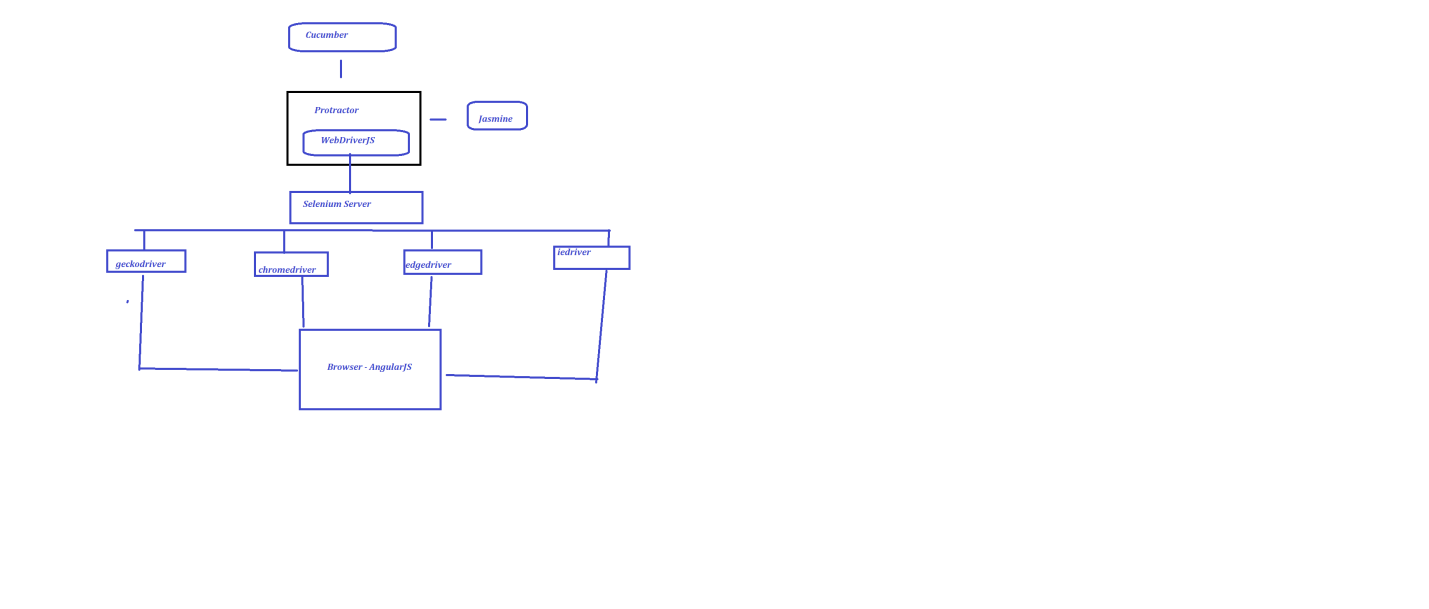
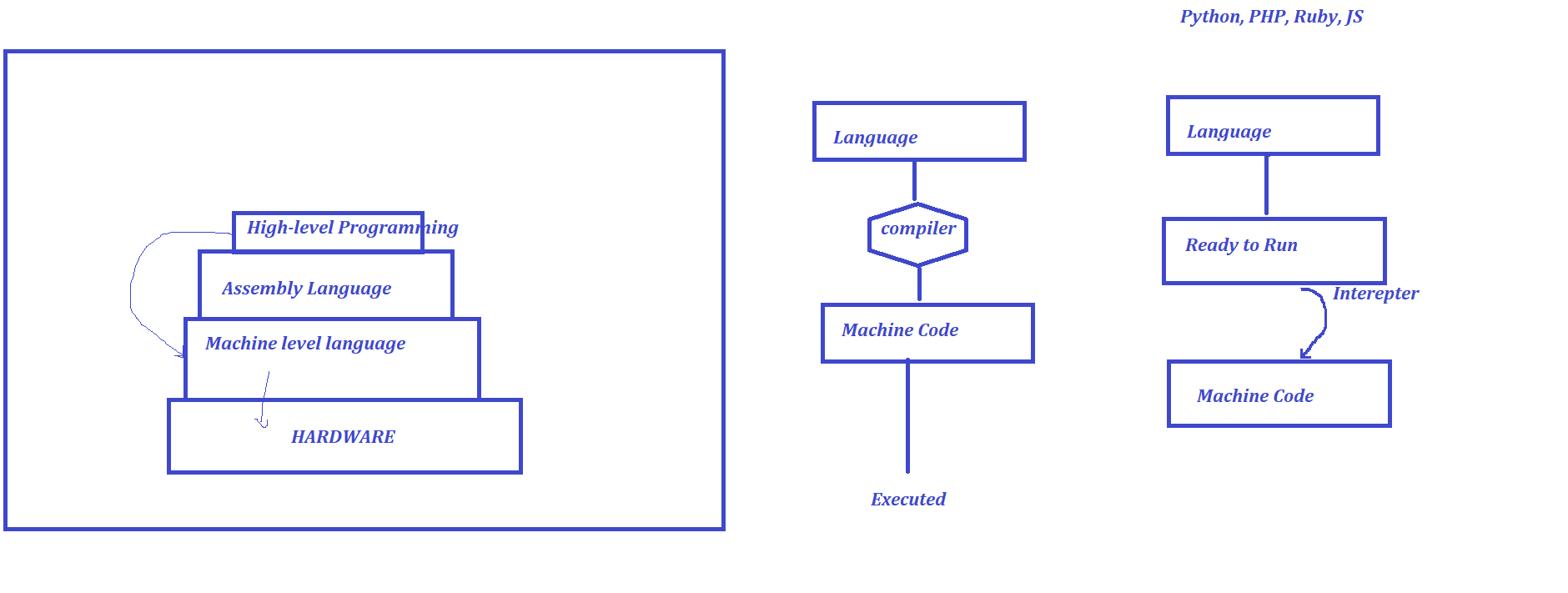
Protractor :

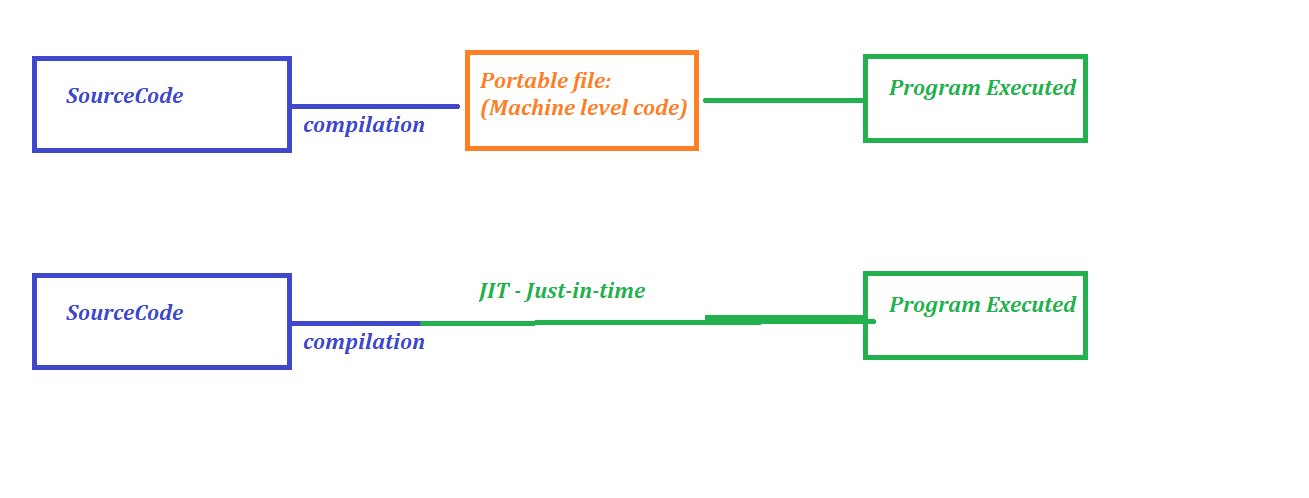
* Tool / Framework which is built on top of WebDriverJS ( Javascript version of Selenium )
* Angular and non-angular application can be automated using protractor
* 

