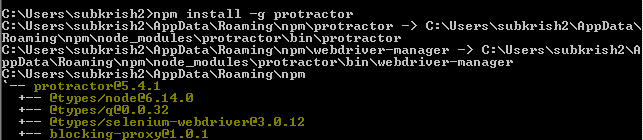
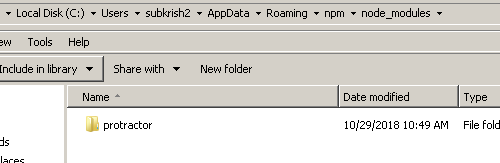
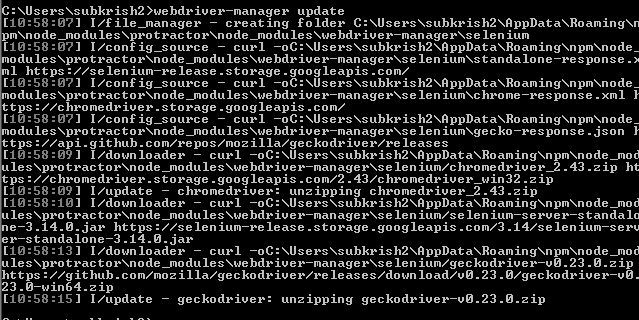
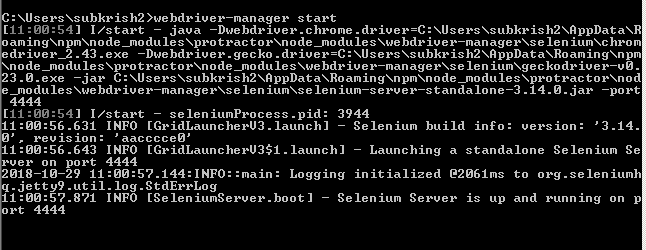
