**Protractor(Angular Automation Tool)**

**What is Protractor ?**

Protractor is a testing tool or end to end testing framework for automating angular applications.

Webdriver + Angular Support = Protractor

**Why Protractor?**

The only stable framework to automate angular apps.

**What language does protractor support?**

Protractor is a Node.js program built on top of Webdriver JS, so it uses JavaScript as core language to develop tests.

**Tools we are going to learn?**

Node.js, Jasmine(Unit testing framework), JavaScript, Protractor API

**Protractor Installation:**

1. Download Node.js

2.Set Node in system variables

3.Importance of NPM(node package manager)

4.Install Protractor

5.Webdriver manager plugin

6.Download Eclipse Java Script Tool

7.Importance of jasmine framework for protractor tests

8.Understand specs and configuration file

9.Describe and It blocks importance in protractor tests

10.Preparing protractor run configuration file

11.Running protractor first Test.

12.Install Angular JS plugins-intern project

**Commands:**

**node -v** >>Check the node version installed

**npm -v** >>Check the npm version installed

**npm install -g protractor** >> Install Protractor

**npm uninstall -g protractor** >> UnInstall Protractor

**protractor –version** >> Check Protractor version

**webdriver-manager update** >> Update the manager

**webdriver-manager start** >>Start the server

Describe –Test Suite

It—Test Case

Spec(Jasmine Terminology, nothing but a test file) –TestCase

Config file

**Points to remember**

1.JavaScript is Asynchronous

2.Every JavaScript step returns promise.

3.Promise resembles state of your step

4.Promise has three states

Pending

Resolved

Rejected

**Synchronous**: You will move to next step only after promise for current step is either resolved or rejected

**Asynchronous**: JavaScript moves to next step even if promise is pending

\*90 percent(All the actions we perform o the browser) of the protractor API will not move to next step until promise is resolved.

\*10 percent(If you want to retrieve anything from browser then the particular related methods have not support of promise resolving)

**\* IE driver download command**

webdriver-manager update –ie

**New Chapter**

**JavaScript Objects**

1.JavaScript is a object based language

\*In node.js just like pom.xml file here we have package.json

When working with JSON

1. Run this command to intitilize package.json file
2. D:\Full Protractor\LearnProtractorTutorial\PracticeProtractor>npm init -f
3. Then uninstall protractor
4. Delete the protractor folder from project
5. Add the dependency in JSON
6. Now run npm install
7. D:\Full Protractor\LearnProtractorTutorial\PracticeProtractor>npm install
8. Go to
9. D:\Full Protractor\LearnProtractorTutorial\PracticeProtractor\node\_modules\.bin
10. From here we can run directly
11. webdriver-manager update
12. webdriver-manager start
13. Revising step 11
14. Full Protractor\LearnProtractorTutorial\PracticeProtractor>npm run webdriver-update