Utilization of testing tool

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Software Testing tools are the tools which are used for the testing of software. Software testing tools are often used to assure firmness, thoroughness and performance in testing software products. Unit testing and subsequent integration testing can be performed by software testing tools. These tools are used to fulfill all the requirements of planned testing activities. These tools also works as commercial software testing tools. The quality of the software is evaluated by software testers with the help of various testing tools.

Types of Testing Tools:

As software testing is of two types, static testing and dynamic testing. Also the tools used during these testing are named accordingly on these testings. Testing tools can be categorized into two types which are as follows:

1. Static Test Tools

2. Dynamic Test Tools

These are explained in detail as following below:

1. Static Test Tools:

Static test tools are used to work on the static testing processes. In the testing through these tools, typical approach is taken. These tools do not test the real execution of the software. Certain input and output are not required in these tools. Static test tools consists of the following:

- **Flow analyzers:**

  Flow analyzers provides flexibility in data flow from input to output.

- **Path Tests:**

  It finds the not used code and code with inconsistency in the software.

- **Coverage Analyzers:**

  All rationale paths in the software are assured by the coverage analyzers.

- **Interface Analyzers:**

  They check out the consequences of passing variables and data in the modules.

2. Dynamic Test Tools:

Dynamic testing process is performed by the dynamic test tools. These tools test the software with existing or current data. Dynamic test tools comprises of the following:

- **Test driver:**

  Test driver provides the input data to a module-under-test (MUT).

- **Test Beds:**

  It displays source code along with the program under execution at the same time.

- **Emulators:**

  Emulators provides the response facilities which are used to imitate parts of the system not yet developed.

- **Mutation Analyzers:**

  They are used for testing fault tolerance of the system by knowingly providing the errors in the code of the software.

  Mobile/android testing tool

We can use this type of tool when we are testing any mobile application. Some of the tools are open-source, and some of the tools are licensed. Each tool has its functionality and features.

For more details about the mobile or android testing tool, refers to the below link: Click Here

GUI testing tool:

GUI testing tool is used to test the User interface of the application because a proper GUI (graphical user interface) is always useful to grab the user's attention. These type of tools will help to find the loopholes in the application's design and makes its better.

For more details about GUI testing tool, refers the below link: Click Here

Security testing tool:

The security testing tool is used to ensure the security of the software and check for the security leakage. If any security loophole is there, it could be fixed at the early stage of the product. We need this type of the tool when the

software has encoded the security code which is not accessible by the unauthorized users.

Benefits of software testing tools

Software testing tools offer many benefits for developers, testers, and QA teams.

- Higher product quality. Software testing tools help deliver higher quality applications by improving the accuracy of tests, increasing the coverage of code that is tested, accelerating the pace of testing, and delivering feedback to developers earlier in the process.
- Improved security. Cybercrime is a substantial threat to organizations large and small, and software vulnerabilities are a significant target for malicious actors. Software testing tools help ensure that applications are free of flaws and vulnerabilities that can be exploited by hackers, protecting companies, their users, partners, and customers from exposure to cyber criminals.
- More cost-effective development. By uncovering defects and design issues earlier in the software developer lifecycle, software testing tools enable developers to fix bugs more easily and cost-effectively.

7.1 Types of Test Tools

- Test Tool Classification
- Tool Support for Management of Testing
- Tool Support for Static Testing
- Tool Support for Test Specification
- Tool Support for Execution and Logging
- Tool Support for Performance and Monitoring
- Tool Support for Specific Application Areas
- Tool Support using other tools