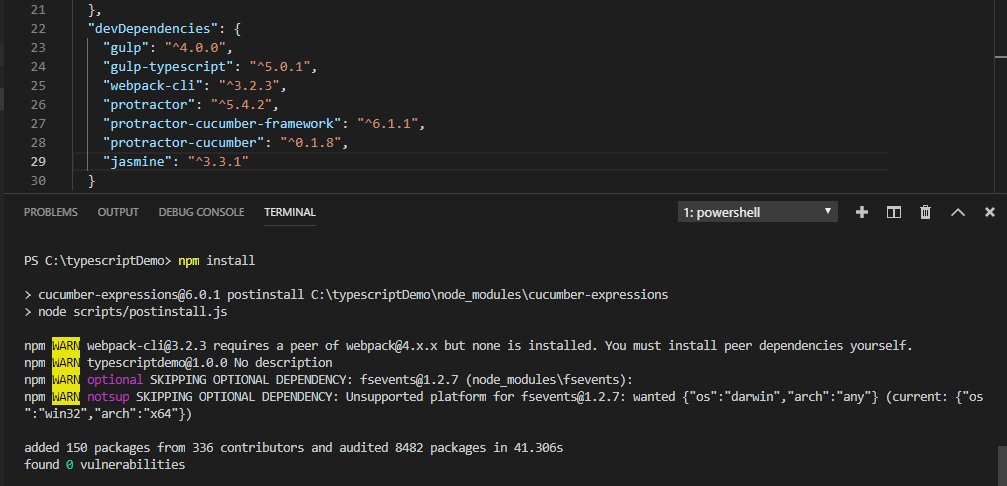
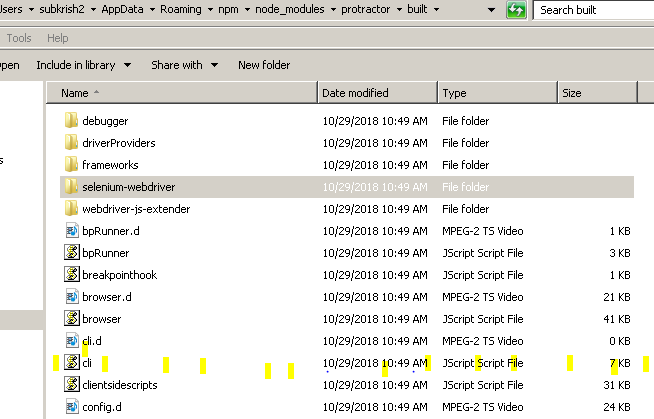
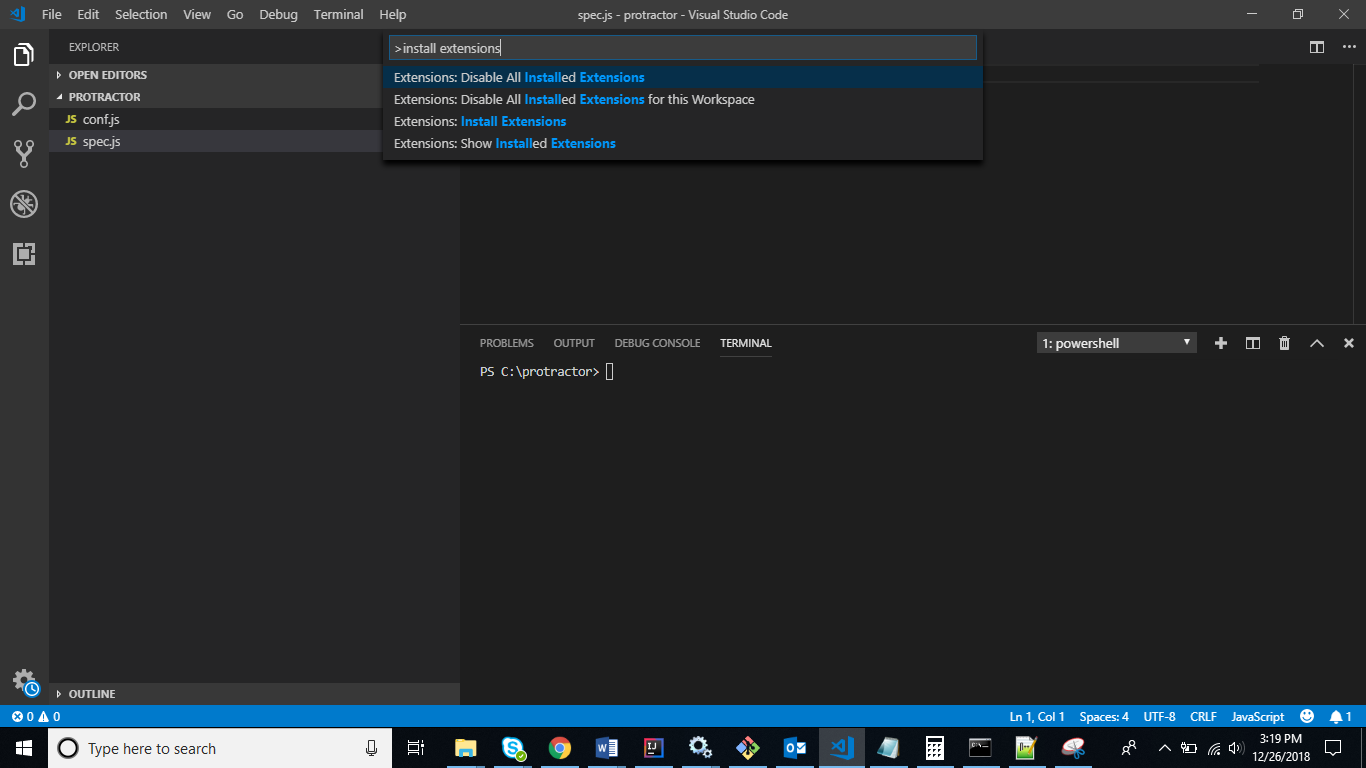
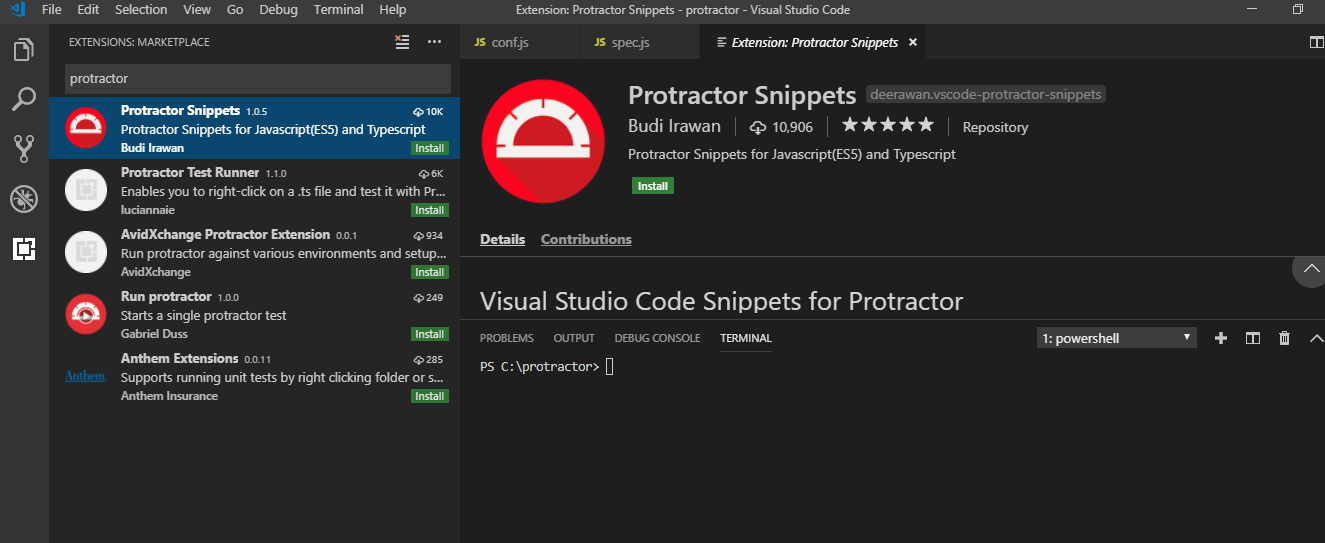
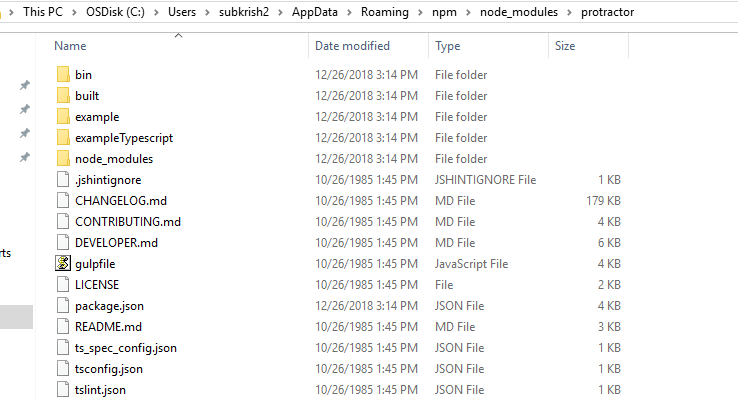
