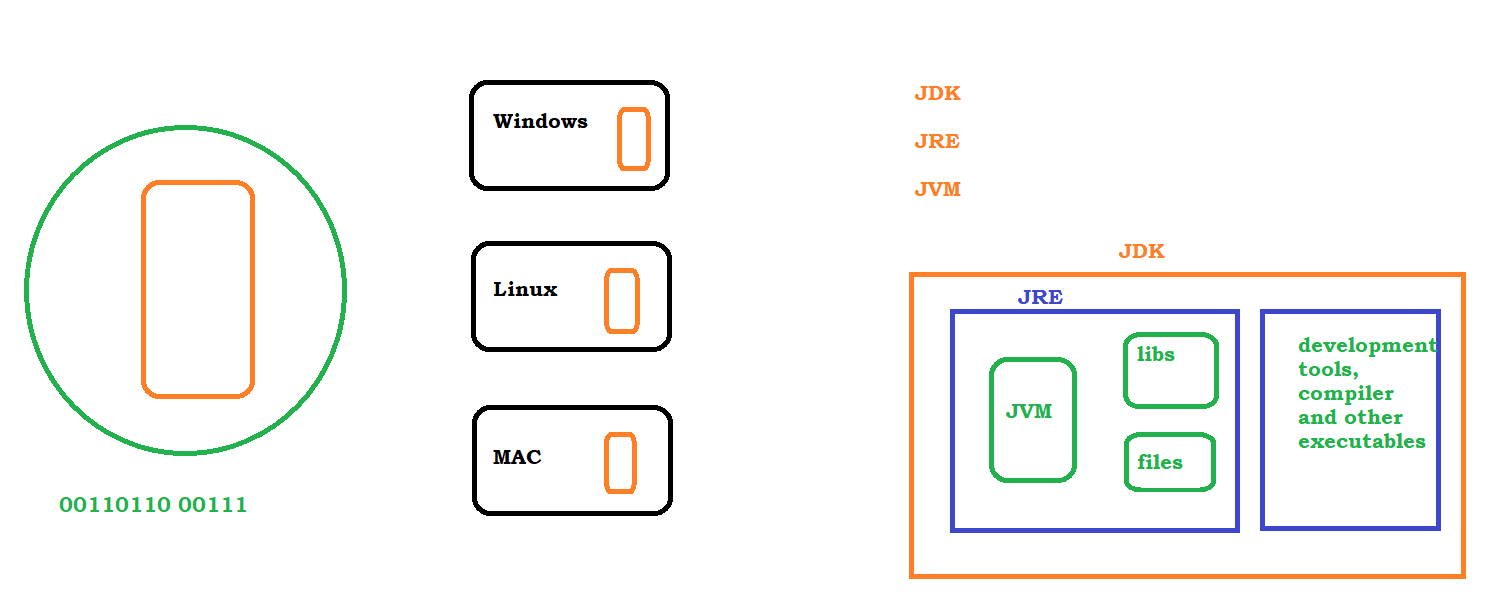
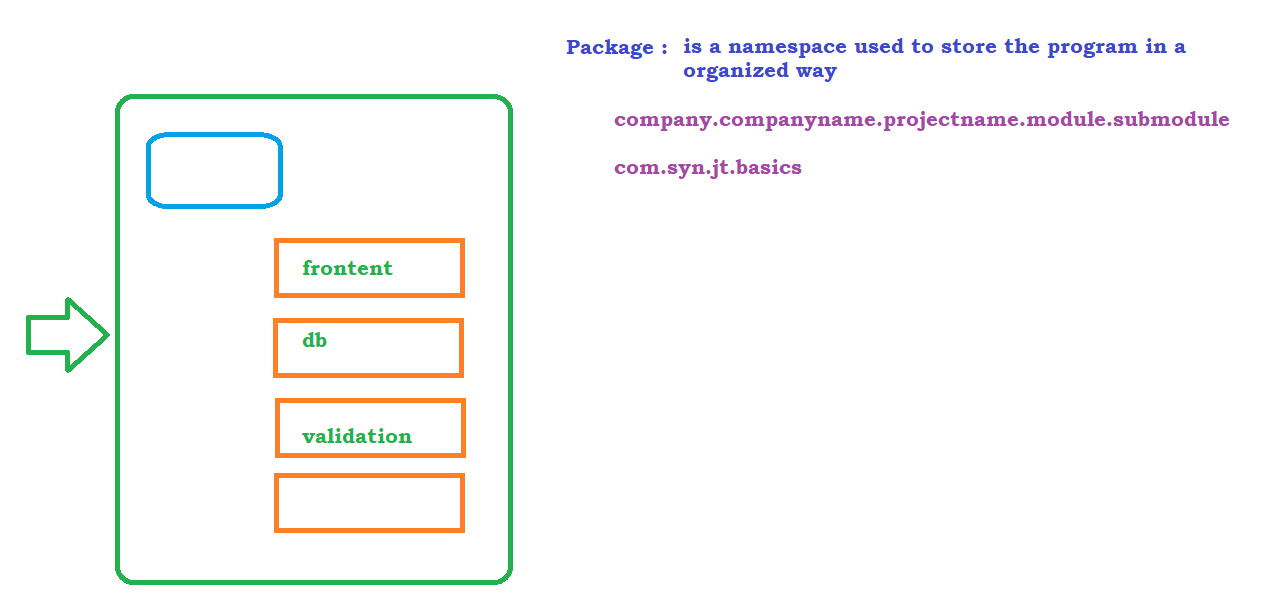
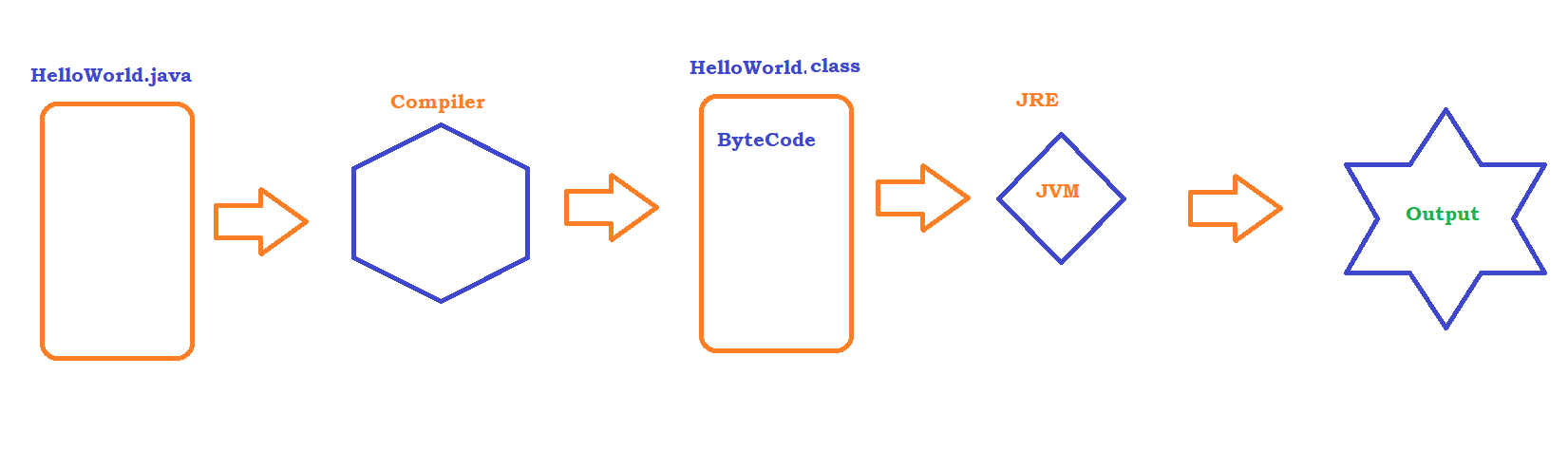
Java Selenium

