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

we need to check each class method without main method. Then we need testing tools.

Testing mainly divided into 2 types.

1. Black box testing

admin@gmail.com

admin@123   success

admi@gmail.com

123   failure

2. White box testing

We need to knowledge of that language. Because we are writing code to test those business logic or database logic.

Unit testing : unit testing is a type of software testing. Which comes under type of white box testing. Unit testing is use to check small code which written in

function or method or modules which work independently. Unit testing is use to test function functionality working or not.

jUnit : jUnit is third party small framework which provided lot of classes and interfaces which help to test java code.

test ng (next generation) : test ng is based upon jUnit testing which help to do unit testing as well as integration testing.

More than one modules interacting with each others

UI Testing

JavaScript : Jasmine : Jasmine testing framework which help to do the UI testing.

Jasmine and Karma : Angular internally provided Jasmine and Karma which help to do unit testing for angular application.

Mocha with Chai : it is small testing framework which help to do UI Testing.

React JS : JEST : JEST is small testing framework provided by Facebook which help to testing for JavaScript as well as React JS.

Core Java Project testing with Junit

jUnit : 3.x without annotation

jUnit : 4.x with annotation

jUnit 5.x with annotation and combination of more than other third party modules. It support Java 8 features.

Junit test case and

Junit test suite

jUnit test is a type of testing class which contains more than one test function with @Test Annotation which help to testing function functionality working or not.

jUnit provided lot of assertXXX methods which help to check expectation and actual output.

jUnit hook or life cycle method

`@BeforeAll`
: with this annotation this method call only once before all test method.

`@AfterAll`
: it will call after all test method only once

`@BeforeEach`
: with this annotation this method call again and again for each test method

`@AfterEach`
: with this annotation this method call again and again for each test method.

Test suite : Test suite is a type of test class which is responsible to run more than one test case class. each test case class contains more than one test function which help to test function functionality.

View(Angular) --→Rest Controller --→ Service layer --→ Dao layer --→ Database coding

View depends upon Rest controller   mock rest controller

Rest controller depends upon service   mock service layer

      Service depends upon dao   mock dao layer

Dao depends upon database   mock database

Mock means fake data provided for that layer to test code.