



Software Testing

Lecture 22

Test Management

Chapter 6:
Test Management

Test Management

❖ Why do we need test management?

- Quality products
- Meeting deadlines



Test Management

- ❖ **Important part of s/w quality is the process of testing and validating**
- ❖ **Process of managing testing activities**
- ❖ **Goal is to allow teams to plan, develop, execute and assess all the testing activities within the overall software development effort.**
- ❖ **Test management challenges:**
 - Why should I test?
 - What should I test?
 - Where do I test?
 - When do i test?
 - How do I conduct the test?
 - Not enough time or resources to test?
 - Testing teams are not always at one place
 - Difficulties with requirements
 - Keeping in sync with development
 - Reporting the right information

Test Management Process

- ❖ Test Organization
- ❖ Test Planning
- ❖ Costs and Economy Aspects
- ❖ Choosing the test strategy and test approach
- ❖ Managing the test work
- ❖ Incident management

1- Test Organization

Test Teams:

- ❖ Testing activities are necessary
- ❖ Developer test
- ❖ Blindness to one's own errors
- ❖ Independent testing
- ❖ Reporting of failures
- ❖ Mutual comprehension

2- Independent testing

❖ Why need independent testing?

Benefits:

- ❖ Improved Software Quality
- ❖ Experienced and Skilled Manpower
- ❖ Lower Costs
- ❖ Reduced Time to Market
- ❖ Flexibility

Independent testing

Drawbacks:

- ❖ Too much isolation
- ❖ Communication problems
- ❖ Lack of necessary resources
- ❖ Developers may lose sense of responsibility

Models of Independent Testing

- ❖ Testing done by developer himself
- ❖ Independent testers ceded to the development team
- ❖ Independent Testing Team within Organization
- ❖ Independent Testers of different Organization
- ❖ Outsourced test team members of other organization

3- Tasks and Qualifications

Specialists with knowledge covering the full scope of activities in the test process should be available. The following roles should be assigned:

- ❖ **Test manager (test leader):** Test planning and test control expert(s), possessing knowledge and experience in the fields of software testing, quality management, project management, and personnel management.
- ❖ **Test designer (test analyst):** Expert(s) in test methods and test specification, having knowledge and experience in the fields of software testing, software engineering, and (formal) specification methods.
- ❖ **Test automator:** Test automation expert(s) with knowledge of testing basics, programming experience, and deep knowledge of the testing tools and script languages. Automates tests as required, making use of the test tools available for the project.
- ❖ **Test administrator:** Expert(s) for installing and operating the test environment (system administrator knowledge). Sets up and supports the test environment
- ❖ **Tester:** Expert(s) for executing tests and reporting failures (IT basics, basic knowledge of testing, using the test tools, understanding the test object).

Tasks and Qualifications

Tester:

Typical tasks are as follows:

- ❖ Reviewing test plans and test cases
- ❖ Using test tools and test monitoring tools (for example, to measure performance)
- ❖ Executing and logging tests, including evaluating and documenting
- ❖ The results and detected deficiencies

Social Competence for Tester

To be successful, in addition to technical and test-specific skills, a tester needs social skills:

- ❖ Ability to work in a team, and political and diplomatic aptitude
- ❖ Skepticism (willingness to question apparent facts)
- ❖ Self control and Persistence
- ❖ Accuracy and creativity
- ❖ Ability to get quickly use to with (complex fields of) application

► Questions and Answers



