

Functional Testing Vs Non-Functional Testing

In previous articles we have seen separate articles for Functional Testing & Non-Functional testing. But in today's article we will see the actual difference between Functional Testing Vs Non-Functional Testing.

What is Functional Testing?

Functional Testing is the type of testing done against the business requirements of application. It is a black box type of testing.

It involves the complete integration system to evaluate the system's compliance with its specified requirements. Based on the functional specification document this type of testing is to be carried out. In actual testing, testers need to verify a specific action or function of the code. For functional testing either manual testing or automation tools can be used but functionality testing would be easier using manual testing only. Prior to non Functional testing the Functional testing would be executed first.

Five steps need to be keeping in mind in the Functional testing:

1. Preparation of test data based on the specifications of functions
2. Business requirements are the inputs to functional testing
3. Based on functional specifications find out of output of the functions
4. The execution of test cases
5. Observe the actual and expected outputs

To carry out functional testing we have numerous tools available, here is the list of Functional testing tools.

In the **types of functional testing** following testing types should be cover:

- Unit Testing
- Smoke testing
- Sanity testing
- Integration Testing
- Interface Testing
- System Testing
- Regression Testing
- UAT

What is non Functional Testing?

The non Functional Testing is the type of testing done against the **non functional requirements**. Most of the criteria are not consider in functional testing so it is used to **check the readiness of a system**. Non-functional requirements tend to be those that reflect the quality of the product, particularly in the context of the

suitability perspective of its users. It can be started after the completion of Functional Testing. The **non functional tests** can be effective by using testing tools.

The testing of software attributes which are not related to any specific function or user action like performance, scalability, security or behavior of application under certain constraints.

Non functional testing has a great influence on customer and user satisfaction with the product. Non functional testing should be expressed in a testable way, not like "the system should be fast" or "the system should be easy to operate" which is not testable.

Basically in the non functional test is used to major **non-functional attributes of software systems**. Let's take **non functional requirements** examples; in how much time does the software will take to complete a task? or how fast the response is.

Following testing should consider in **non functional testing types**:

- Availability Testing
- Baseline testing
- Compatibility testing
- Compliance testing
- Configuration Testing
- Documentation testing
- Endurance testing
- Ergonomics Testing
- Interoperability Testing
- Installation Testing
- Load testing
- Localization testing and Internationalization testing
- Maintainability Testing
- Operational Readiness Testing
- Performance testing
- Recovery testing
- Reliability Testing
- Resilience testing
- Security testing
- Scalability testing
- Stress testing
- Usability testing
- Volume testing

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