Test Management: Part I

Software Testing: INF3121 / INF4121

Summary

Test organisation

Independence | Tasks of the test leader and testers

Test planning and estimation

Activities | Entry and exit criteria | Estimation | Strategy and approach

Test progress monitoring and control

Configuration and management

Risk and testing

Part I: Close-ended questions

Independent Testing

Question 1

Why is independent testing important?

a. Independent testing is usually cheaper than testing your own work
b. Independent testing is more effective at finding defects
c. Independent testers should determine the processes and methodologies used
d. Independent testers are dispassionate about whether the project succeeds or fails

Question 2

Which of the following is an advantage of independent testing?

a. Independent testers don’t have to spend time communicating with the project team
b. Programmers can stop worrying about the quality of their work and focus on producing more code
c. The others on the project can pressure the independent testers to accelerate testing at the end of the test schedule
d. Independent testers sometimes question the assumptions behind the requirements, design and implementations

Testing Roles and Tasks

Question 3

According to the ISTQB glossary, what do we mean when we call someone a test manager?

a. A test manager manages a collection of test leaders
b. A test manager is the leader of a test team or teams
c. A test manager gets paid more than a test leader
d. A test manager reports to a test leader

Question 4

Which of the following is among the typical tasks of a test leader?

a. Develop system requirements, design specifications and usage models
b. Handle all test automation duties
c. Keep test cases and coverage hidden from programmers
d. Gather and report test progress metrics

Question 5

According to the ISTQB Glossary, what is a test level?

a. A group of test activities that are organised together
b. One or more test design specification documents
c. A test type
d. An ISTQB certification

Test Planning and Documents

Question 6

A test plan is written specifically to describe a level of testing where the primary goal is establishing confidence in the system. Which of the following is a likely name for the document?

a. Master test plan
b. System test plan
c. Acceptance test plan
d. Project test plan

Question 7

What is the primary difference between a test plan, test design specification, and test procedure specification?

a. The test plan describes one or more levels of testing, the test design specification identifies the associated high-level test cases and a test procedure specification describes the actions for executing a test
b. The test plan is for managers, the test design specification is for programmers and the test procedure specification is for the testers who are automating the tests
c. The test plan is the least thorough, the test procedure specification is the most through and the test design specification is midway between the two
d. The test plan is finished in the first third of the project, the test design specification is finished in the middle third of the project and the test procedure specification is finished in the last third of the project

Entry and Exit Criteria

Question 8

Entry criteria for testing means that the company management gave their OK to the development team to start the test activities

a. True
b. False

Question 9

The ISTQB Foundation Syllabus established a fundamental test process where test planning occurs early in the project, while test execution occurs later. Which of the following elements of the test plan, while specified during test planning, are assessed during test execution?

a. Test tasks
b. Environmental needs
c. Exit criteria
d. Test team training

Question 9: Example

Example using Entry and Exit criteria

Want to test *login* functionality for an imaginary website

We write test cases for two different scenarios

User already registered / User not registered

ID	Test Case	Preconditions	Input Test Data	Procedure	Expected Results
1	Test if registered user is able to log in successfully	User must be registered	Correct username	1. Enter input username and password	Login successful
			Correct password	2. Click "Login"	
2	Test if unregistered user is not able to log in	None	Incorrect username	1. Enter input username and password	Login failed
			Incorrect password	2. Click "Login"	

Question 9: Example

Example using Entry and Exit criteria

Use entry and exit criteria to assess the test effort

Entry criteria

Testing environment established?

Yes

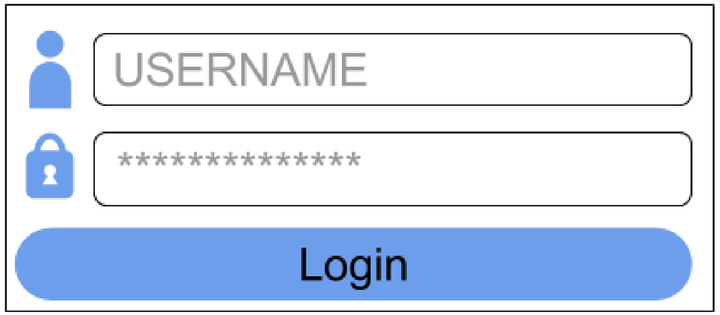
Graphical user interface in place

We choose manual testing

Adequate test data is available?