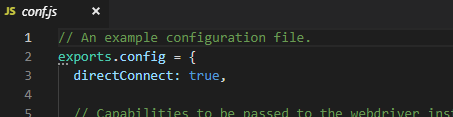
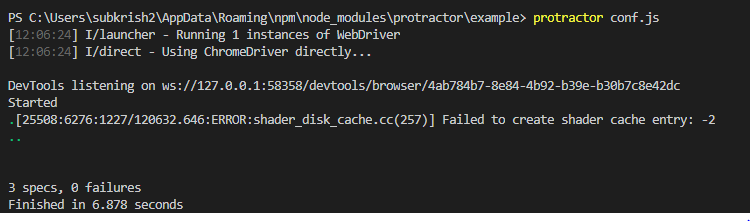
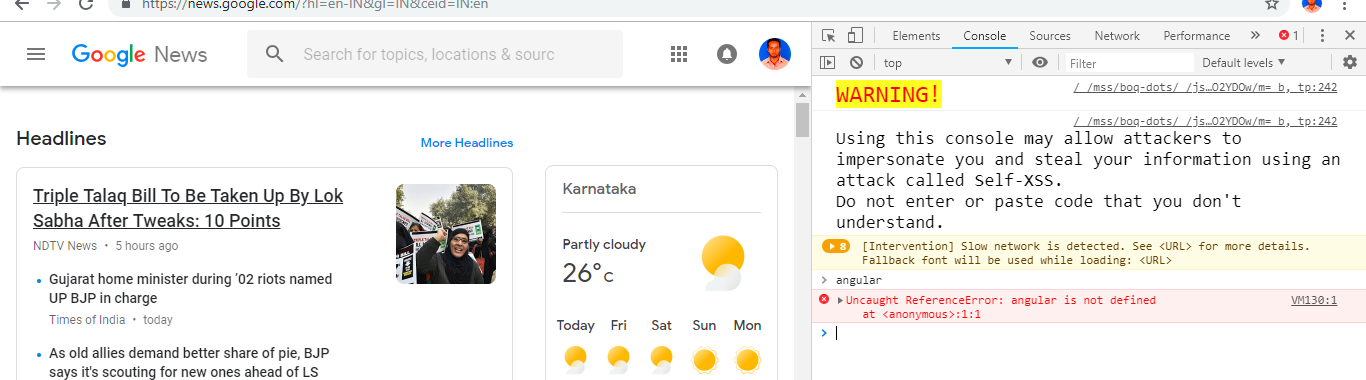
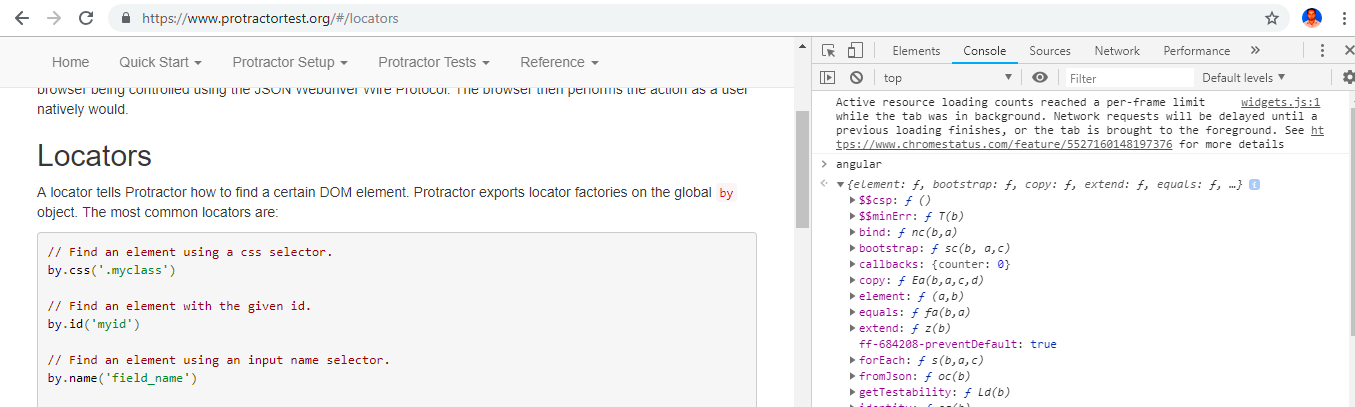
