

Software Testing (An Enrichment towards Quality)

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Definition:

It is an active process to check whether deliverable product(S/W) matches expected requirements with assurance that deliverable product (S/W) is defect free.

Need:

A study conducted by NIST (National Institute of Standards & Technology) states that overall 1/3 of budget is wasted due to softawre buges therefore software testing is necessary.

It is important to check the severity of the error & its adverse effect.

Testing technique

It is usually 5 dimension system for any kind of testing & they are as follows:

i) Tester

It is a human element which performs testing.

ii) Coverage

It is talk about components to be getting covered.

Iii) Threats (Potential problems)

It is source of probelm

Iv) Activity

It is plan for testing (way to & how to test)

v) Evaluation

It is all about comparing results if testing is successful or anti of it.

Software Testing Technique (Method)

It all depends upon requirements of software to choose a suitable software technique , there are several types of testing technique available but we focus on:

I) Black Box Testing

II) White Box Testing

I) Black Box Testing

i) It is one of software testing technique (method) where , the tester analysis the functionality without knowing its internal design .

ii) It is also called as specification testing technique.

Iii) Example :

Equivalence partition

Boundary value analysis

Error Guessing

II) White box Testing

i) It is one of another software testing technique (method) where, the tester should be knowledgeable of internal design & analyzes during testing .

ii) It is also called as structural testing technique

iii) Example :

Statement coverage

Branch coverage

Path coverage

Software Testing Terms

The following terms are commonly used in software testing :

1) Debugging

2) Testing

3) Review

1) Debugging

i) It is a part of the development process that identifies , analyzes and remvoes error .

ii) It is conducted by developers.

2) Testing

i) It is process of the activity of identifying defects .

ii) It is performed by tester.

3) Review

i) It can be performed on deliverables such as documents , code and test cases .

ii) It is also known as a static testing technique where one should not required executing the code.

Role of software testing

Every software testing bonded by following

1) Identify defects

2) meet users requirment

- 3) increase quality
- 4) Reduce failures

Advantages

It is a process rather than a activity which has following advantages :-

i) Customer satisfaction :

The main aim of software testing is to give best user experience for deliverable product. This can be achieved through software testing.

ii) Quality definiteness :

The software testing will ensures a quality deliverable product is given to customers.

iii) Minimize security vulnerabilities:

Insecure software can leave vulnerabilities that can cause the source for delivering the malicious code , which can be prevented with proper software testing.

iv) Early stage defect identification:

Software testing is imperative process which identifies defects in the deliverable product so it can be fixed before it is delivered.

v)cost effective

It is cost effective i.e. many times findind & fixing bug in software developemnt process may results into another defect , if these defect identified in early defect identification stage then testing cost may be at lower side.

Conclusion:

As we know any user who uses the software product do except it as an error free or defect – free, With the help software testing it will ensure that quality assurance factor will improved .