Valid username / Valid password

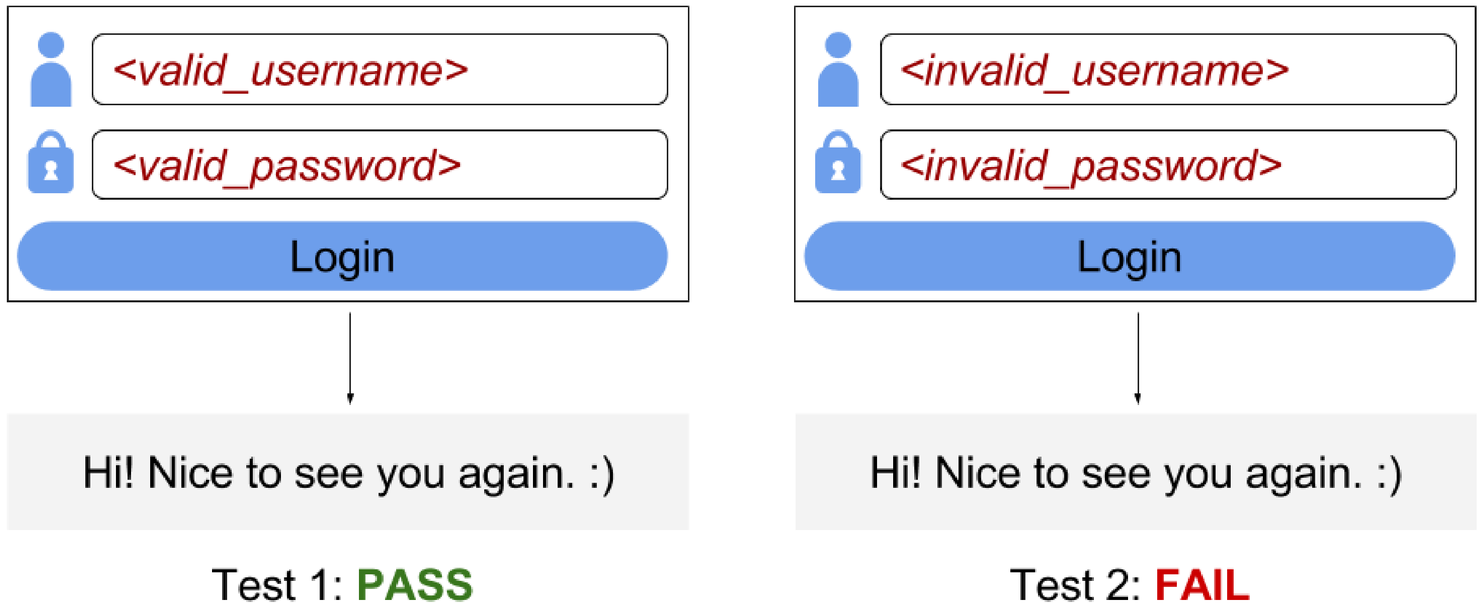
Invalid username / Invalid password



Question 9: Example

Example using Entry and Exit criteria

Assume we run the two tests, and get the following:



Must assess tests based on exit criteria

Question 9: Example

Example using Entry and Exit criteria

Use entry and exit criteria to assess the test effort

Exit criteria

All test cases (100 %) have been executed?

Yes → Both test 1 and test 2 have been executed

Failed cases have a satisfactory resolution?

Yes → Developers will fix the discovered defect

Defects were documented and reported?

Yes → Defect revealed by test 2 has been documented

New tests will be run once developers fix the discovered defect

Question 10

Consider the following exit criteria which might be found in a test plan. Which of these belong in an acceptance test plan?

1. No known customer-critical defects
2. All interfaces between components tested
3. 100 % code coverage of all items
4. All specified requirements satisfied
5. System functionality matches legacy system for all business rules

a. All statements belong in an acceptance test plan
b. Only statement 1 belongs in an acceptance test plan
c. Only statements 1, 2 and 5 belong in an acceptance test plan
d. Only statements 1, 4 and 5 belong in an acceptance test plan

Question 11

During test execution, the test manager describes the following situation to the project team:

- 90 % of the test cases have been run.
- 20 % of the test cases have identified defects.
- 110 defects have been found.
- 100 defects have been fixed and have passed confirmation testing.
- Of the remaining 10 defects, project management has decided that they do not need to be fixed prior to release.

Question 11

Which of the following is the most reasonable interpretation of this test status report?

a. The remaining 10 defects should be confirmation tested prior to release
b. The remaining 10 % of test cases should be run prior to release
c. The system is ready for release with no further testing or development effort
d. The programmers should focus their attention on fixing the remaining known defects prior to release

Question 12

The purpose of _____ criteria is to define when to stop testing, such as at the end of a test level or when a set of tests has a specific goal.

Question 13

The metrics for test progress monitoring can be collected both manually and automatically

a. True
b. False

Question 14

Pair the following roles with their typical activities

Tester	Evaluates the results of the execution of tests: Pass or fail
	Evaluates the exit criteria and gives recommendations based on it: Continue testing or stop
	Introduces metrics for measuring the test progress
Test Leader	Test data: Acquires it and prepares it
	Writes test summary reports for management
	Writes automated tests

Part II: Exercises and Open-ended questions

Exercise 1

Describe briefly what is meant by the following test approaches (strategies)

a. Analytical approach
b. Model-based approach
c. Methodical approach
d. Process- or standard-compliant approach
e. Dynamic and heuristic approach
f. Consultative approach
g. Regression-averse approach

Is one approach better than the other? Why, why not? Which do you prefer?

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