AngularJS

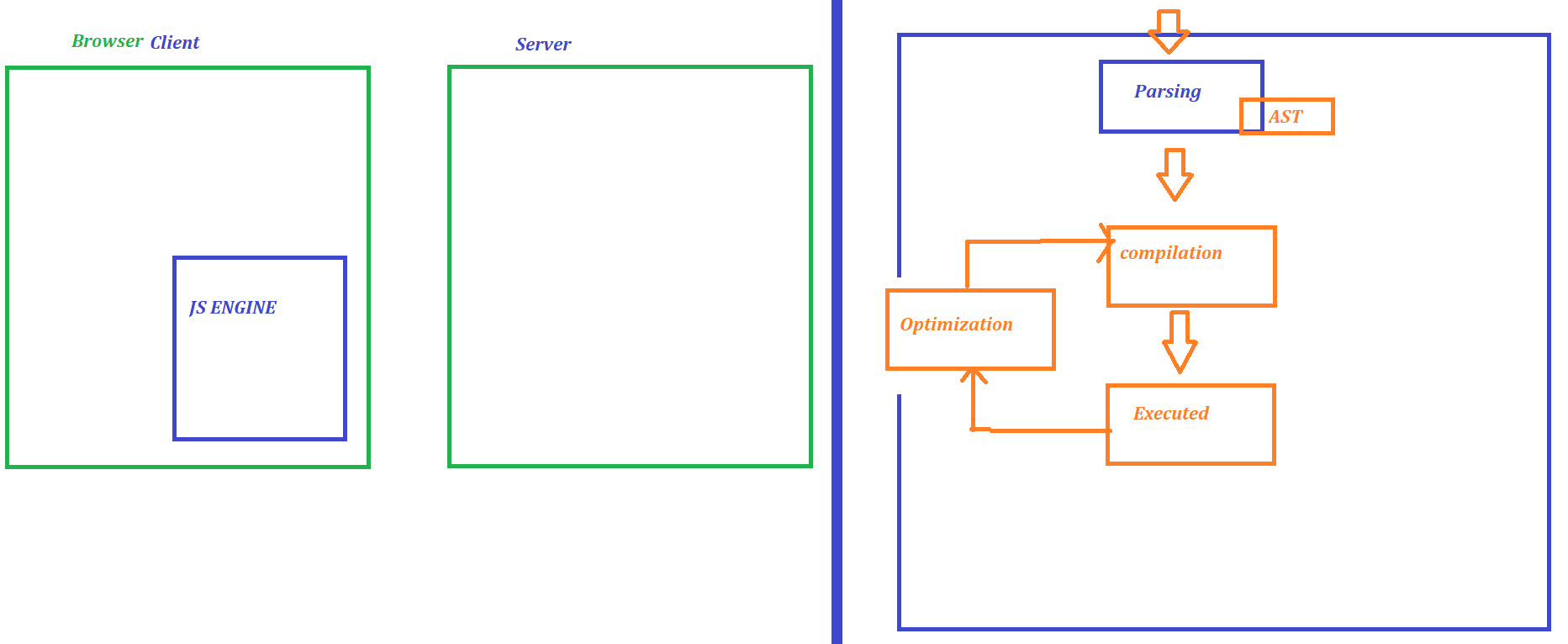
JAVASCRIPT :

Javascript is a high-level and interpreted programming language



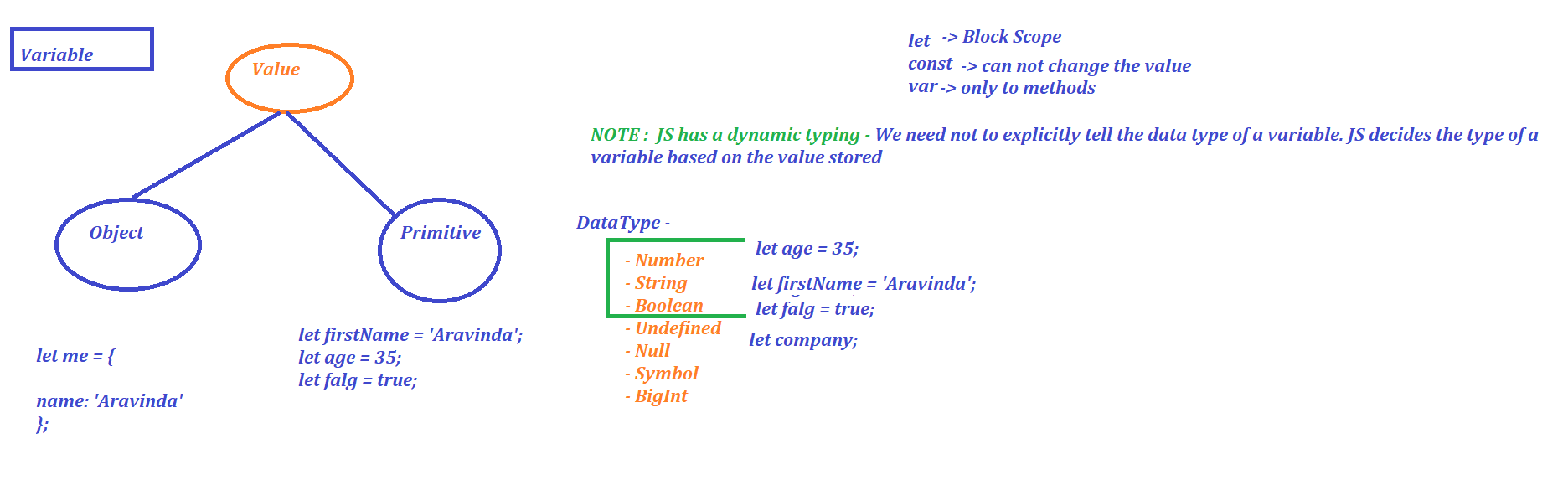


JS Engine

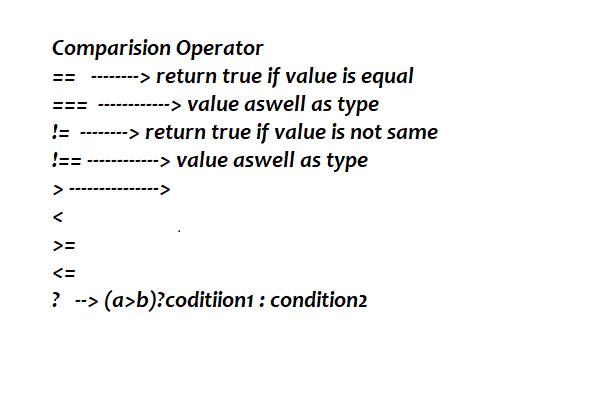


Editor :

