

What is testing ?

The testing is a process of identifying the bugs, errors or the defects in the software or the code . It is used to check that the project or the product is satisfying the requirement of the client or the end user, this is known as testing.

Objectives of testing

The main objective of testing is

1. Ensuring the quality of the project / product /software
2. To find the problems and mistakes or issues before it causes any trouble
3. Making sure it's easy to understand and easy to use
4. Ensuring the correctness in the project or the product
5. Ensuring the safety and security
6. Ensuring the product is bug free before we hand it over to the client

Why should we do testing ?

- To catch the problems early and ensure there are no mistakes in the software/ product/project
- To ensure the developed product /software/project is very good quality
- It is used to detect the bugs early so that it would be cost effective
- Testing reduces the risk of the product failure .
- Testing helps find vulnerabilities and security risks, ensuring the product is safe for users
- It ensures the product is safe for the users and the data is protected

What is software testing ?

SOFTWARE : in simple words it is the collection of all the codes and merging them all into a one code in the application or an app it is known as software.

Software testing is the process of evaluating and verifying that a software application or system meets specified requirements and works as expected.

It ensures the good quality product or to improve the quality of the product.

There are two types of testing

1. Manual testing : Performed by human testers without automation.
2. Automated testing : Uses scripts and tools to execute tests automatically.

What is quality product ?

It is defined as the justification of all the requirements of the customer in an application or a software to ensure a bug free software and to satisfy the requirements of the client and for the 100% justification to for the application.

Need for the software testing ?

- In order to deliver a good quality software /application/project/product
- To satisfy the requirements of user or a client or end user
- To make the developed software more reliable
- In order to avoid the negative feedback from the clients
- Complies with industry standards and regulations.

PROJECT

If the software is developed based on requirements of the specific customer or a client then it is called as a project.

PRODUCT

If the software is developed on based on the requirement of multiple customers in the market then it is called as product.

What is an error ?

It is an incorrect human action that produces a false output in an software or an application.

What is bug ?

It is the deviation from expected behaviour to actual behavior of the system it known as bug.

What is failure ?

It is the complete deviation from the actual behaviour of the software or the application in a system it is called as a failure.

Why software has the bugs ?

- miscommunication between the team members
- Software complexity or a too lengthy software
- Too many changing requirements from the clients
- Lack of programming skills of a developer
- Lack of skilled testers
- Lack of collaboration between the team

What is SOFTWARE DEVELOPMENT LIFE CYCLE : (SDLC)

It describes the sequence of phases or steps that involved to develop any software from beginning to ending

In an simple words entire lifetime of software from beginning to ending

There are seven major steps involved in the (SDLC)

1. **Planning** – Define project scope, feasibility, and resources.
2. **Requirement Analysis** – Gather and document software needs.
3. **Design** – Create system architecture and UI/UX.
4. **Development** – Write and implement the code.
5. **Testing** – Identify and fix defects through various tests.
6. **Deployment** – Release the software for users.
7. **Maintenance** – Provide updates, bug fixes, and improvements.

