**Java Phase 5 : Testing, Deployment and develops tools**

**10 days**

Testing :

Junit testing Unit testing

TestNG Integration testing

Selenium Testing Automation testing

Testing

Docker

CI and CD tool

Overview of Kubernetes Develops tool

AWS Overview Deployment

Testing :

Testing is use to find the defect or error or bugs in the application.

If we run any application using any technologies java, C#, python, C or C++ etc. indirectly we are testing that application.

Read a, b 10 20

Sum = a+b

Write b 30

Once we run the program then we have to provide the input and expect the output. If expectation and actual result match. Then we can say test pass else test fail.

Controller layer, model layer, bean layer, dao layer, resource layer, service etc.

Testing mean running the program without main method or functions.

Testing mainly divided into two types.

Black box testing : if we are black box tester then we need knowledge to how to run the application using command prompt or tool.

Input----------🡪 Logic/ Process--------🡪 Output

White box testing : if we are white box tester then we need knowledge about that technologies. Because we are writing test case to check the business logic.

Input ---🡪 Login/ Process -----🡪 Output

Under this option we can say manual testing or automation testing.

These testing we can do manually or we can take the help of automation testing tool inside a tool we can write script which is responsible to run those test cases.

Unit testing : Unit testing is part of STLC (Software Testing Life cycle). STLC is a part of SDLC(Software Development Life cycle).

Unit testing is process in which the smallest testable code or part of an application testing independently. Generally we write code inside function or method. Those method or function test independently working or not. Unit testing come under the type of white box testing.

jUnit : jUnit is an open source small testing framework which help to do the unit testing.

jUnit 3.x without annotation

jUnit 4.x with annotation

jUnit 5.x with annotation with combination of more other third party library.

TestNG