Visual Studio code

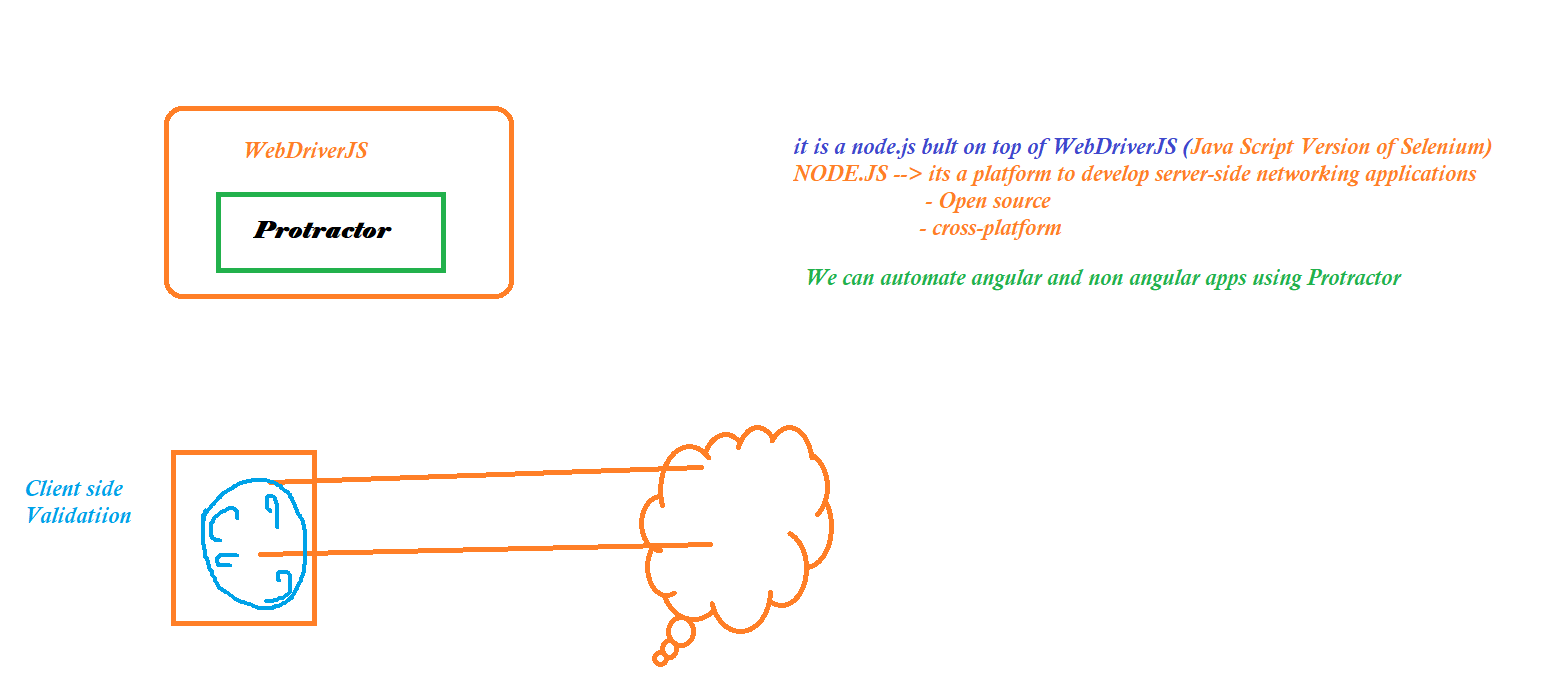
* Data types Variables and comments
* 

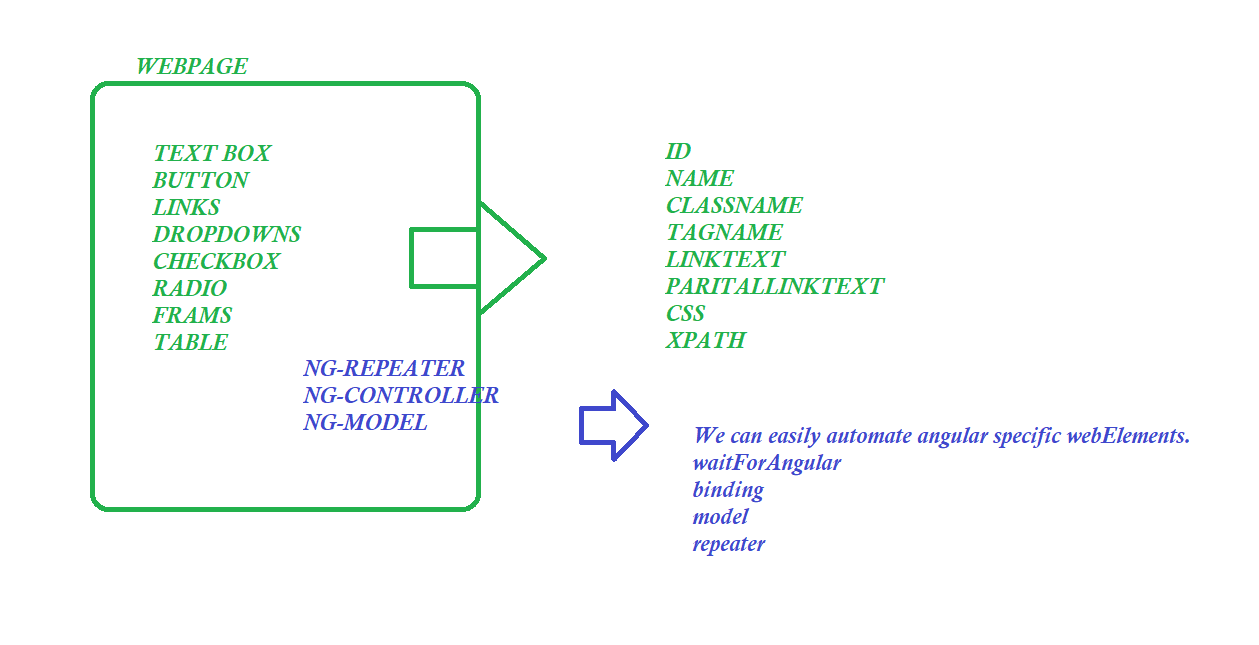
Operators in JS

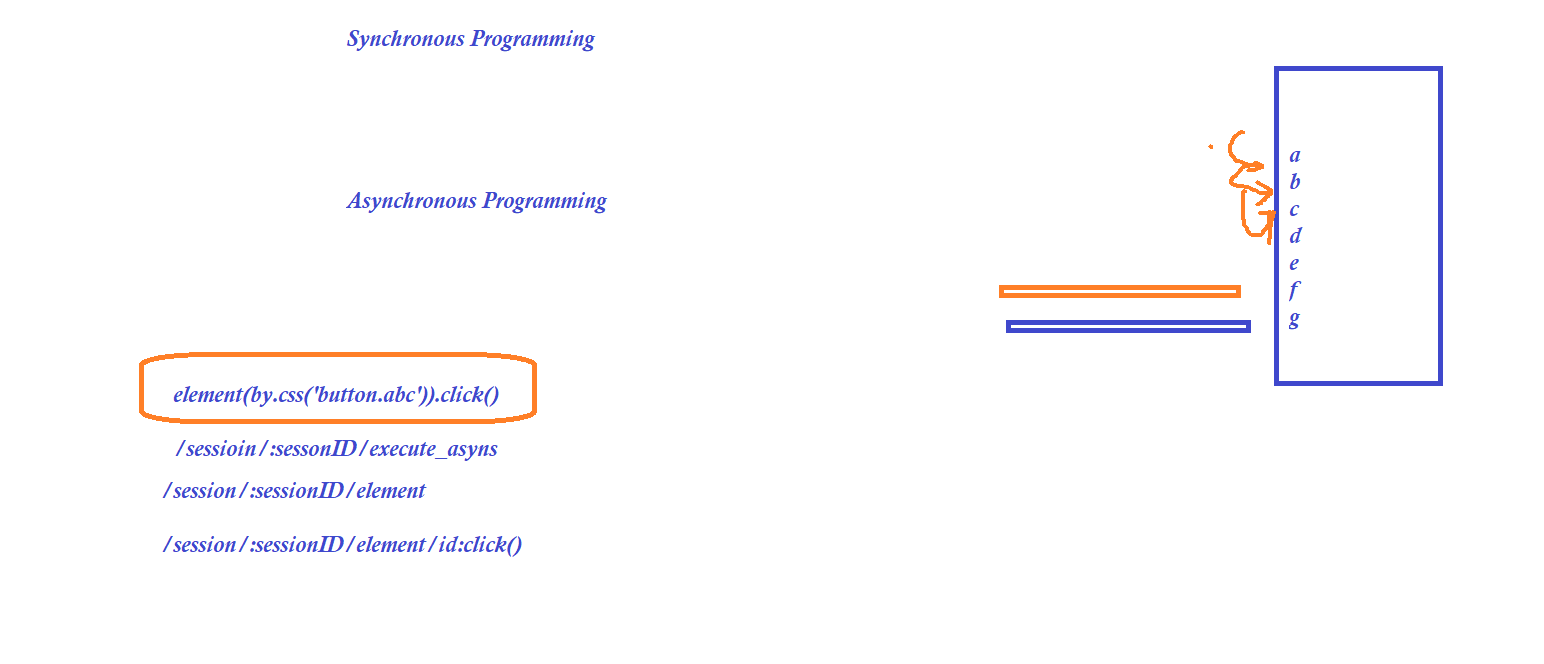
* Arithmetic operators
* Assignment operators
* 

