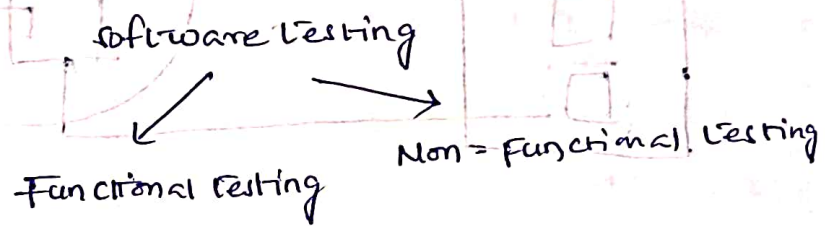1) Explain different types of testing?

g:- Software testing:- It is the process of evaluating and verifying that a software product/application does what it is supposed to do.

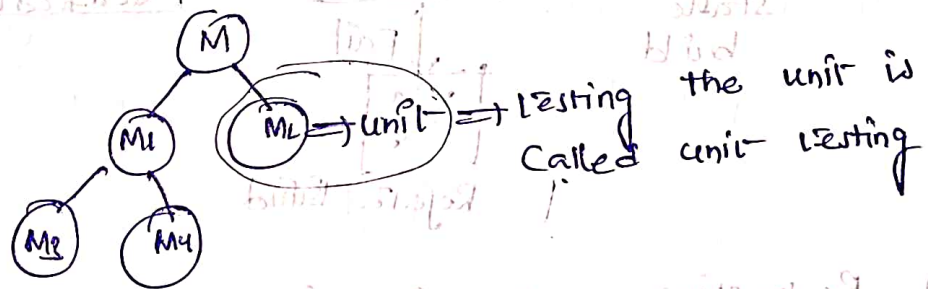The benifits of software testing include preventing bugs, reducing deployment cost and improving performance
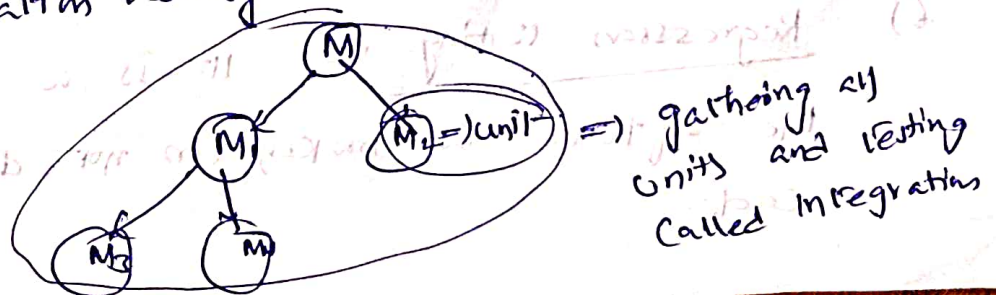
Types of software testing :-

software testing
Functional testing   Non-Functional testing

Functional testing,- Functional testing is the process, of that is used to test the feautres/functions of the software
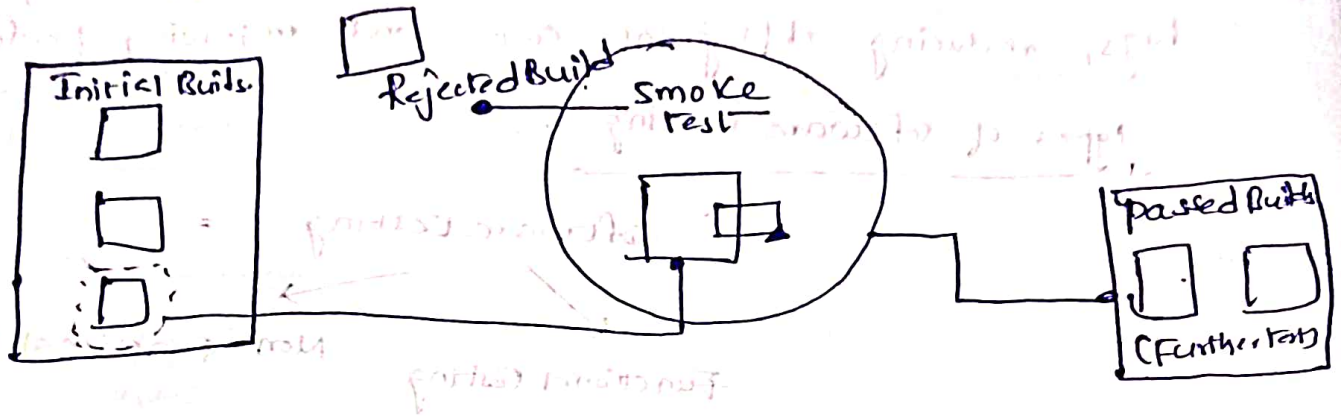
Types of Functional testing : -