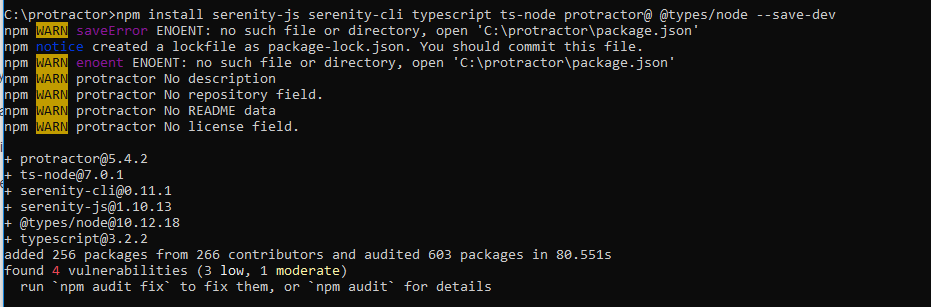
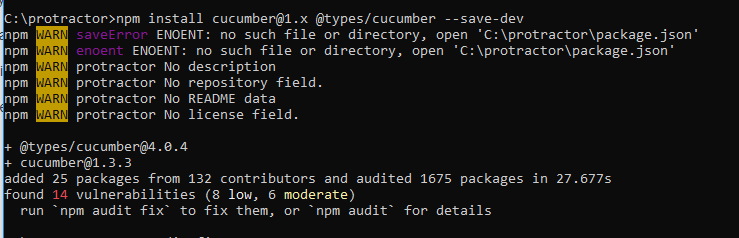
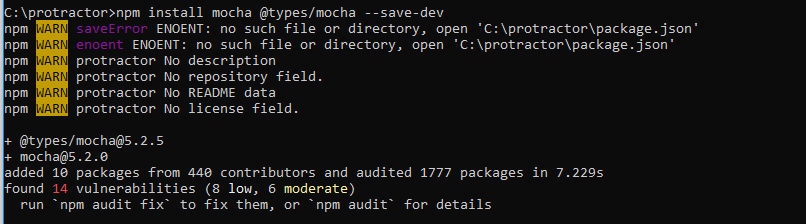
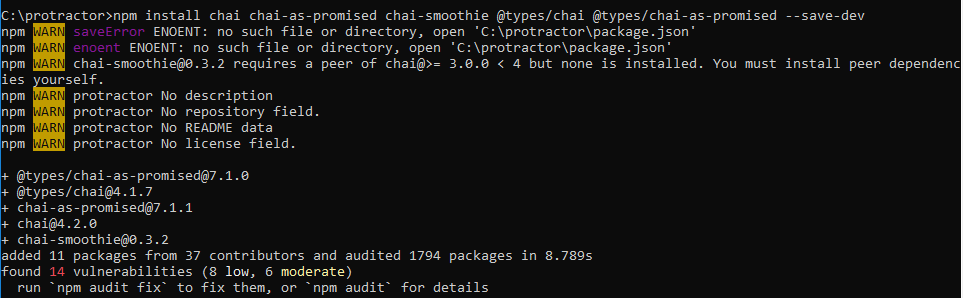
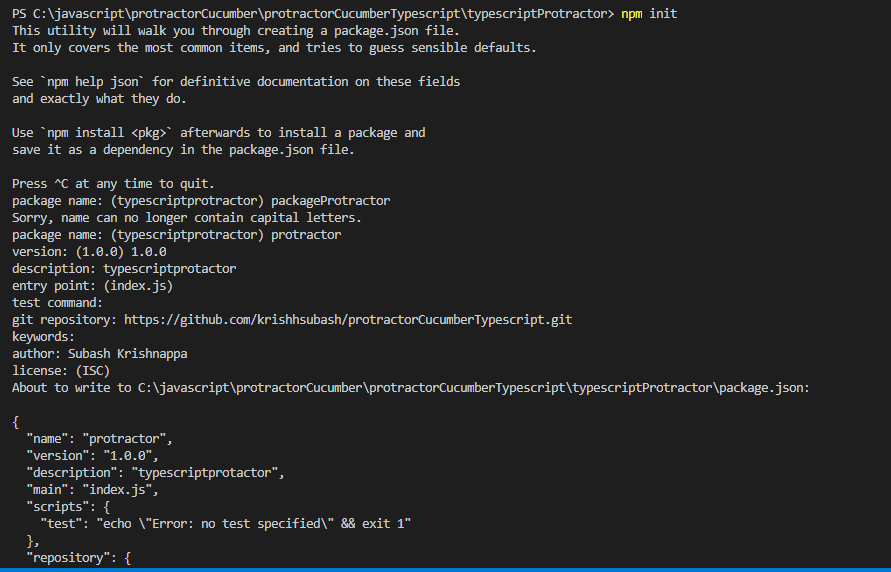