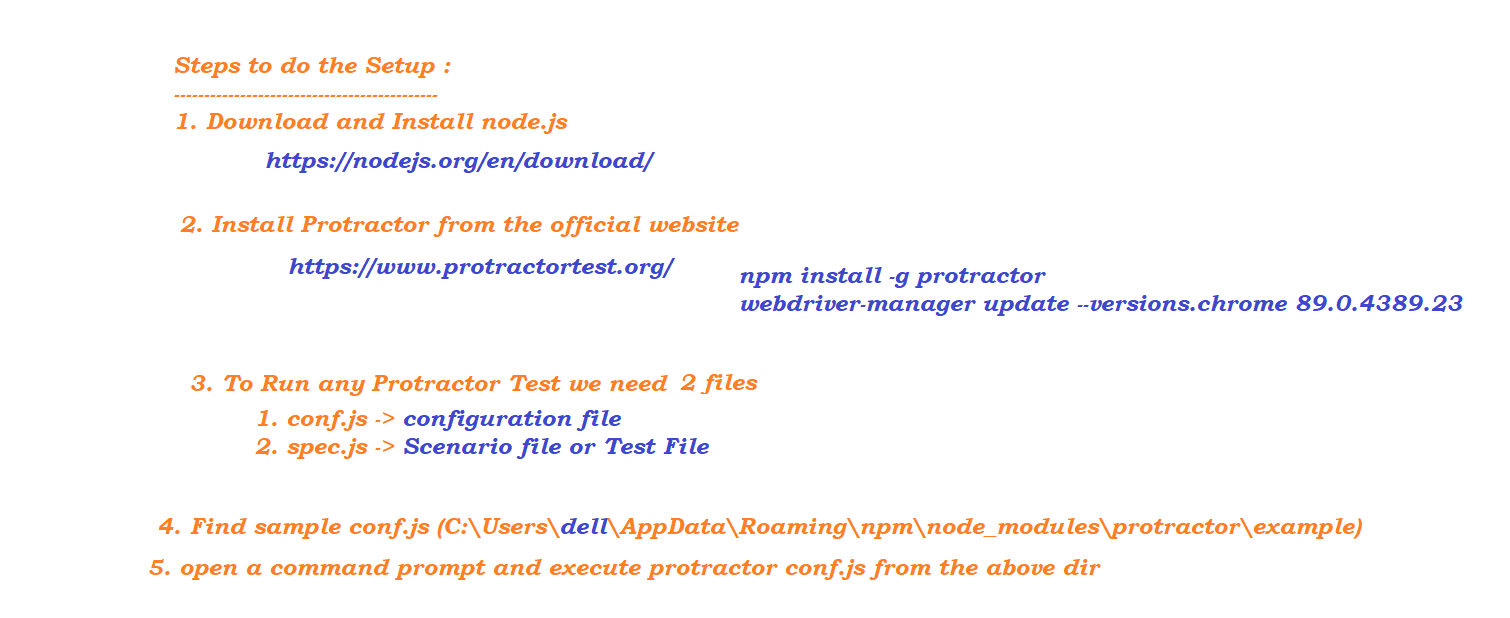
Loops and Conditional statements

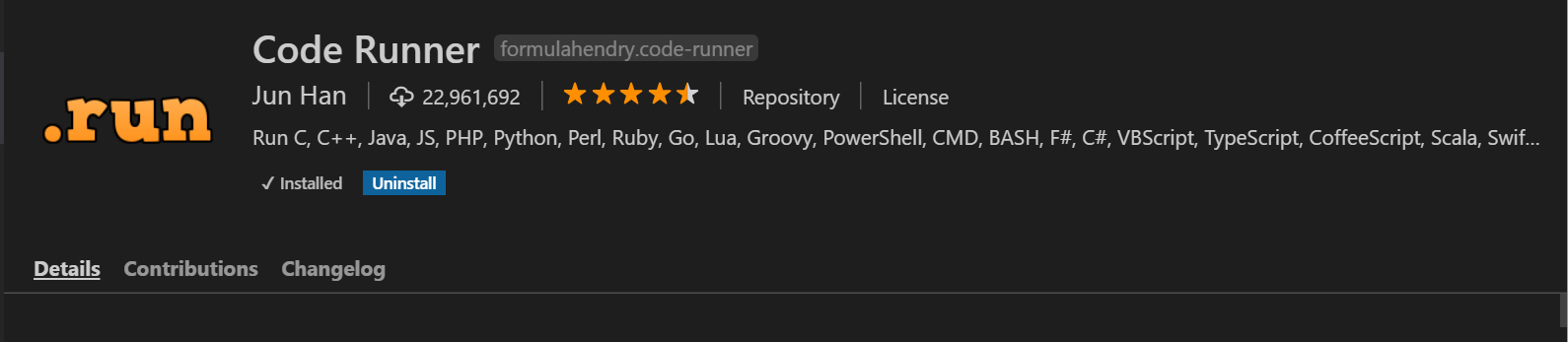
PROTRACTOR :