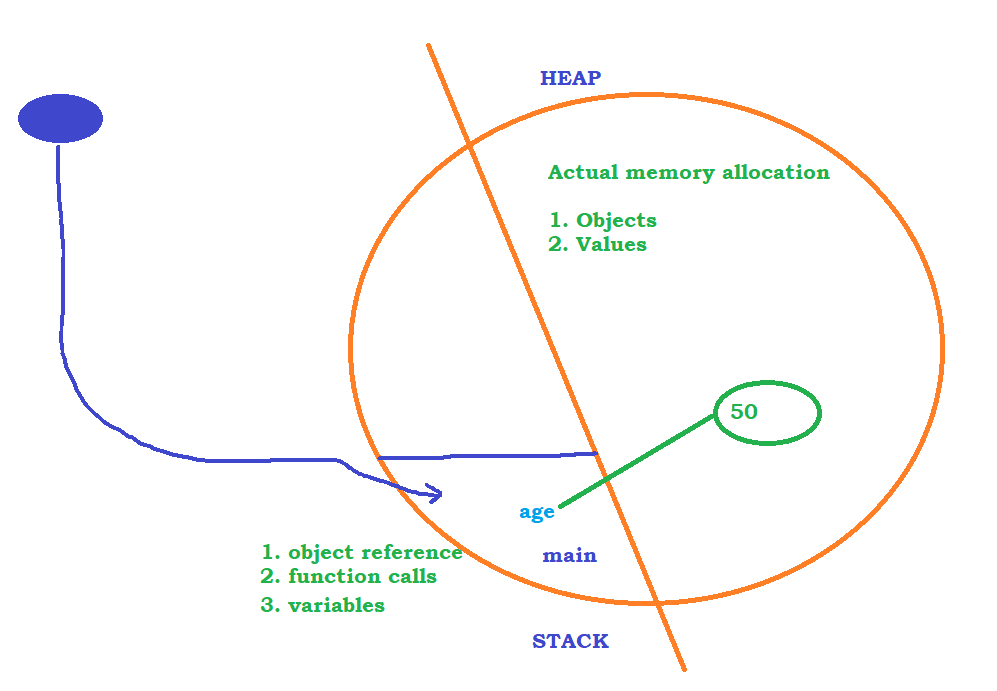


## HelloWorld JAVA Program

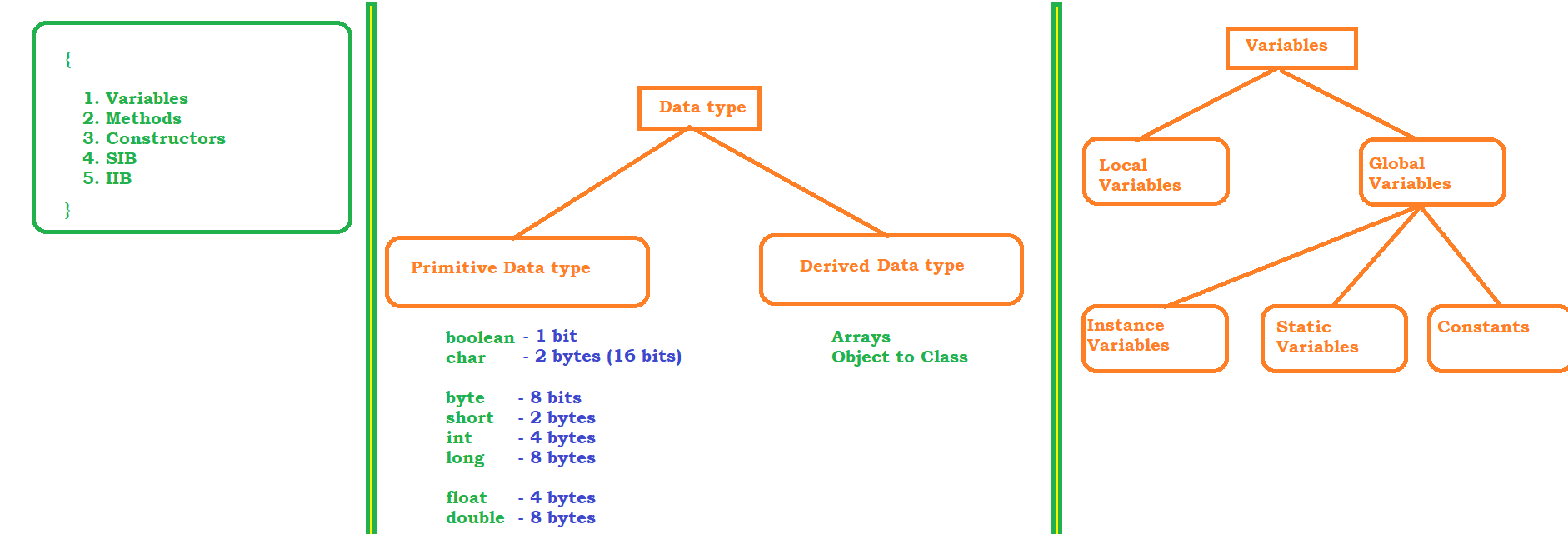


Compilation and Execution

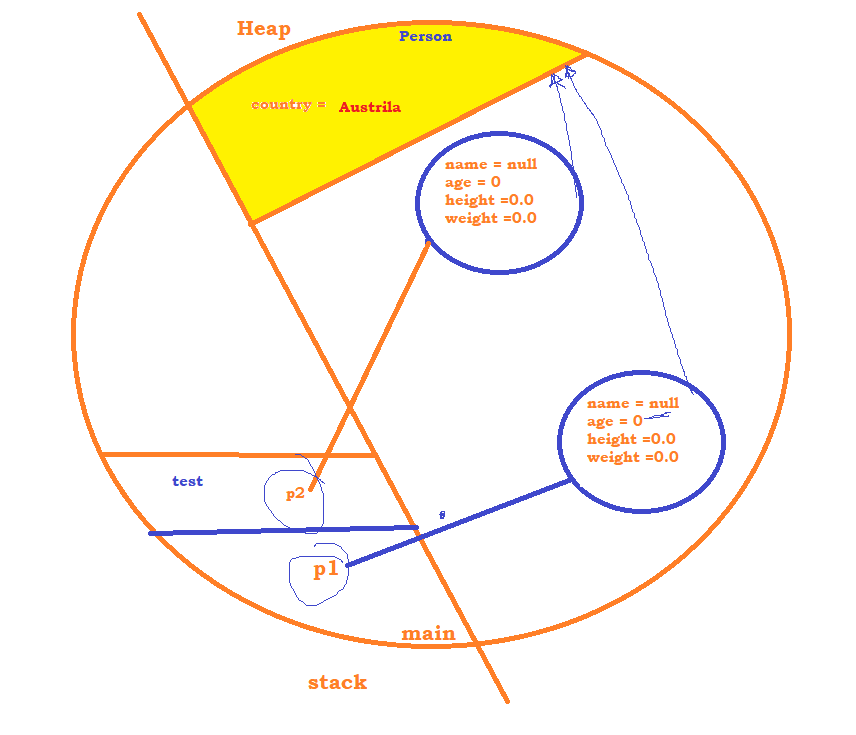




Data types and Variables