1. unit testing :- unit testing is the process of testing an individual module (unit in a software

M
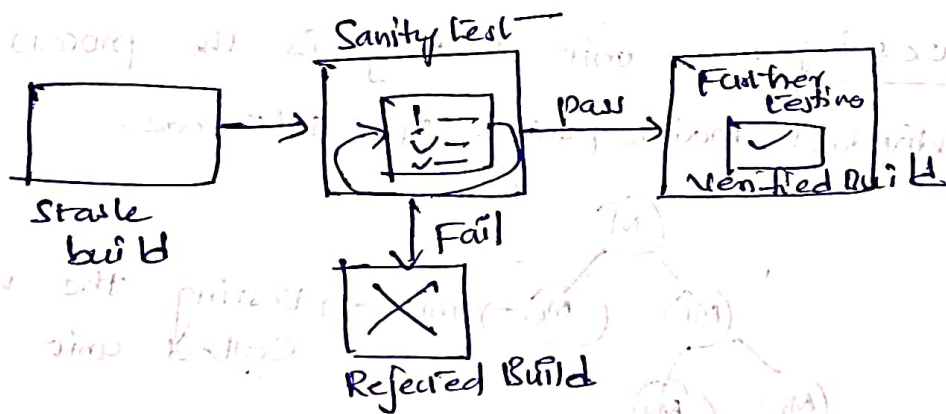M1   ML=>unit => testing the unit is Called unit testing
M2   M4

2. Integration testing :- It is the process of combining/ gathering all unit tests and then testing overall called as integration testing

M
M   M2=>unit => gathering all units and testing
M3   M   Called integration

3) Smoke testing :- It is also called as Build verification testing / Build acceperance testing. It is typically performed at the beginning of the development-process to ensure that the most critical functions of an software applicatn are working correctly.

Initial Builds.

Rejected Build
Smoke test

Passed Builts
(Further testg)

4) Sanity testing :- It aims to quickly evaluate whether the basic functionality of a new software build is working correctly (or) not.

Stable build

Sanity test

Pass

Further testing
Verified Build

Fail

Rejected Build

5) Re-testing :- Retesting is the process of executing a previously failed test against new software to check if the problem is resolved.

6) Regression testing :- It is a process of checking the software is broken (or) not due to changes in code

7) **Exploratory testing:-** Testing without any documents (cases/step) and Identify the functionality of an application. by exploring the application.

9) **Monkey testing :-** The process of testing system under test randomly. The input data that is used to test also generated randomly.

9) **End to End testing:-** Testing the application whether the flow from start to end is same as designed.

10) **ADHOC testing :-** The testing is done without a predefined test plan, relying on experience, intuition, and creativity to identify defects and issues.

Non-functional testing :-

Non-functional testing is a software testing technique that checks the non-functional attributes of the system.

Types :-

1. **Security testing !-** It is basically to check whether the application / product is secured (or) not.

   Eg!— A Hacker can Hack the account without any security and authorization.