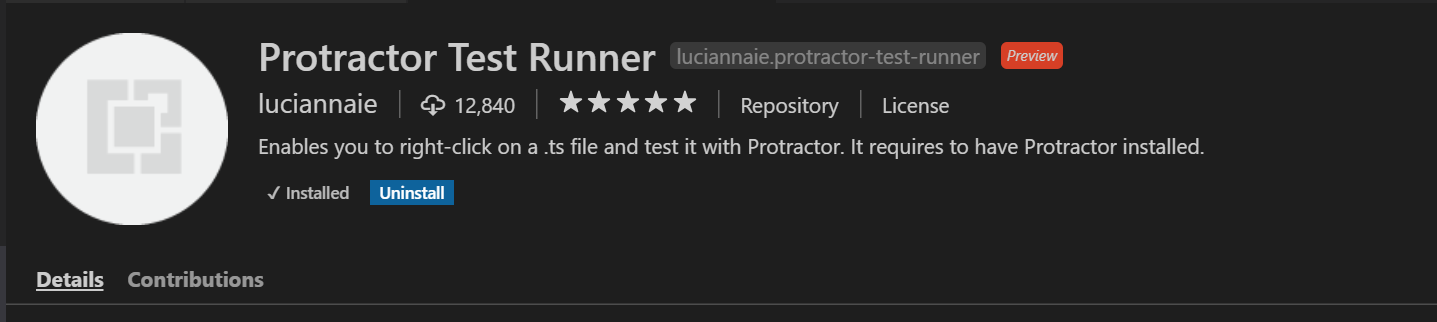


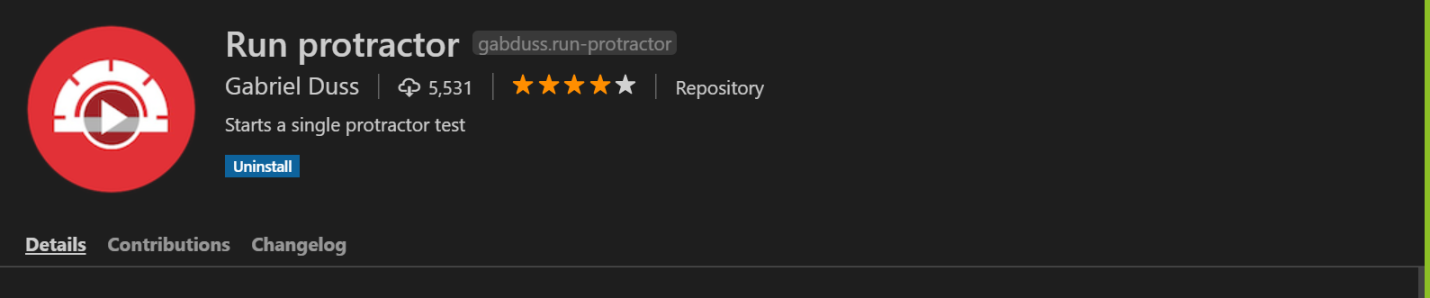


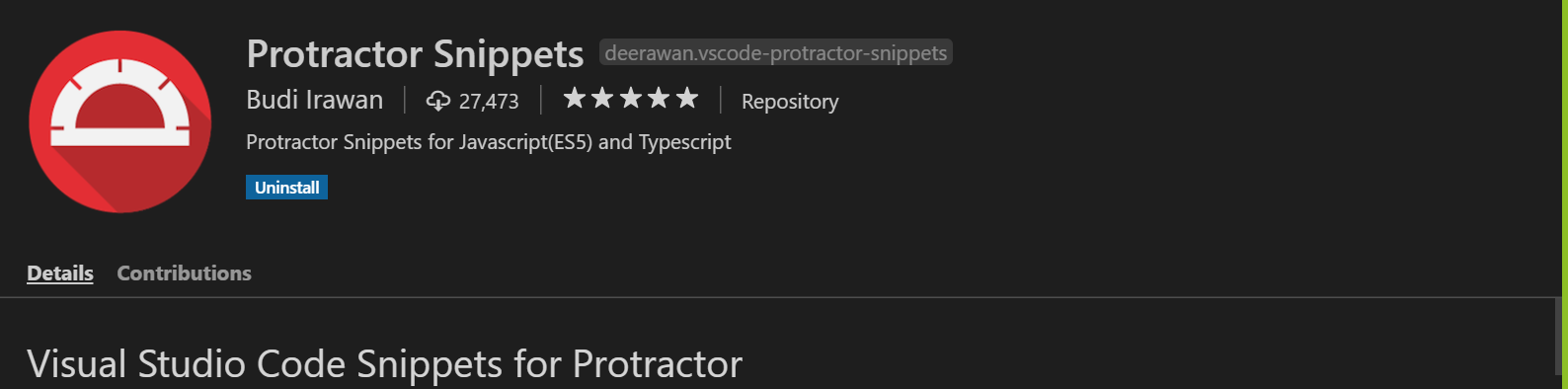
  
Installation :

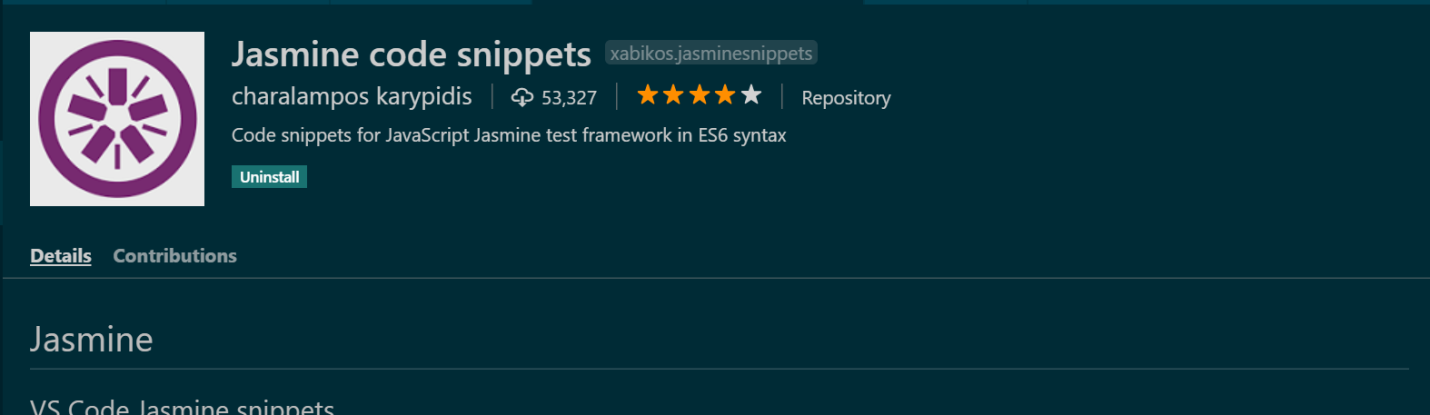


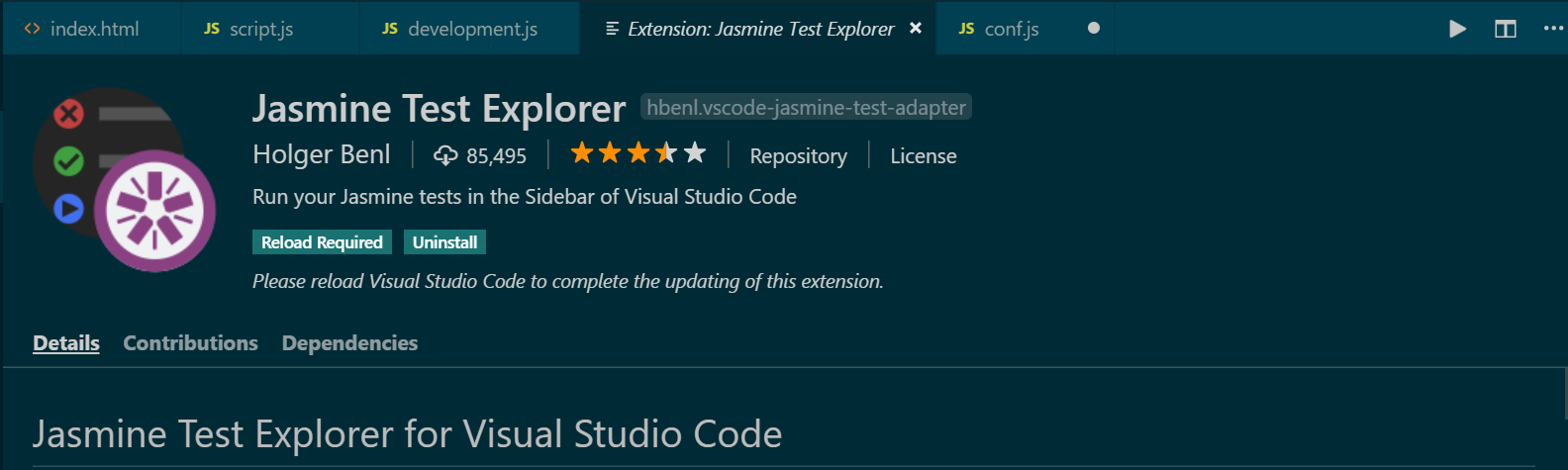
Popular plugins - 





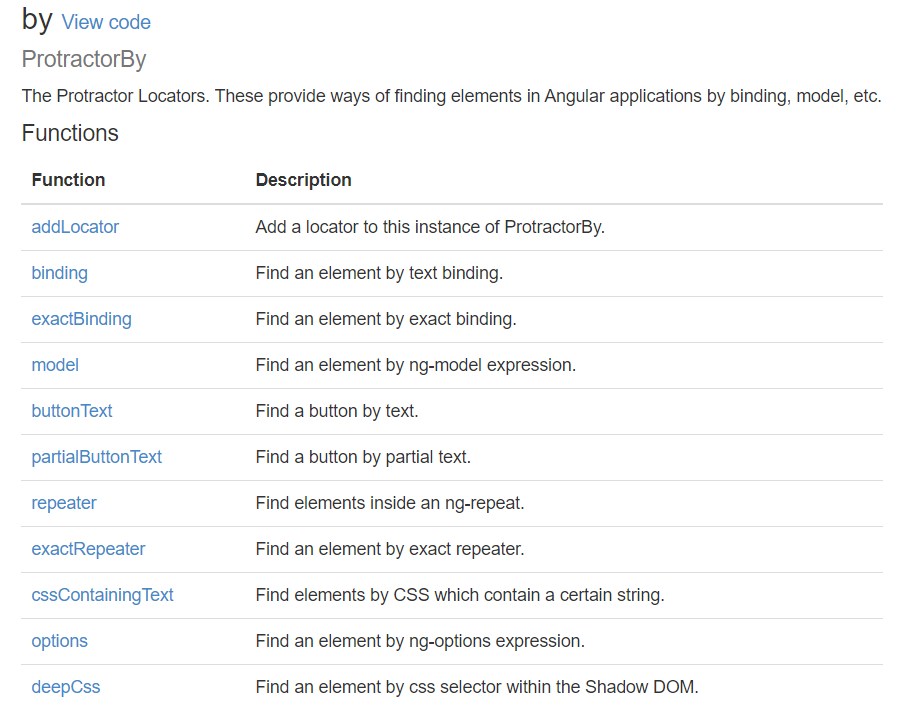






Finding Element in Protractor :