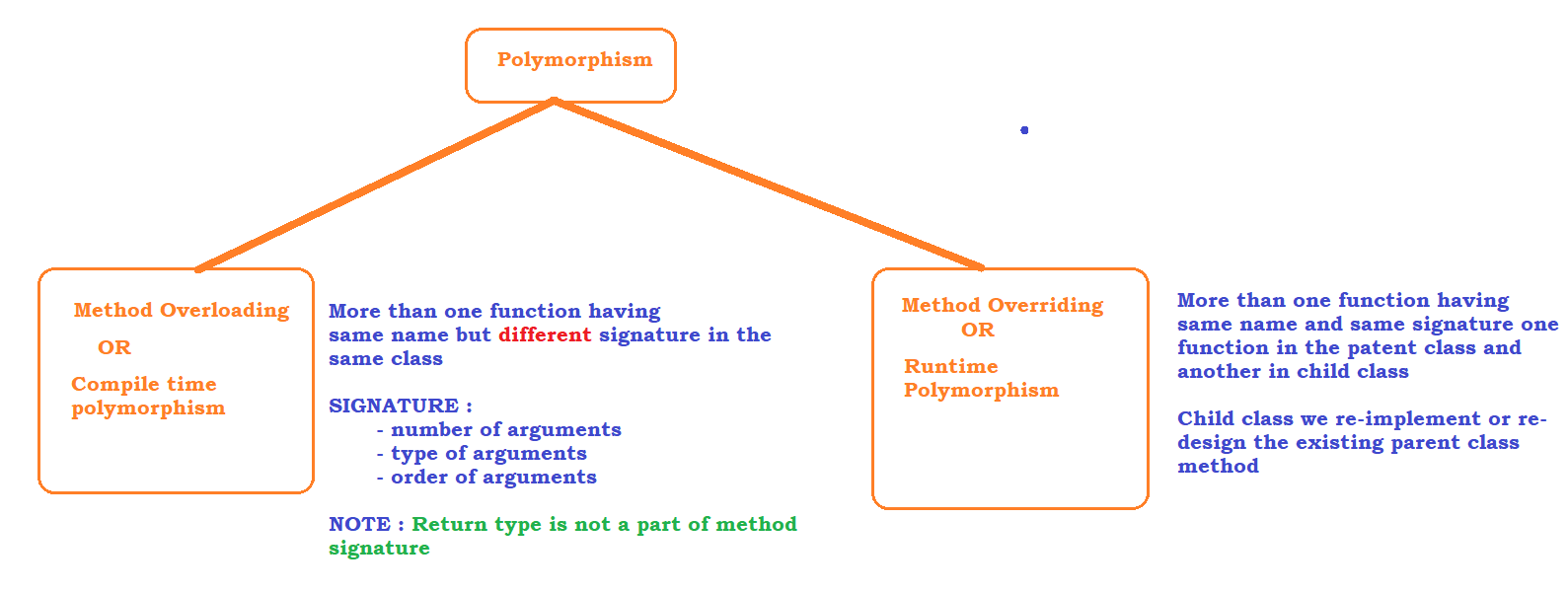


static demo

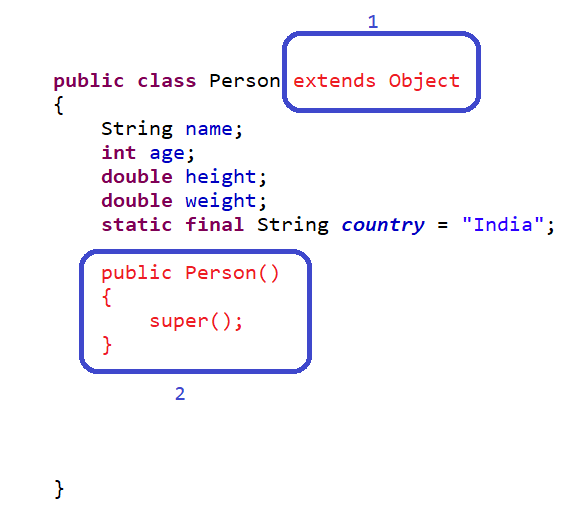


Methods or Functions

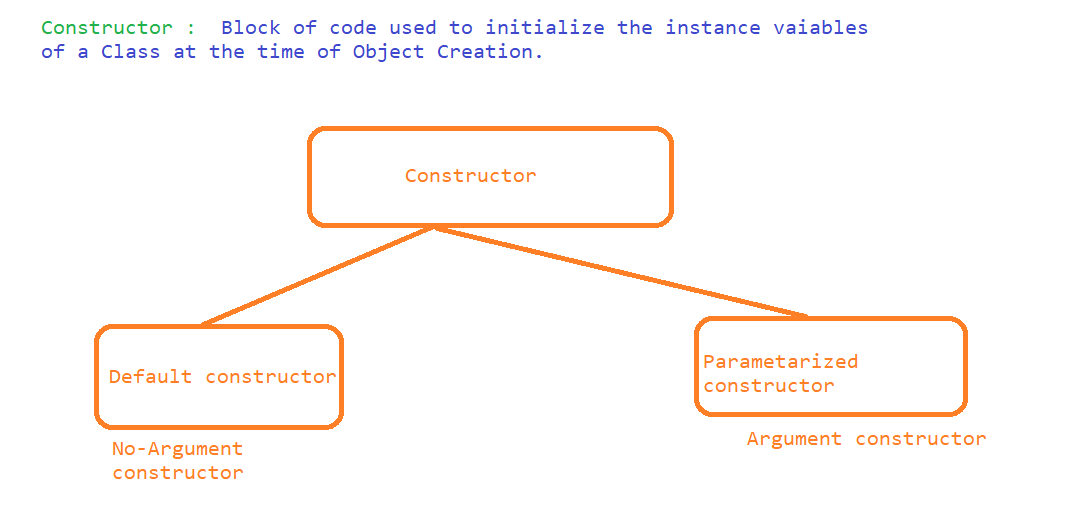
methods are reusable entities, we can write once and execute many times



