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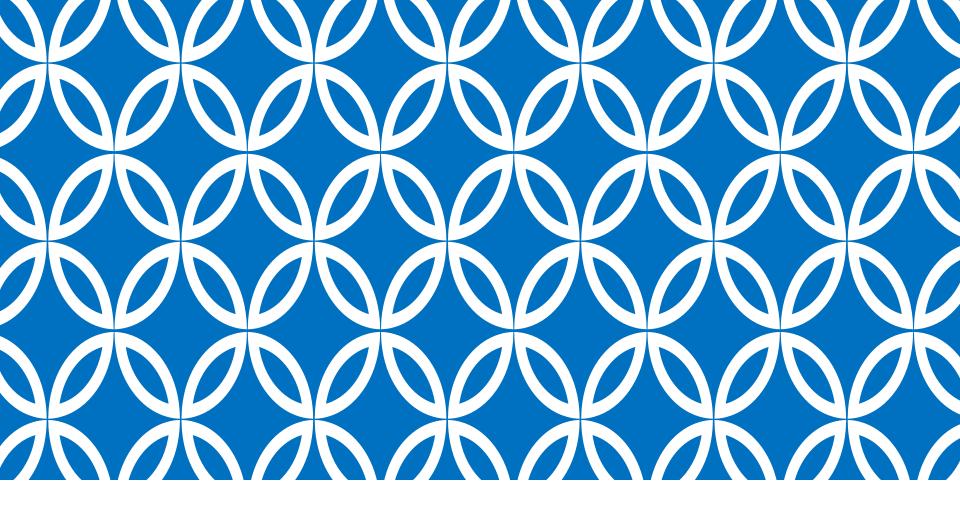


# FRONT END DEVELOPMENT (WITH ANGULARJS)



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Session 18 – AngularJS Testing



## **Agenda - AngularJS Testing**

- 1. Automated Testing
- 2. List Of Frameworks Required For Testing Jasmine
- 3. Jasmine
- 4. Jasmine Spec
- 5. What Is A Suite?
- 6. Setup And Tear Down For Tests
- 7. Setting Up And Creating Tests
- 8. Setting Up Unit Testing For AngularJs





#### **Automated Testing**

#### Unit Testing:

- Unit testing is for testing the code.
- It's similar to the way we test server side application..i.e. JUnit.
- For unit testing JavaScript applications we can use **Jasmine**.

#### End to End testing:

- Sometimes unit testing is not enough.
- Then we need to know how the application behaves to the user interactions in the browser.
- For this we need to simulate user interactions at the browser.
- For End to End testing we can use Protractor.
- Note: We will be using protractor testing framework built over Selenium and Jasmine.







#### **List Of Frameworks Required For Testing Jasmine**

- **Karma:** Karma is a task runner for unit testing. It assist in running the test and provided a lot more features to make testing easier.
- **Protractor:** Protractor is the End to end testing framework. It is used to write and execute e2e tests for angular.





#### **Jasmine**

- **Jasmine** is a behavior-driven development unit testing framework for testing JavaScript code.
- Jasmine can be downloaded from <a href="http://jasmine.github.io">http://jasmine.github.io</a>
- Jasmine can also be installed using npm(node package manager).
- Use the command in npm install -g jasmine
- Alternatively you can download the standalone version of Jasmine.





## Jasmine Spec

- An expectation in Jasmine is an assertion that is either true or false.
- A **spec** is a collection of exceptions
- A spec with all expectations as true is a passing spec.
- If a spec has one or more false expectations, it is a **failing spec**.

#### **Example of a spec:**

```
it("and has a positive case", function() { var a = 5,b=5;
expect(a).toBe(b); });
```



#### What Is A Suite?

A suite is a collection of specs.

#### Example of a suite:

```
describe("A suite", function() {
it("and has a positive case", function() { var a = 5,b=5;
expect(a).toBe(b); }); });
```



#### **Setup And Tear Down For Tests**

- Following are global functions:
- The beforeEach function is called once before each spec in the describe is run.
- The afterEach function is called once after each spec.
- The beforeAll function is called only once before all the specs in a describe are run.
- The afterAll function is called after all specs finish.





## **Setting Up And Creating Tests**

- Download the standalone version of jasmine.
- After downloading we have the following folders
  - **lib:** The lib folder contains the libraries for jasmine
  - spec: spec is the folder where will be keeping our tests
  - src: the folder where our code to be tested will be kept
- We also have a file called specrunner.html that we run within browser to run our tests.





# **Setting Up Unit Testing For AngularJS**

- To start with we need to install karma and karma cli on the system.
- This can be done either using npm(node package manager) or you just need to run npm install - g karma and npm install -g karma-cli.
- The above two commands install karma on the machine.
- Once done we can start setting up our environment.





# Lets Discuss Assignments