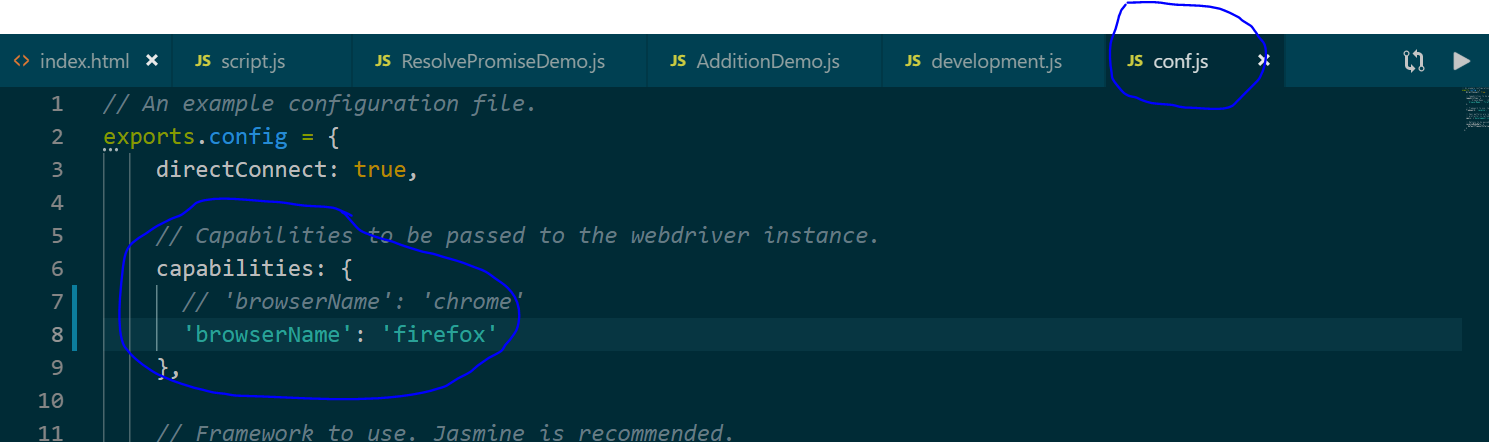
<https://www.protractortest.org/#/api?view=ProtractorBy>



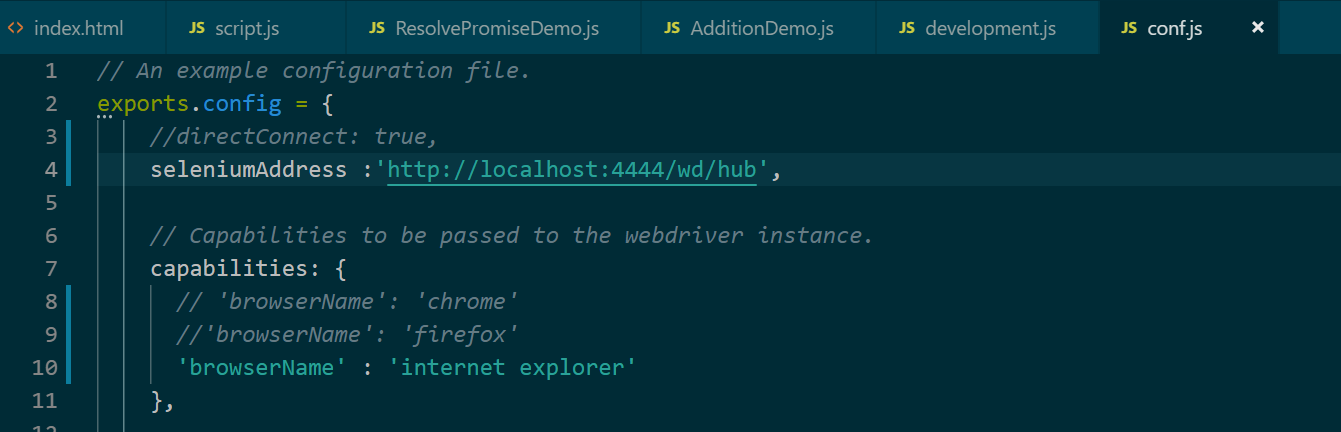
Executing Test on Firefox : to execute the test on different browser change the browserName to required the required brower

NOTE : only chrome and firefox supports direct connect and default location of driver executable is

C:\Users\<<USERNAME\_FOLDER>\AppData\Roaming\npm\node\_modules\protractor\node\_modules\webdriver-manager\selenium



To execute Tests other than chrome or FF : Example - IE

1. Download the driver executable for the corresponding brower on which you want to execute your test
   1. webdriver-manager update –ie
   2. webdriver-manager update --version.chrome 89.0.4389.23Start the
2. webdriver-manager manually
   1. webdriver-manager start
   2. <http://localhost:4444/wd/hub>
3. Update the conf.js file with browser name
   1. Specify the SeleniumAddress and remove directConnect option
   2. 

PROMISE :



Validations in Protractor :

We use **expect** statements in protractor to perform validation, these expect statements are from Jasmin framework

Finding Sub-Elements :

* a sub-element:

element(by.css('some-css')).element(by.tagName('tag-within-css'));

* to find a list of sub-elements:

element(by.css('some-css')).all(by.tagName('tag-within-css'));

You can chain with get/first/last as well like so:

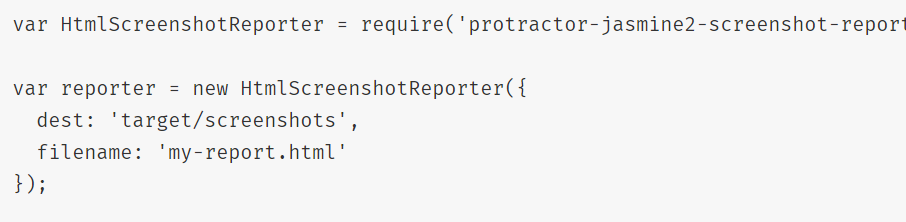
element.all(by.css('some-css')).first().element(by.tagName('tag-within-css'));

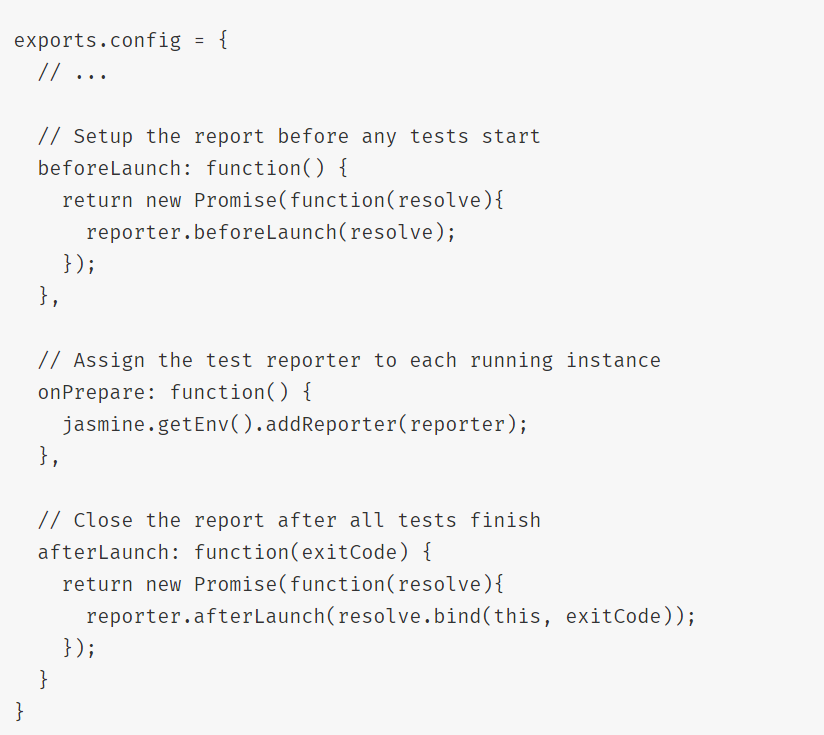
element.all(by.css('some-css')).get(index).element(by.tagName('tag-within-css'));

element.all(by.css('some-css')).first().all(by.tagName('tag-within-css'));