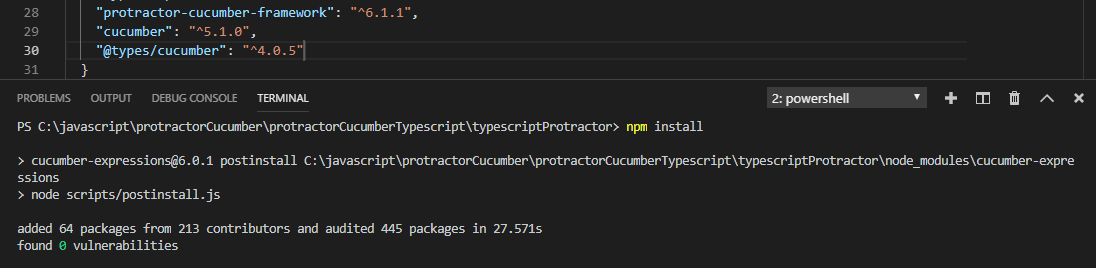
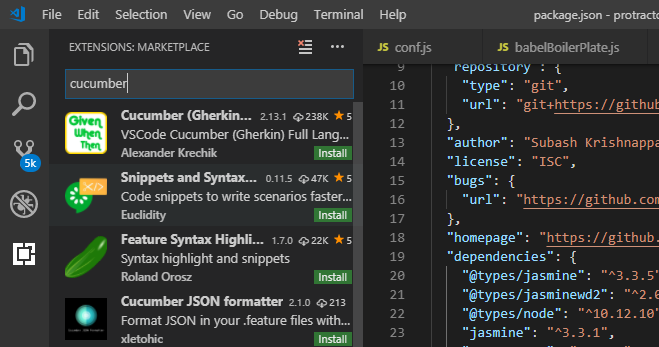
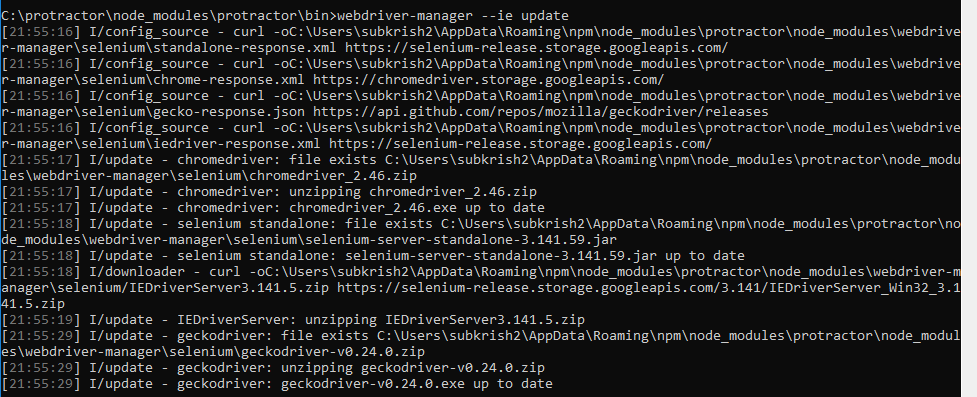
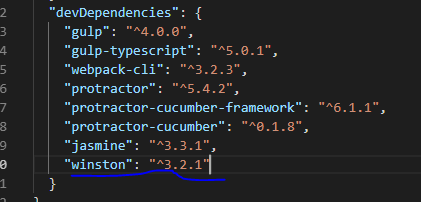
Protractor:

1. Used for testing angular applications  
   Webdriver + Angular features -> protractor
2. Protractor is a node.js program built on top of webdriver.js
3. Jasmine unit testing framework for protractor, is just like testng for selenium
4. To check if node.js is installed in machine  
   
5. To check if npm is installed  
   
6. Install protractor  
     
     
     
   This installs two command line tools -> protractor and webdriver-manager
7. Check version of protractor installed  
     
   checks for any updates and downloads latest updates for downloading stand alone server or driver executables  
   
8. By default webdriver server will start on port 4444
9. To start protractor server  
   
10. Protractor dependencies download from node.js package.json file  
    
11. Jasmine testing framework  
    describe -> Test Suite  
    it -> test case  
    spec file -> test file  
    every spec file must have describe and it file
12. Main file of protractor is cli.js presnt in the following path:  
    
13. Javascript is asynchronous:  
    it executes instructions without waiting for the previous steps to complete
14. Promise states: pending, resolved, Rejected  
    In synchronous execution, unless a statement execution is not completed, compiler doesn’t proceed with next statement, but in case of javascript which is asynch, it proceeds to execute further steps
15. Global Variables:  
    browser:   
    element:   
    by:   
    protractor:
16. Locators:  
    common locators:  
    by.id  
    by.name,  
    by.css  
    by.model  
    by.binding  
      
      
      
    by.id  
    by.className  
    by.linkedText  
    by.xpath  
    by.css  
    by.name  
    by.tagName  
    by.partialLinkedText  
    by.js  
    by.model  
    by.binding  
    by.exactbinding  
    by.buttonText  
    by.partialButtonText  
    by.repeater  
    by.exactrepeater  
    by.addLocator  
    by.cssContaining
17. Installing protractor extensions:  
    
18. 
19. When we install protractor, the below is installed at npm folder  
      
    Navigate to example section to get a sample spec.js and conf.js
20. 

When we provide directConnect: true, protractor will not check whether webdriver manage has been started or not

1. Command to execute protractor tests:  
   
2. To check if a website is angular or not:  
   google news website is not an angular website  
     
   
3. Protractor.org website is angular  
   
4. Promises: protractor is developed on top of webdriver.js library:
5. Serenity JS



1. Install cucumber with protractor:  
   
2. Install mocha  
   
3. Install chai.js  
   
4. Protractor Typescript framework  
     
   Creating package.json file from command prompt using command npm init,
5. Install all protractor dependencies  
   
6. Add Cucumber extension to VS Code  
   
7. Run tests in chrome driver  
   
8.   
   to use protractor for non angular websites
9. Capturing logs using Winston in package.json file  
   
10.   
    will launch tests in chrome y default