Day1 : 22-01-2022

Phase 4 : Testing and deployment

Software testing

Grunt task runner for JavaScript

Docker

CI and CD : Jenkins

Cloud computing

AWS

Ec2, S3 and EBS modules

Graph QL : Self learning

Elastic Stack : Self learning

Testing : Testing is use to find the defects or errors or bugs.

Read value a, b,

Process compute sum = a+b

Display value write b

Layer architecture

MVC

function operation() {

}

function add(a,b) {

// coding

var sum = a+b;

return sum;

}

Function sub() {

}

Function mul() {

}

Testing mainly divided into 2 types

Black box testing

Input -------------------🡪Process ---------------------🡪Output

Raj,123 success

Failure

Ravi, 123,

Age

21 60

Age between 21 to 60

>=21 <=60

<21 >60

Special symbol

-ve number

White box testing

Input --------🡪Process -----------🡪Output

Unit Testing :

Test suite and test case

describe(“”,()=> {

it(“”,()=> {

})

})

Unit testing : Unit testing is a kind of software testing method in which each individual and independent part of the source code or functions tested developed by developer.

Unit can be function or method or module or class.

If we do unit testing for UI side then we can call front end unit testing.

We can do backend side unit testing with respective framework.

Front end unit testing : Jasmine :

Jasmine is open source library which help to do the unit testing for Client side as a well as Server scripting language.

Jasmine provide pre-defined function which help to write test suite, test cases and expect functionality to check actual and expected output.

Old version of jasmine to generate the report or output we were depends upon Another ie Karma.

Karma is test runner for the Jasmine testing framework.

But new version Jasmine provide pre-defined plugin which help to generate the report or result without depending upon the Karma test runner.

Client Side JavaScript testing : Jasmine framework + Karma with old version Jasmine tool

Jasmine Framework with inbuilt plugin to run the tool.

Server Side JavaScript testing (Node JS): Node JS provided pre-defined external module jasmine which help to do the Testing for Server Side JavaScript (Node JS). In Server side JavaScript karma not required.

Mocha : Mocha is light weighted library which upon Jasmine. Using Mocha we can testing for Client side as well as server side testing.

Jasmine Vs Mocha

Mocha with Chai

Server Side JavaScript testing we can do with Jasmine or Mocha with Chai.

Client side testing Using Jasmine Plugin

Test suite : Test suite is use to write more than one test cases as well as another test suite.

To write the test suite using testing framework.

describe(“message”,callbackfunction);

Example

describe(“Operation Testing ”,()=> {

});

Test case : Test case is a type of test function which help to check the function functionality with the help of more than one except functions.

Syntax

it(“message”,callback);

describe(“Operation Testing”,()=> {

it(“Additing Testing”,()=> {

// write the code to call the function and

// using expect function we will check actual and expected output

})

})

Assert function : Jasmine framework provided lot of pre-defined assert function in the form of expectXXX() syntax to check actual and expected output.