1. Capturing Screenshots in protractor

* Install npm package protractor-jasmine2-screenshot-reporter
  1. <https://www.npmjs.com/package/protractor-jasmine2-screenshot-reporter>
* Update the conf.js file as given in the document





1. Allure Reports in protractor

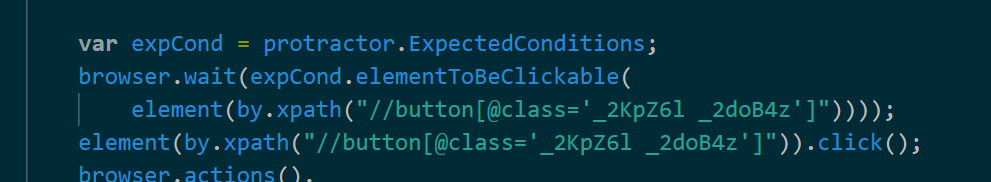
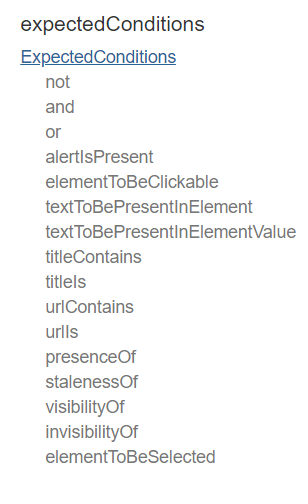
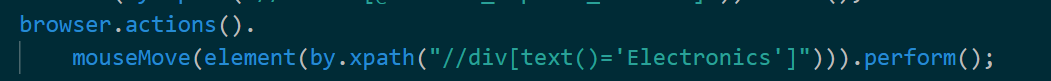
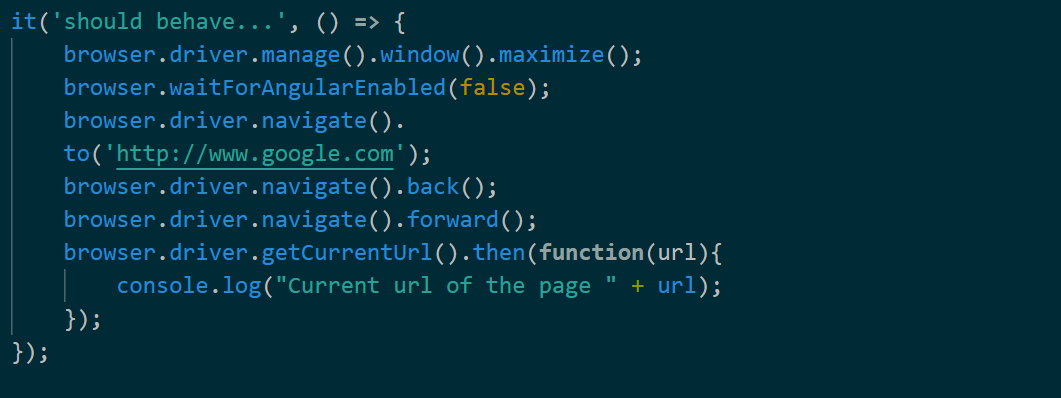
* Go to npmjs and download jasmine-allure-reporter
* Install Allure report using **npm i -g jasmine-allure-reporter**
* **Update the conf.js and execute the** Test and verify allure-reports folder is generated.and it should contain output in xml format

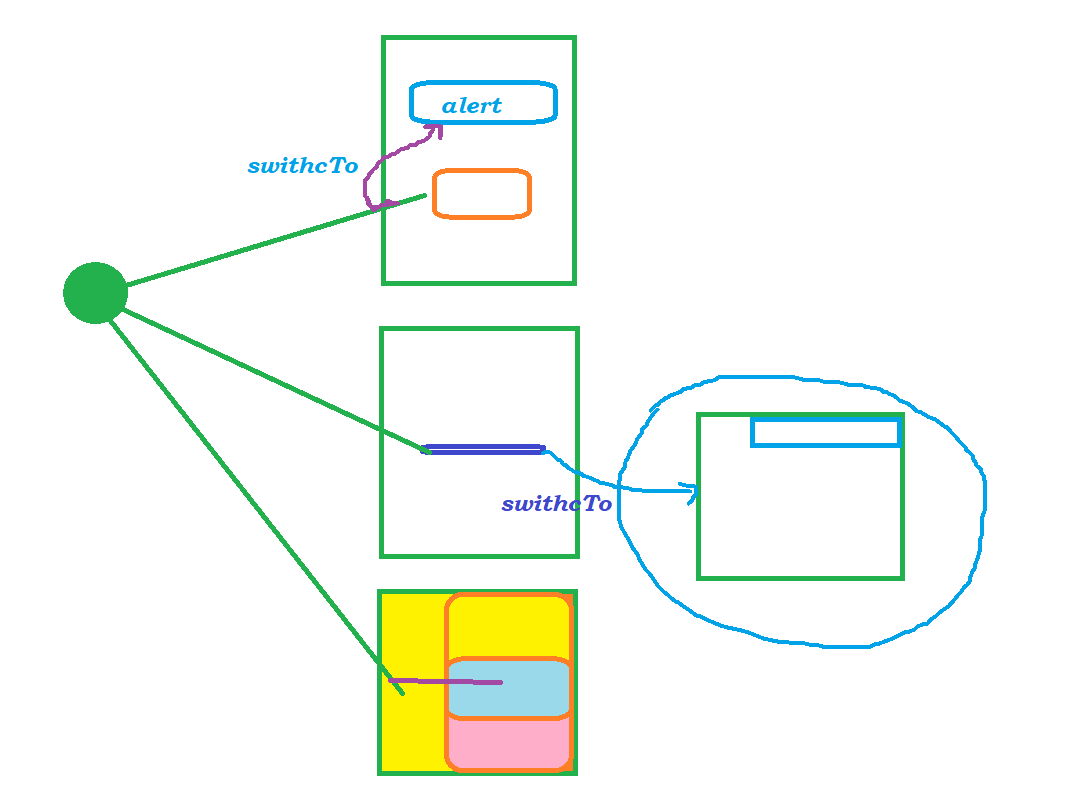
****

* **To get the HTML output we have to install allure command line tool from Command prompt with administrator privilege** 
  + [**https://www.npmjs.com/package/allure-commandline**](https://www.npmjs.com/package/allure-commandline)
* Install **npm i –g allure-commandline**
* Execute **allure serve “location of allure-results”**
  + **allure serve F:\Synechron\_Protractor\Training\allure-results**

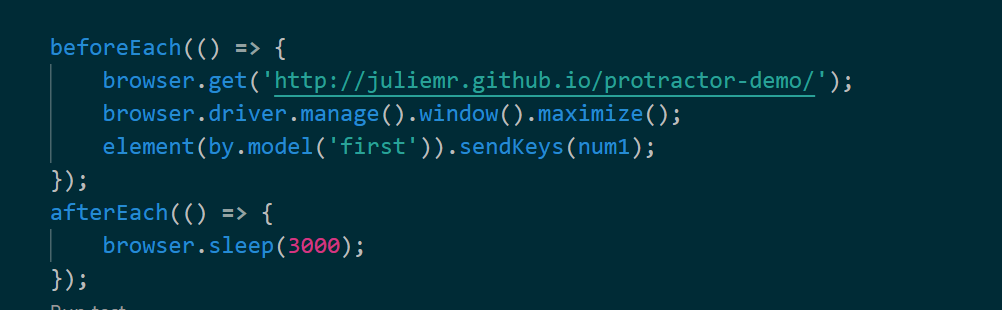
1. **HTML Report with Screenshot :**

* **Download and install the package** [**https://www.npmjs.com/package/protractor-html-reporter-2**](https://www.npmjs.com/package/protractor-html-reporter-2)
* **Update conf.js as shown in the official documentation**

