getting inputs correctly.

**Result of Test Case** 

SUCCESSFUL

**Test Case 9** 

**Test Definition** 

Testing prepareExam method of Exam class

**Expected Value** 

Preparing exam correctly; 5 shuffled questions for the paper.

**Actual Value** 

5 shuffled questions is ready.

**Result of Test Case** 

**Test Definition** 

Testing displayExam method of Exam class

**Expected Value** 

It should print the questions to console.

**Actual Value** 

All questions were printed.

**Result of Test Case** 

SUCCESSFUL

**Test Case 11** 

**Test Definition** 

Testing gradeExam method of Exam class

**Expected Value** 

Exam should be graded according to my answers.

**Actual Value** 

**Grade was calculated correctly.** 

**Result of Test Case** 

SUCCESSFUL

**Test Case 12** 

**Test Definition** 

**Testing getCorrect method of Question class** 

**Expected Value** 

Set correct answer: "C"

**Actual Value** 

"C"

Result of Test Case SUCCESSFUL

**Test Definition** 

**Testing getName method of Question class** 

**Expected Value** 

Set question name: "Question"

**Actual Value** 

"Question"

**Result of Test Case** 

SUCCESSFUL

**Test Case 14** 

**Test Definition** 

**Testing getAnswers method of Question class** 

**Expected Value** 

Set first answer : "Adana"

**Actual Value** 

"Adana"

**Result of Test Case** 

SUCCESSFUL

**Test Case 15** 

**Test Definition** 

**Testing constructor of Answer class** 

**Expected Value** 

Set answer: "Bolu" in constructor

**Actual Value** 

"Bolu"

Result of Test Case

**Test Definition** 

**Testing constructor of Question class** 

**Expected Value** 

Set name: "which one is above?" in constructor

**Actual Value** 

"which one is above?"

**Result of Test Case** 

SUCCESSFUL

**Test Case 17** 

**Test Definition** 

**Testing constructor of Exam class** 

**Expected Value** 

Set ID: 318 in constructor

**Actual Value** 

318

**Result of Test Case** 

SUCCESSFUL

**Test Case 18** 

**Test Definition** 

**Testing default constructor of Answer class** 

**Expected Value** 

Set answer: "no answer" in default constructor

**Actual Value** 

"no answer"

Result of Test Case

**Test Definition** 

**Testing default constructor of Question class** 

**Expected Value** 

Set name: "no question" in default constructor

**Actual Value** 

"no question"

**Result of Test Case** 

SUCCESSFUL

**Test Case 20** 

**Test Definition** 

Testing default constructor of Exam class

**Expected Value** 

Set name: "no name" in constructor

**Actual Value** 

"no name"

Result of Test Case

## 4 CONCLUSION

In the first phase, initial test cases were discussed and were designed according to our code. Enhancements were made and primary test cases were created. There are 20 test cases for the project. We tested the getter methods for the consistency. Along with the getters, setter methods were also checked implicitly. Both default and parametrized constructors were tested. Finally, all test cases passed successfully.