Object class



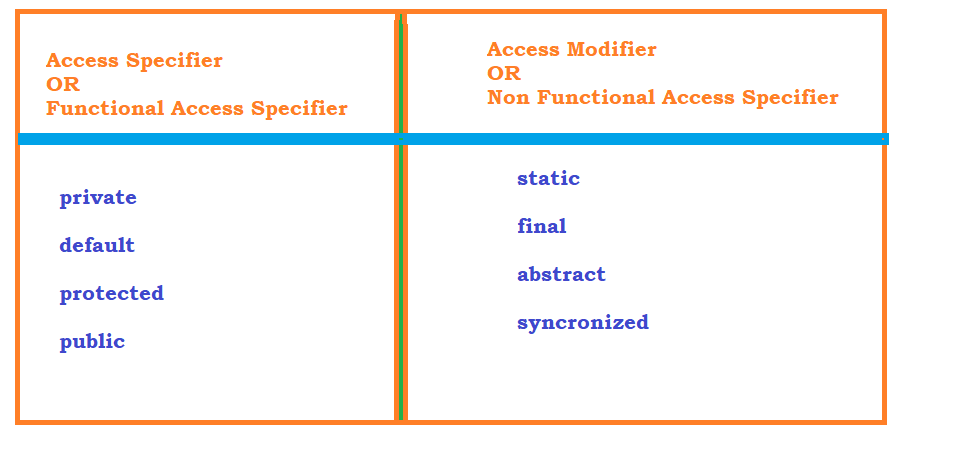
Constructors

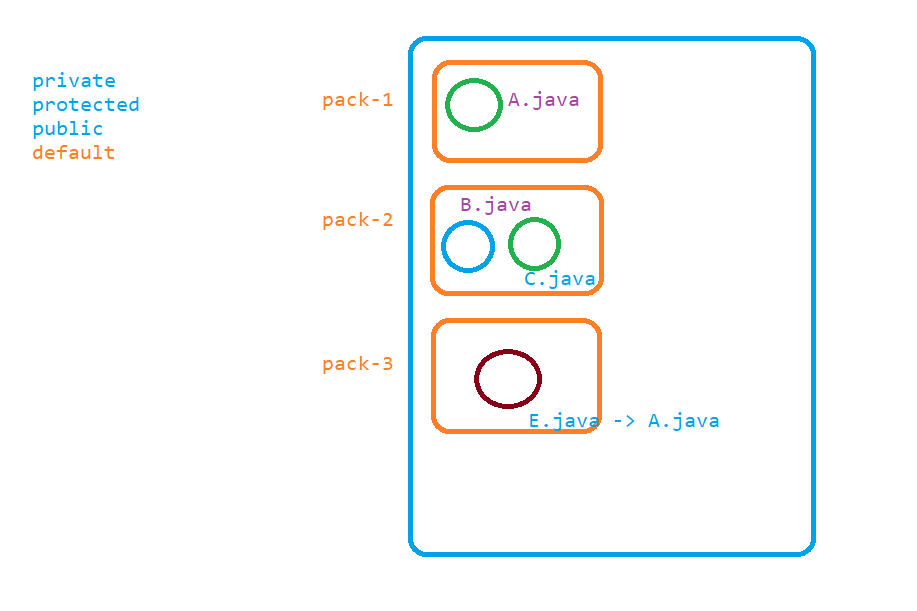


Initialization Blocks

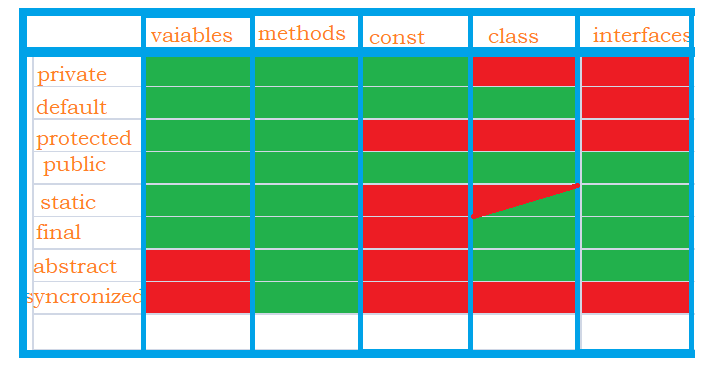
* SIB
* IIB

Access Specifiers and Modifiers





Summary of Access Specifiers and modifiers



Day-1

data types

primitive datatypes

derived datatypes

variables

Local V

Global V

Instance V

Static V

Const

methods

Overloading

Overriding

Constructors

Access specifiers

Access modifiers

Scanner class

Abstract class

Interfaces

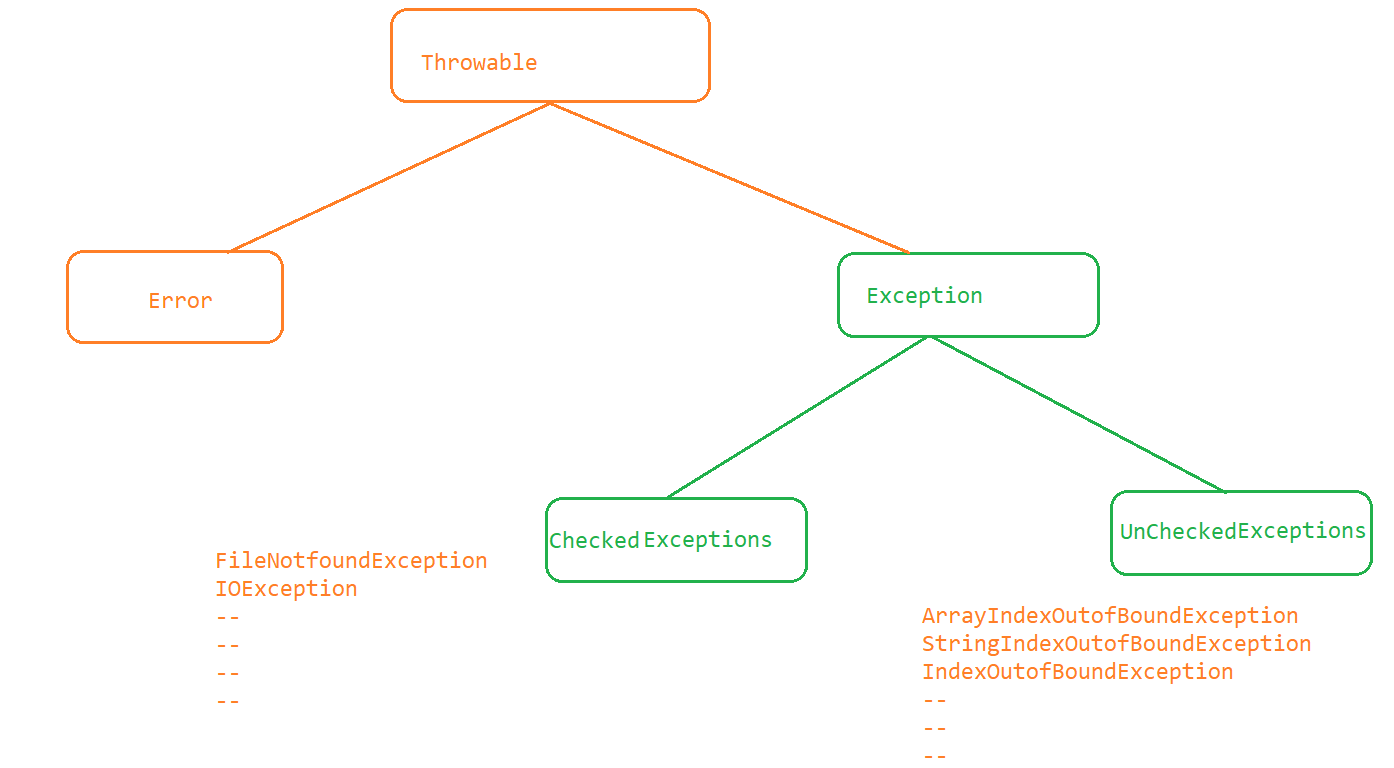
this and super kw

String

* java.lang
* Strings are Immutable in nature
* string functions
* StringBuffer
* StringBuilder

