

What is Software Testing?

- Software Testing is a process that consists of all test life cycle activities like static and dynamic testing, planning, preparation and evaluation of software products to determine that the software products satisfy customers requirements and are fit for customers use.
- Software Testing is done to find software defects or failures in advance.

ISTQB definition of Software Testing

As per ISTQB software testing can be divided into two parts.

1. Testing as a process

- Testing is a process
- Testing is both static & dynamic
- Planning
- Preparation
- Evaluation
- Software products & related work products

2. Objectives of testing

- Determine that Software meets product requirements
- Determine that software is fit for use
- Find defects/bugs in software

Testing as a process

1. Testing is a process

- Testing is not a standalone activity
- It is a series of activities.

For example - Software Testing is done in all phases of SDLC. Testers start with static testing which includes reviewing the documents like Software Requirements Specifications(SRS), High Level Design(HLD) etc. and in later phases of SDLC when tester gets the working build he installs the software and validates that the software functions as per the end user requirements.

2. Testing is both Static & Dynamic

Testing involves both Static and Dynamic verification

- In initial phases of SDLC static testing is done
 - Technical Reviews
 - Walkthrough
 - Inspection
 - Static Code Analysis
- Once the build is available to tester he starts dynamic testing and validates that software meets customer requirements
 - Unit Testing
 - Integration Testing
 - System Testing
 - Acceptance Testing

3. Planning

Test planning is the most important part for testing.

You need to plan for:

- What you want to achieve?
- Who will do what?
- Time frame of testing
- Control the test progress
- Prepare test summary reports

4. Preparation

Once plan has been finalized you need to do test preparation.

- Prepare test cases
- Prepare test environment
- Prepare test data

5. Evaluation

While test execution you also need to evaluate the software and make sure that:

- It meets the exit criteria
- It is easy to use (Usability testing)
- Meets end user requirements

6. Software products and related work products

Software testing is not just about testing the software code. It requires testing all the related documents like:

- Software requirements documents(SRS)
- Design documents(HLD/LLD)
- Quick reference guide
- Training materials
- User guides
- Installation guide

And any other related products

Objectives of Testing

1. Determine that software meets end user requirements

- Software Testing also checks products against requirements
- HLD is reviewed to make sure that it meets requirements and validation of software is done to ensure it meets the design and requirements
- Testing ensures that product meets its specification and helps stakeholders to make release decisions

2. Demonstrate that Software is fit for use

- Software Testing also demonstrates that the software is fit for use.
- Testing is done to ensure that software is fit for use for the end users who will be using the software.
- It ensures that the software does what users expect it to do.

3. Find Defects/Bugs in software

- Software testing detects the defects/bugs in software
- Fixing those defects improves the quality of software
- By doing root cause analysis of defects found by testing, improves the software development process

Conclusion

To conclude, in this session we learned

- What is Software Testing
- ISTQB definition of Software Testing
- Detailed explanation of Software Testing

Thank You!!!