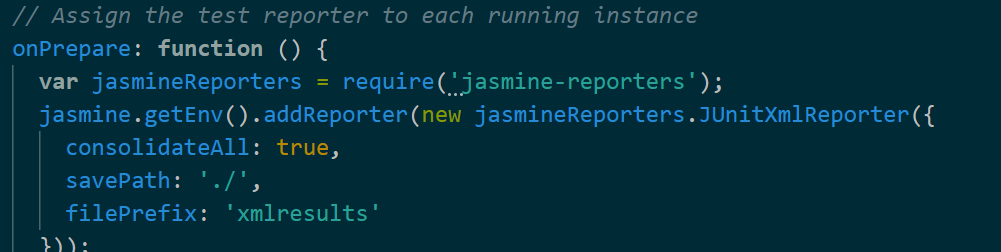
1. **Automate Non angular applications :**
   1. **Keep browser.waitForAngularEnabled(false); in test.**
2. **Explicit wait in Protractor**
   1. ****
   2. ****
3. **Actions in Protractor :**
   1. ****
4. **Browser Operations**
   1. ****
5. **SwitchTo in Protractor**

****

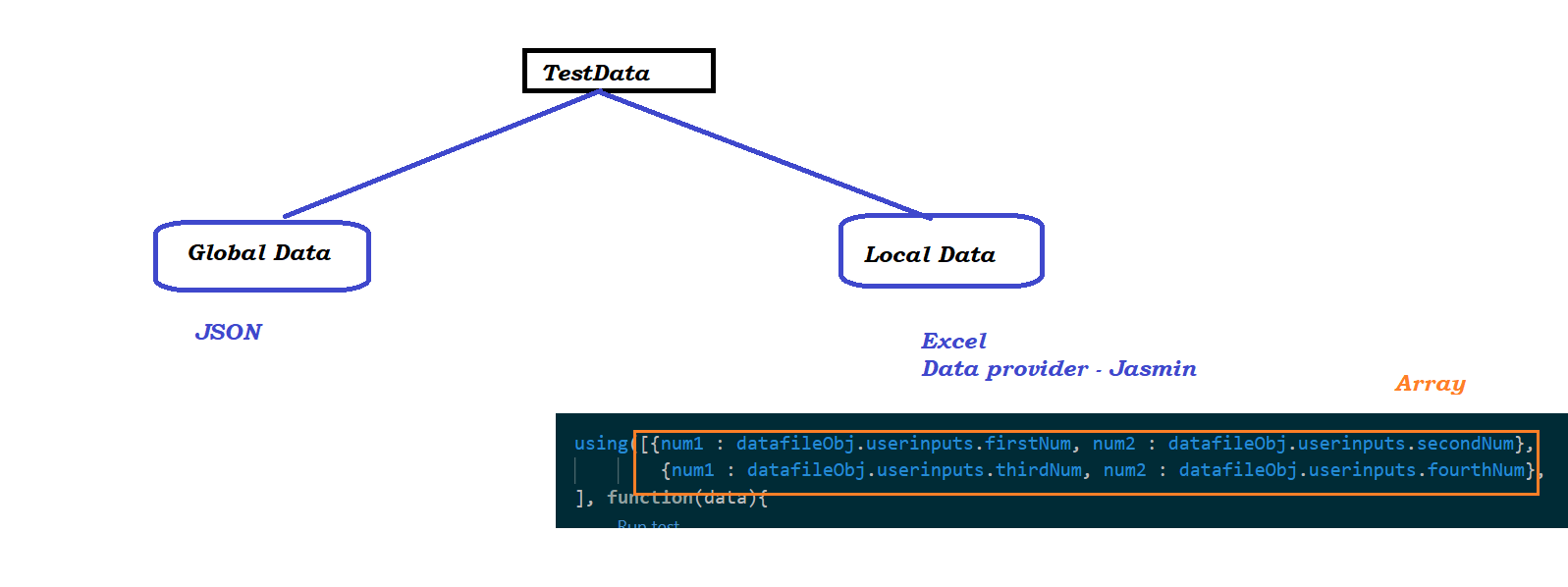
1. **Before Each and after Each in Protractor – Before and After executing test case**

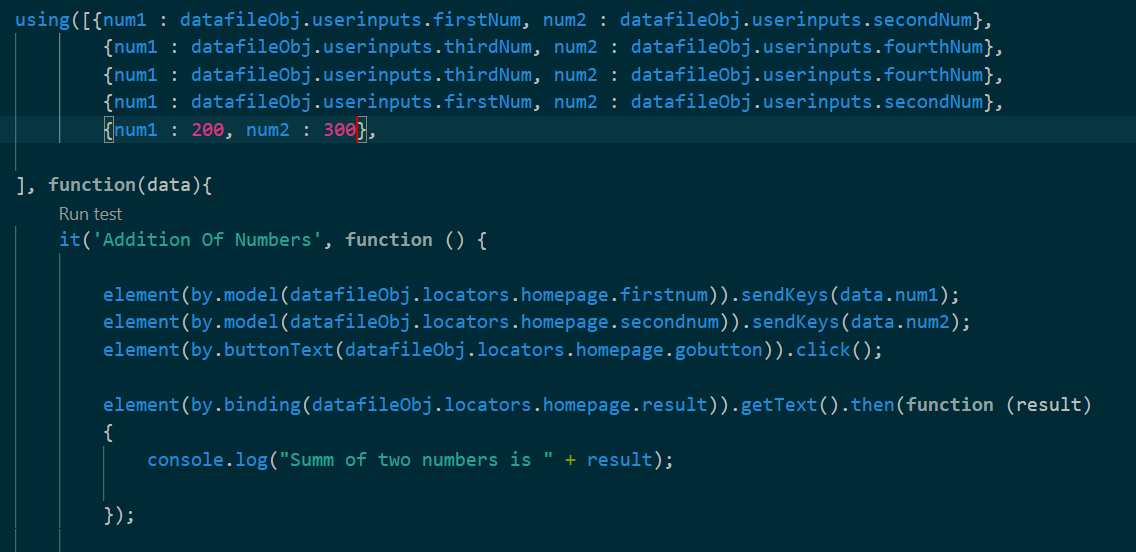
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1. **Onprepare OnComplete in conf.js – Executed before and After executing Test Suite**

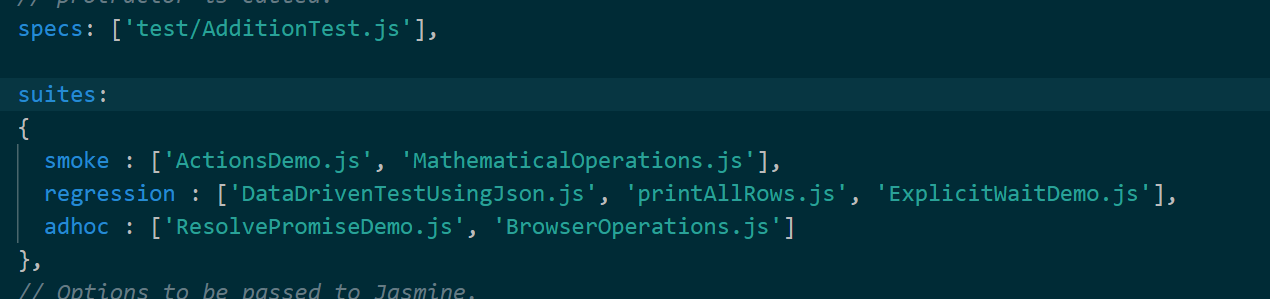


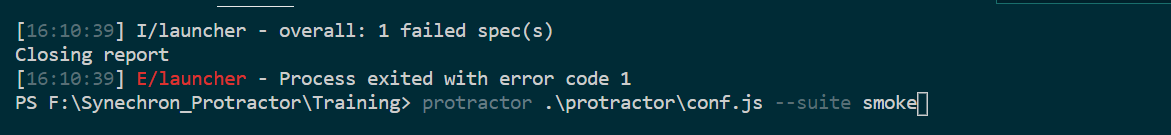
1. **Data Driven Testing**

****

* 1. **Using Json File**
  2. **Using Data Provider**
     1. **npm i jasmine-data-provider**
     2. **Use it in test**
     3. ****

1. **PAGE OBJECT MODEL** 
   1. **PAGE**
   2. **TEST**
2. **EXECUTING TEST SUITE :**

****

****

1. **Package.json**