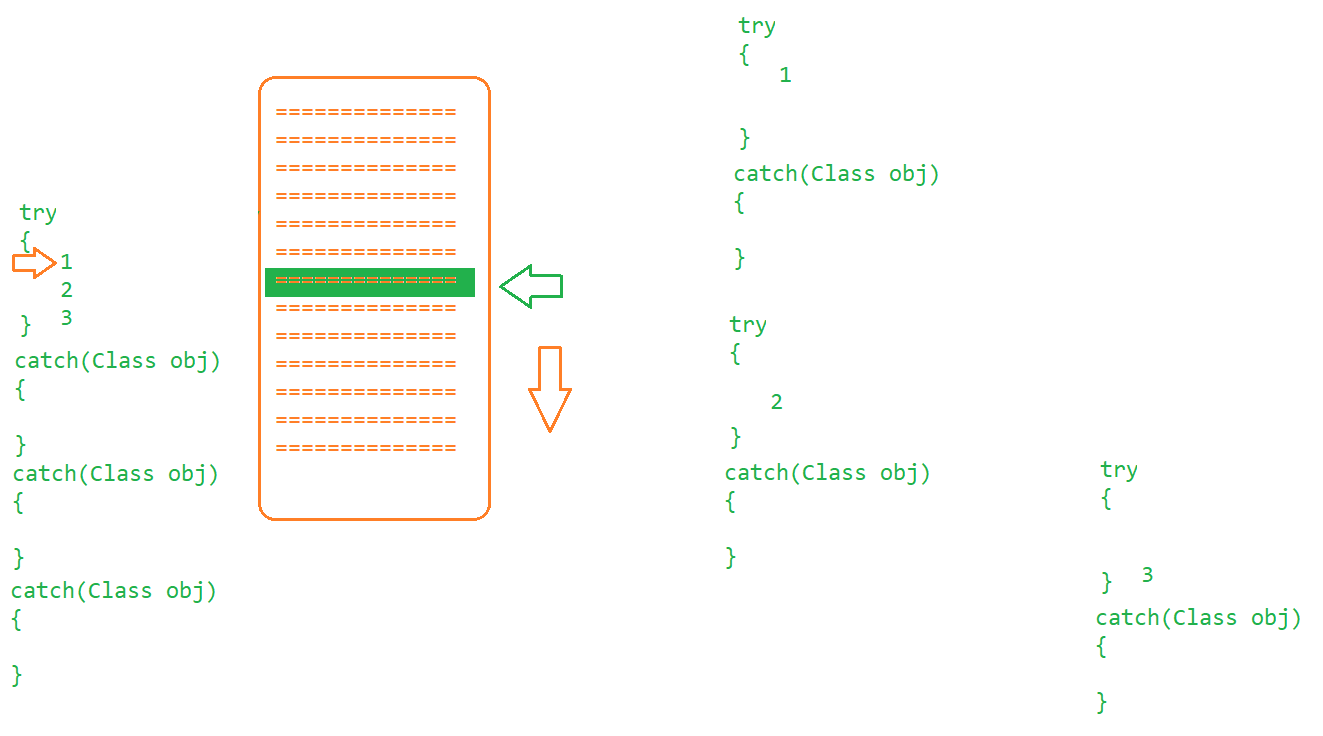
Looping and Conditional Statements

Exceptions



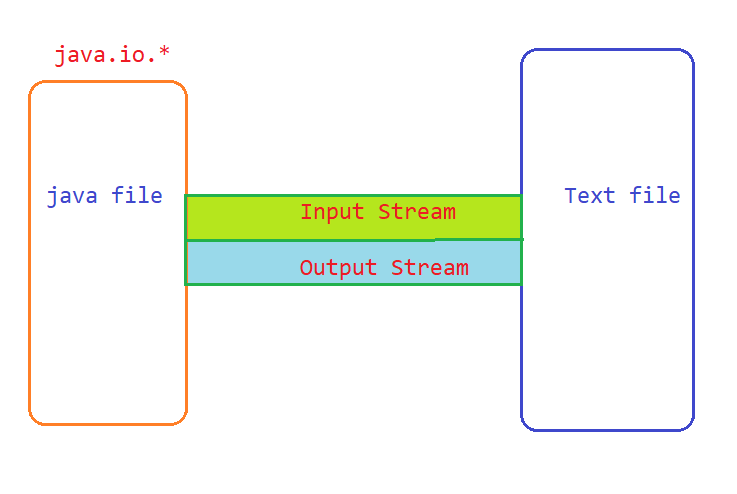
# Exception Handling



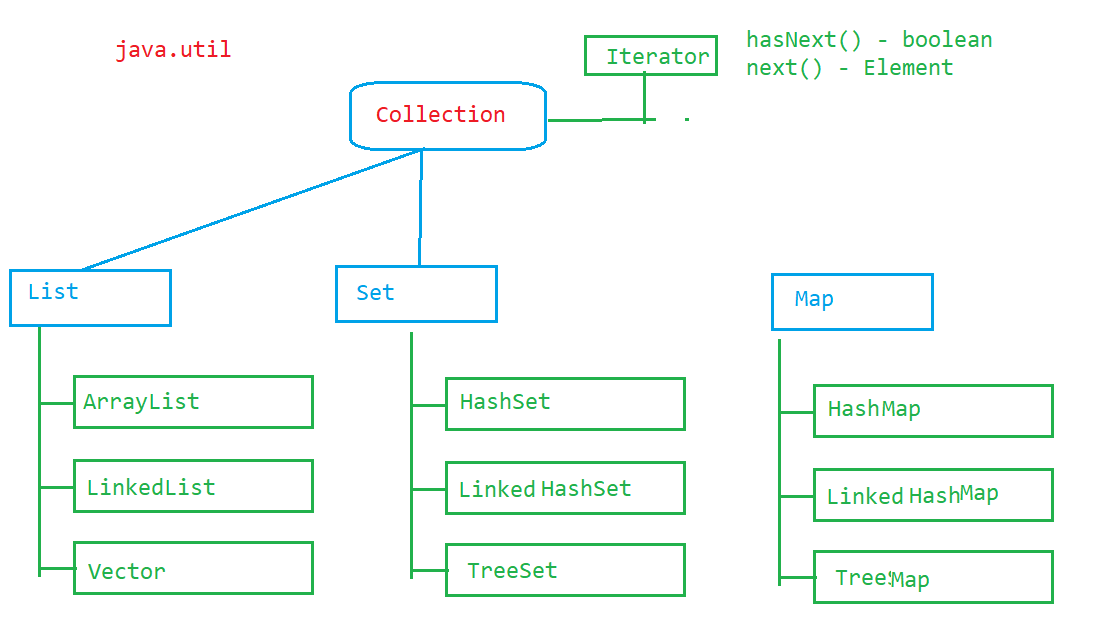


# What is the difference between final, finally,finalize

File Handling



Collections



Day-2

Strings

Exception Handling

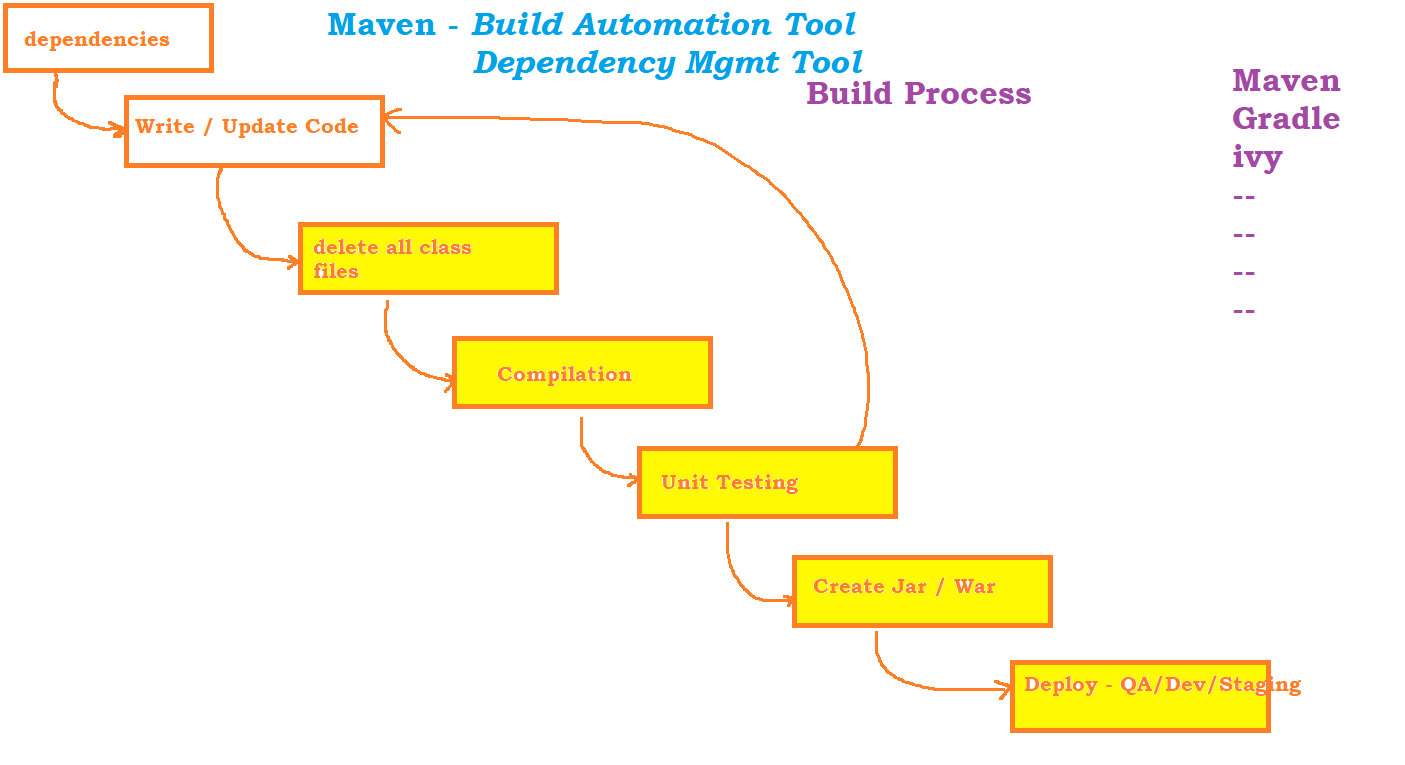