2. **GUI Testing !-** used to check the application design of an application

   Eg!- Rows, Countbox, Scrollbar, Move etc.,

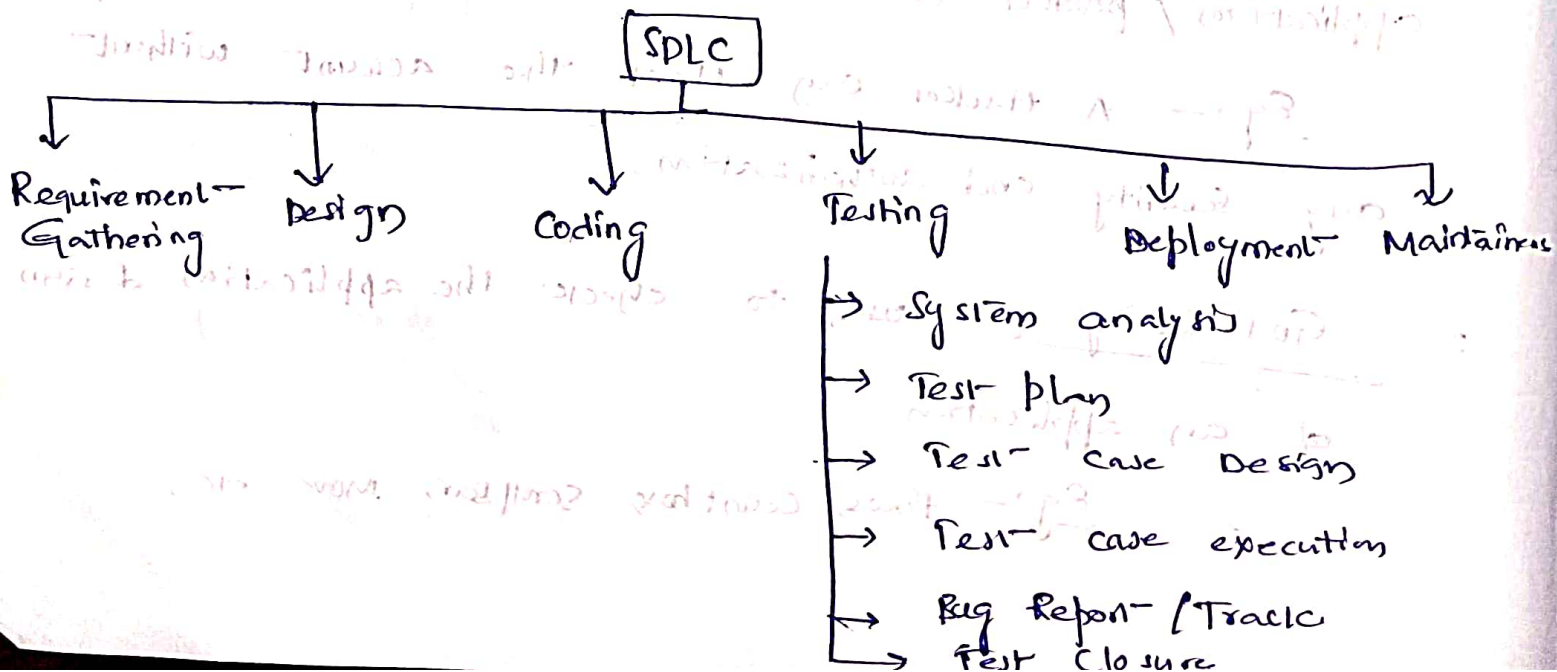3. **Usability testing :-** It is the process of making an application/app in convinent way to user for usage

4. **Stress testing :-** The testing used to determine the stability of an given system.

5. **Load testing :-** It is the process to determined a system behaviour under both normal and at peak conditions

6. **performance testing :-** A performance testing is testing that is performed, to determine how fast some aspect of system perfoms under a particular workload.

2) Draw and Explain software testing lyfe cycle in detail.

A) **STLC :-** software testing life cycle is an systametic approch to testing an software application to ensure that it meets the requirements and it free of defects. It is an process that follows series of steps / phases, Each phase has its specific objectives and delivearasles

```
                            ┌──────┐
                            │ SPLC │
                            └──────┘
      │           │           │          │              │            │
      ↓           ↓           ↓          ↓              ↓            ↓
Requirement-   Design      Coding     Testing      Deployment   Maintainace
Gathering
                                         └→ System analysis
                                         → Test plan
                                         → Test case Design
                                         → Test case execution
                                         → Bug Report / Tracle
                                         → Test Closure
```

① **System analysis :—** It means what software we are developing, what are client requirement, what we need to test and develop are analyzed in this phase.

② **Test plan :—** This is done by senior in the team. In these phase they use. plan how to test, what to test, How many other storage are available, how many feautre functionalities, which team involves in which period / work all done in this phase

③ **Test Case Design :—** The software testing write the test cases. They can be written in excel sheet / Test Management System.

Eg :— Zira tool is using maximum companies

Test Cases contains instruction. The instructions are used to test the feautres, functionalities are to be tested in what manner.

④ **Test Execution :—** It is used to execute the test case and check whether the feautres of any application are meeting the client requirements / not

⑤ **Bug Report / Track :—** It is the process of reporting the all data about the Error occur in Client and product Requirement output. There is any deviation between expectations

6. **Test closure** :- The test cases are all passed and no more Issues b/w expected and disered output then the team make a decision/meeting then forwarded to client and close.