**SOFTWARE TESTING**

**What is Testing?**

Testing is a process of executing programs with the aim of finding errors.

**Principles of Testing**

* All the test should meet the customer requirements.
* All the test to be conducted should be planned before implementing it.
* It follows the pareto rule (80/20 rule).
* Start testing with small parts and extend it to large parts.

**Types of Testing**

1. **Unit Testing:** In this, we test an individual unit or group of interrelated units.

**2. Integration Testing:**  Integration testing is testing in which a group of components is combined to produce output.

**3. Regression Testing:** This testing makes sure that the whole component works properly even after adding components to the complete program.

**4. Smoke Testing:** This test is done to make sure that software under testing is ready or stable for further testing.

**5. Alpha Testing:** It is a type of acceptance testingwhich is done before the product is released to customers.

**6. Beta Testing:** The beta test is conducted at one or more customer sites by the end-user of the software. This version is released for a limited number of users for testing in a real-time environment.

**7. System Testing:** In this, we just focus on the required input and output without focusing on internal working.

**8. Stress Testing:** In this, we give unfavorable conditions to the system and check how they perform in those conditions.

**9. Performance Testing:** In it we check, what is the performance of the system in the given load.

**10. Object Oriented Testing:** This testing is a combination of various testing techniques that help to verify and validate object-oriented software. This testing is done in the following manner:

* Testing of Requirements
* Design and Analysis of Testing
* Testing of Code
* Integration testing
* System testing
* User Testing