Looping and Conditional statements

File Handling

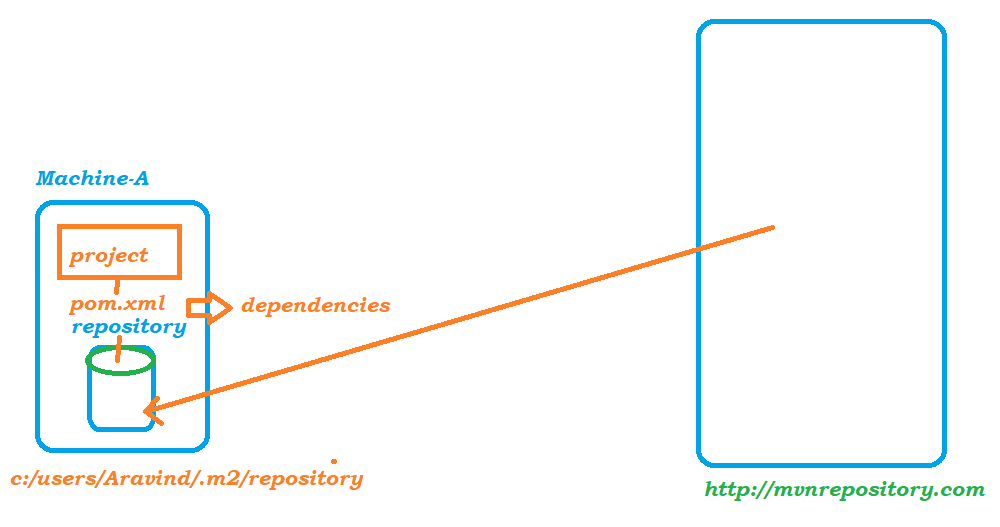
Collections

Generics

Maven

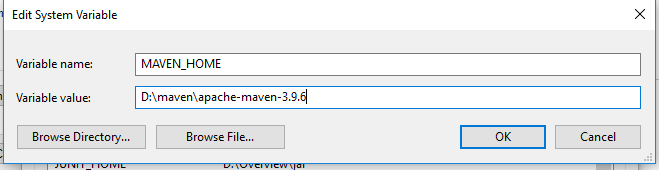


How maven work

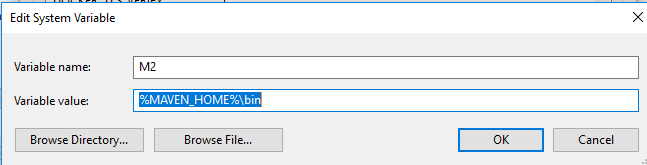


# Installation and Setup of Maven

* Download the zip file from <https://maven.apache.org/download.cgi>
* extract the file
* **set the Environment Variables**
  + MAVEN\_HOME



