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**Levels of Testing in Software Testing**

**What are the levels of testing?**

A level of software testing is a process where every unit or component of a software/system is tested. The main goal of system testing is to evaluate the system's compliance with the specified needs.

There are many different testing levels which help to check behavior and performance for software testing. These testing levels are designed to recognize missing areas and reconciliation between the development lifecycle states. In SDLC models there are characterized phases such as requirement gathering, analysis, design, coding or execution, testing, and deployment.

All these phases go through the process of software testing levels. There are mainly four testing levels are:

1. Unit Testing
2. Integration Testing
3. System Testing
4. Acceptance Testing

Each of these testing levels has a specific purpose. These testing level provide value to the software development lifecycle.

1) [**Unit testing:**](https://www.guru99.com/unit-testing-guide.html)

A Unit is a smallest testable portion of system or application which can be compiled, liked, loaded, and executed. This kind of testing helps to test each module separately.

The aim is to test each part of the software by separating it. It checks that component are fulfilling functionalities or not. This kind of testing is performed by developers.

2) [**Integration testing:**](https://www.guru99.com/integration-testing.html)

Integration means combining. For Example, In this testing phase, different software modules are combined and tested as a group to make sure that integrated system is ready for system testing.

Integrating testing checks the data flow from one module to other modules. This kind of testing is performed by testers.

3) [**System testing:**](https://www.guru99.com/system-testing.html)

System testing is performed on a complete, integrated system. It allows checking system's compliance as per the requirements. It tests the overall interaction of components. It involves load, performance, reliability and security testing.

System testing most often the final test to verify that the system meets the specification. It evaluates both functional and non-functional need for the testing.

4) [**Acceptance testing:**](https://www.guru99.com/user-acceptance-testing.html)

Acceptance testing is a test conducted to find if the requirements of a specification or contract are met as per its delivery. Acceptance testing is basically done by the user or customer. However, other stockholders can be involved in this process.

**Conclusion:**

* A level of software testing is a process where every unit or component of a software/system is tested.
* The primary goal of system testing is to evaluate the system's compliance with the specified needs.
* In Software Engineering, four main levels of testing are Unit Testing, Integration Testing, System Testing and Acceptance Testing.