Error Guessing in Software Testing

Software application is a part of our daily life. May be in laptop or may be in our mobile phone, or it may be any digital device/interface our day starts with the use of various software applications and also ends with the use of various software applications. That's why software companies are also trying their best to develop good quality error free software applications to the users.

So when a company develops any software application software testing plays a major role in that. Testers not only test the product with a set of specified test cases they also test the software by coming out of the testing documents. There the term error guessing comes which is not specified in any testing instruction manual still it is performed. So in this article we will discuss about that error then error guessing, where and how it is performed. The benefits that we get by performing it. So let's start the topic.

Actually an error appears when there is any logical mistake in code by developer. And It's very hard for a developer to find an error in large system. To solve this problem Error guessing technique is used. Error guessing technique is a software technique where test engineer guesses and try to break the software code. Error Guessing technique is also applied to all of the other testing techniques to produce more effective and workable tests.

What is the use of Error Guessing ?

In software testing error guessing is a method in which experience and skill plays an important role. As here possible bugs and defects are guessed in the areas where formal testing would not work. That's why it is also called as experience based testing which has no specific method of testing. This is not a formal way of performing testing still it has importance as it sometimes solves many unresolved issues also.

Where or how to use it ?

Error guessing in software testing approach which is a sort of black box testing technique and also error guessing is best used as a part of the conditions where other black box testing techniques are performed, for instance, boundary value analysis and equivalence split are not prepared to cover all of the condition which are slanted to error in the application.

Advantages and Disadvantages of Error Guessing Technique :

Advantages :

- It is effective when used with other testing approaches.
- It is helpful to solve some complex and problematic areas of application.
- It figures out errors which may not be identified through other formal testing techniques.
- It helps in reducing testing times.

Disadvantages :

- Only capable and skilled tests can perform.
- Dependent on testers experience and skills.

- Fails in providing guarantee the quality standard of the application.
- Not an efficient way of error detection as compared to effort.
- Drawbacks of Error Guessing technique:
- Not sure that the software has reached the expected quality.
- Never provide full coverage of an application.

Factors used in error guessing :

1. Lessons learned from past releases.
2. Experience of testers.
3. Historical learning.
4. Test execution report.
5. Earlier defects.
6. Production tickets.
7. Normal testing rules.
8. Application UI.
9. Previous test results.

Error Guessing is one of the popular techniques of testing, even if it is not an accurate approach of performing testing still it makes the testing work simple and saves a lots of time. But when it is combined with other testing techniques we get better results. In this testing, it is essential to have skilled and experienced testers.

Compatibility testing :

Compatibility testing is software testing which comes under the non functional testing category, and it is performed on an application to check its compatibility (running capability) on different platform/environments. This testing is done only when the application becomes stable. Means simply this compatibility test aims to check the developed software application functionality on various software, hardware platforms, network and browser etc. This compatibility testing is very important in product production and implementation point of view as it is performed to avoid future issues regarding compatibility.

Types of Compatibility Testing :

Several examples of compatibility testing are given below.

1. Software :

- Testing the compatibility of an application with an Operating System like Linux, Mac, Windows
- Testing compatibility on Database like Oracle SQL server, MongoDB server.
- Testing compatibility on different devices like in mobile phones, computers.

Types based on Version Testing :

There are two types of compatibility testing based on version testing

1. **Forward compatibility testing :** When the behavior and compatibility of a software or hardware is checked with its newer version then it is called as forward compatibility testing.
2. **Backward compatibility testing :** When the behavior and compatibility of a software or hardware is checked with its older version then it is called as backward compatibility testing.

2. Hardware :

Checking compatibility with a particular size of

- RAM
- ROM
- Hard Disk
- Memory Cards
- Processor
- Graphics Card

3. Smartphones :

Checking compatibility with different mobile platforms like android, iOS etc.

4.Network :

Checking compatibility with different :

- Bandwidth
- Operating speed
- Capacity

Along with this there are other types of compatibility testing are also performed such as browser compatibility to check software compatibility with different browsers like Google Chrome, Internet Explorer etc. device compatibility, version of the software and others.

So for now we have known the uses of compatibility in different fields. Now the question rises is HOW TO PERFORM A COMPATIBILITY TEST?

How to perform Compatibility testing ?

Testing the application in a same environment but having different versions. For example, to test compatibility of Facebook application in your android mobile. First check for the compatibility with Android 9.0 and then with Android 10.0 for the same version of Facebook App.

Testing the application in a same versions but having different environment. For example, to test compatibility of Facebook application in your android mobile. First check for the compatibility with a Facebook application of lower version with a Android 10.0(or your choice) and then with a Facebook application of higher version with a same version of Android.

Why compatibility testing is important ?

1. It ensures complete customer satisfaction.
2. It provides service across multiple platforms.
3. Identifying bugs during development process.

Compatibility testing defects :

1. Variety of user interface.

2. Changes with respect to font size.
3. Alignment issues.
4. Issues related to existence of broken frames.
5. Issues related to overlapping of content.