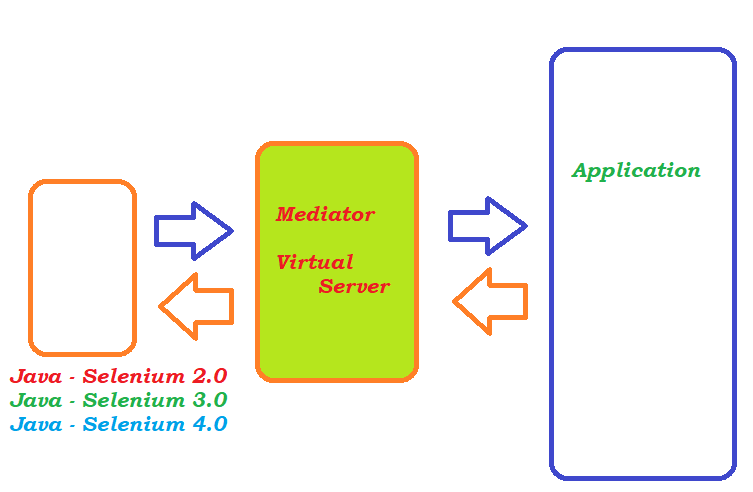
* + M2



**Update PATH**

New -> %M2%

Selenium



# Features of Selenium :

1. Open source and freely Available Software

2. Supports multiple programming language

java, ruby, python, javascript, cSharp, kotlin

3. Almost all popular browsers

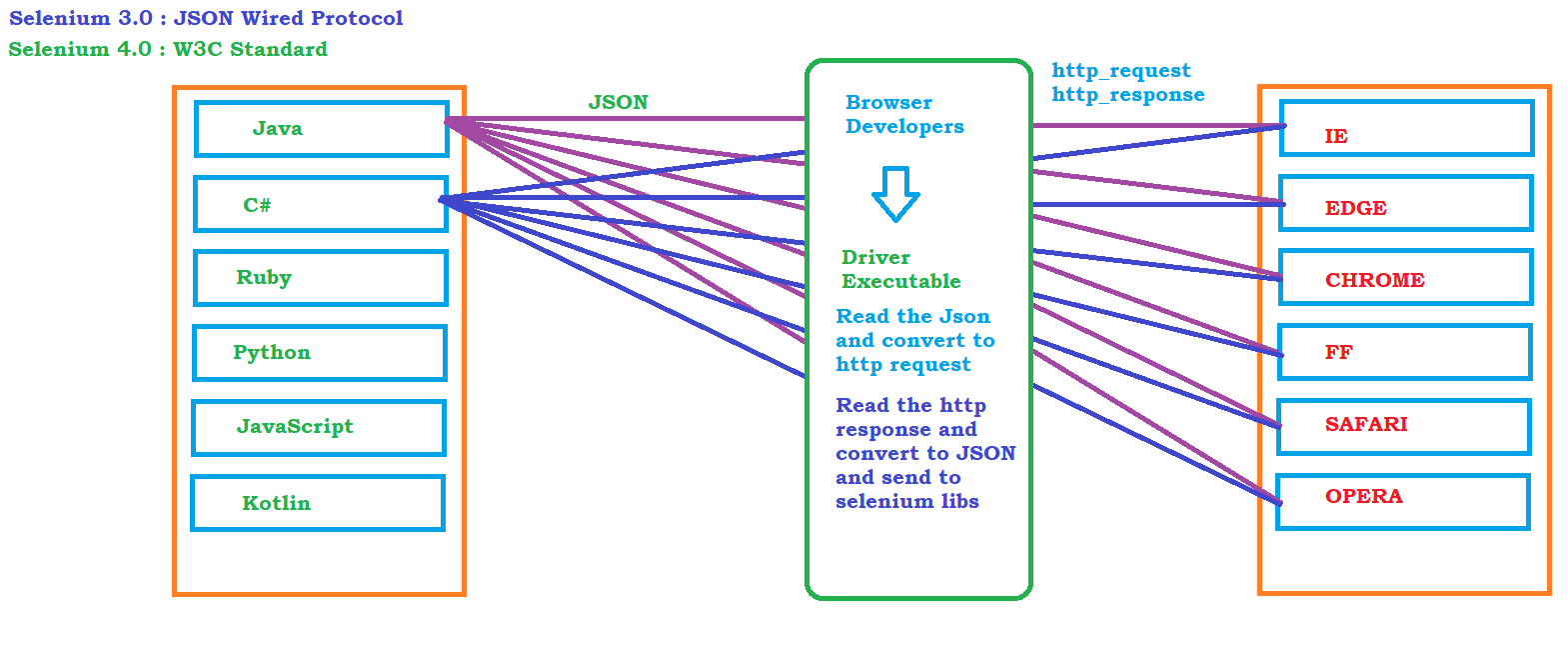
edge, Chrome, FF, IE, safari, Opera

4. No need to have a dedicated machine to run the tests

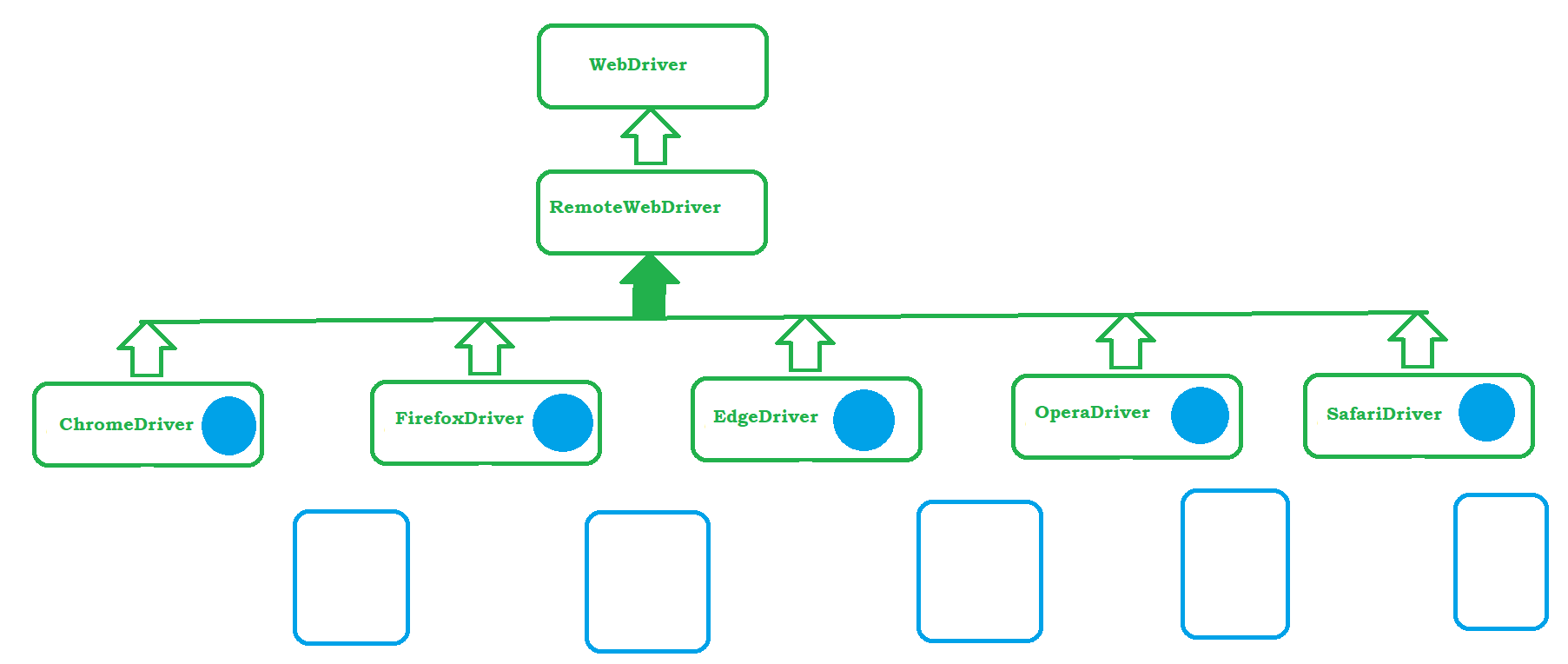
5. Parallel Execution of Tests

6. GRID - Distributed Execution

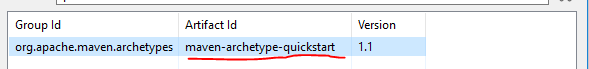
Architecture of Selenium



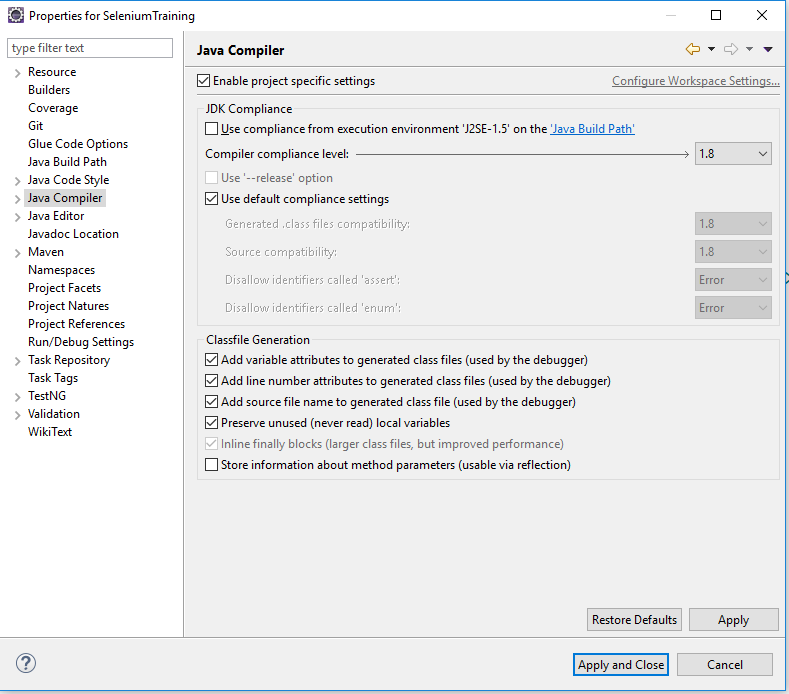
Driver Architecture



Create a Selenium Project

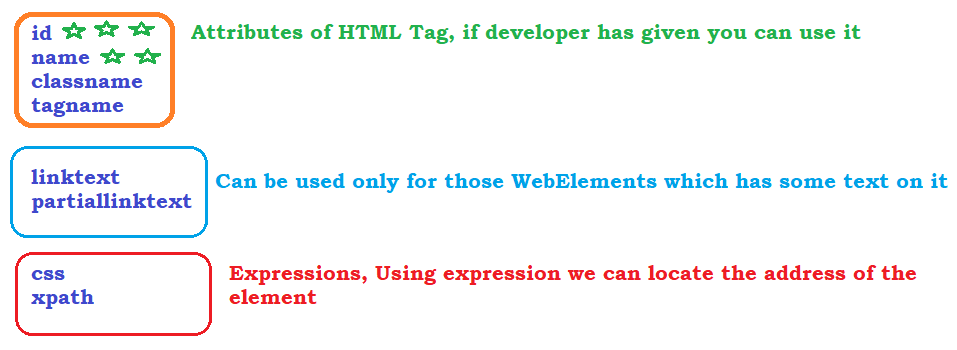


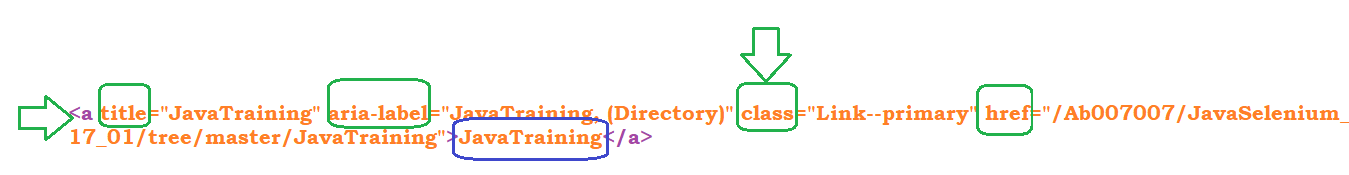
# Update JRE and Compiler if Mavan is using old one



Identification of WebElements

1. id
2. name
3. classname
4. tagname
5. linktext
6. partiallinktext
7. css
8. xpath





xpath plugin

xpath helper is the plugin we need to install to write our expressions

[https://chromewebstore.google.com/detail/xpath-helper/](https://chromewebstore.google.com/detail/xpath-helper/hgimnogjllphhhkhlmebbmlgjoejdpjl)

xpath Expressions

* **Basic xpath**

1. //htmltag[@property\_name=’property\_value’]

* **Xpath using functions**
  1. text() : //a[text()='JavaTraining']
  2. contains(arg1, arg2)
     + //th[contains(text(),'Directed by')]
     + //a[contains(@title,'This page is protected')]
  3. starts-with(arg1, arg2)

**arg1 – attribute of html tag OR function**

**arg2 – corresponding value**

* **Logical operators**
  1. **AND -** //htmltag[@property\_name1=’property\_value’ and [@property\_name1=’property\_value’]
     + **//th[@rowspan='15' and text()='Network']**
  2. **OR -** //htmltag[@property\_name1=’property\_value’ or [@property\_name1=’property\_value’]
  3. **NOT -** //htmltag[@property\_name1=’property\_value’ not [@property\_name1=’property\_value’]
* **Traverse from parent to child**
  1. //expression/for immediate child and write expression
     + **//td[@class='infobox-data']/a[@title='Prashanth Neel']**
  2. //expression// child is not a immediate and write expression
* **Traverse from child to parent**

Whenever we have dependent and independent elements in the application then we go with traversing from child to parent

STEP1: always write xpath for independent element

//th[text()='Directed by']

STEP2 : put the complete expression in a square bracket and specify the parent HTML Tag, do this until both dependent and independent elements are highlighted

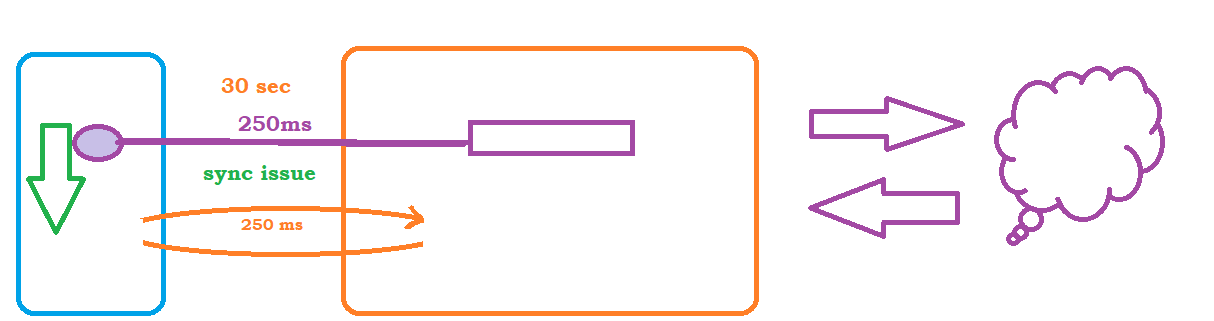
//tr[th[text()='Directed by']]

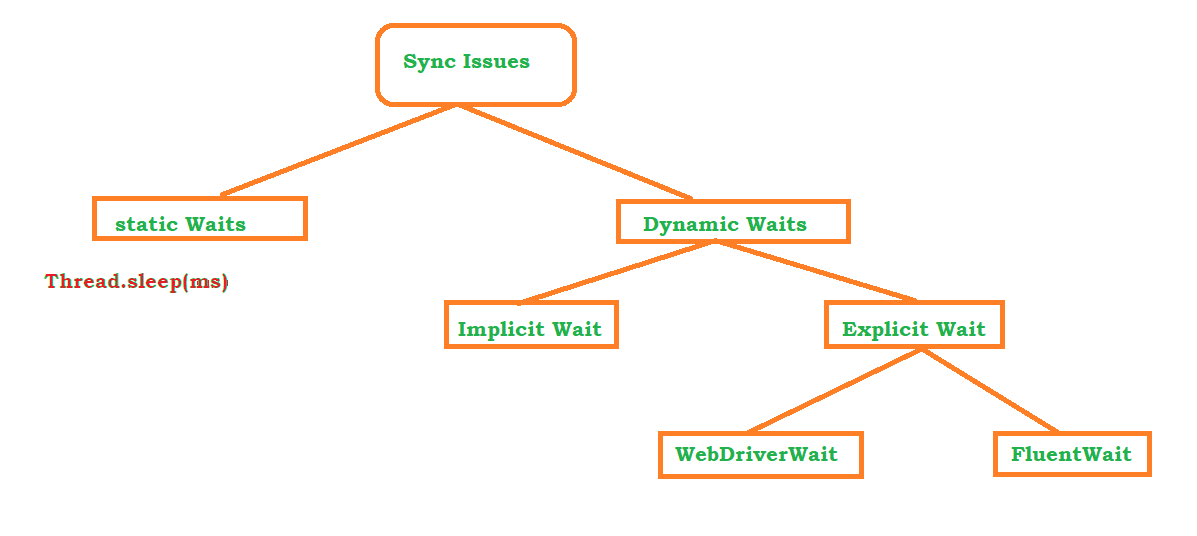
STEP3 : Traverse to the required parent / dependent element

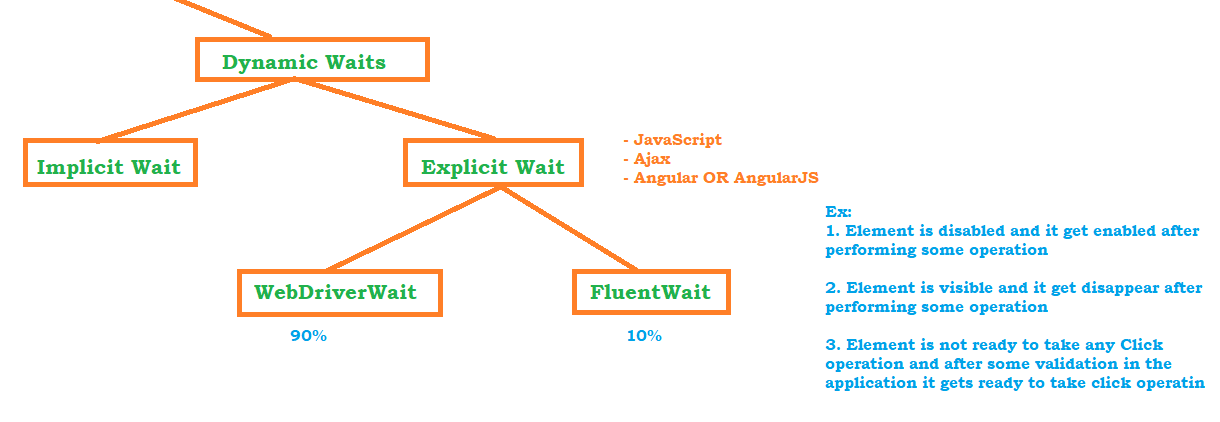
//tr[th[text()='Directed by']]//a

* Axes Function !!!!!

Handling synchronization issues or Sync Issues







Fluent Wait

**STEP-1 : Create an object to fluent Wait**

**1. Mention the WebElement on which we want to put fluent wait**

**2. Specify the Max wait time**

**3. Specify the polling time**

**4. Specify if any exceptions to be ignored**

**STEP-2 : Override apply Method which is present in Function Interface, and write your own wait logic**

**This technique is called anonymous inner class**

**STEP-3 : Use wait object and wait until the condition is satisfied**