30% - 50% -> Java

50% -> Selenium/TestNG/Maven/Framework etc (Real Time Questions )/Appium

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Pre-Req:

Java

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1. OOPS Concepts. (abstraction, encapsulation, inheritance, polymorphism)
2. Basics of Programming
   1. Data types and Variables
      1. Local variables
      2. Global variables
      3. Static variables
      4. Final variables
   2. Methods
      1. Default Methods
      2. Parameterised Methods
      3. Methods without return type
      4. Methods with return type
   3. Constructors
      1. Default constructors
      2. Parameterised constructors
   4. Static and instance blocks
3. Class
   1. Abstract class
   2. Final class
   3. Concrete class
4. Interface
5. Inheritance
6. Operators
7. Looping and conational statements
   1. For, while, do while , enhanced for loop
   2. If , if else, if elseif else, switch
8. Strings \*\*\*\*\*\*\*\*\*\*\*
   1. String functions
9. Exception Handling
   1. Try
   2. Catch
   3. Throw
   4. Throws
   5. Finally
10. File Handling in Java
    1. How to read a text file
    2. How to write into a text file
11. Threads
12. Collections
    1. List
    2. Set
    3. map

What is Testing

What are the different types of Testing we perform

What is Automation testing?

Why Automation testing is required!!!?

Different Tools available in Market ???

Why Selenium is Popular?

Selenium

* Selenium IDE
  + Record and play back
  + Add-on Chrome and FF
* ~~Selenium RC~~
* Selenium WebDriver
  + Writing xpath and css selector.
  + Lot of concepts – each and every thing
* Selenium Grid
  + Distributed Execution

Frameworks –

* Data driven Automation Framework
* Function driven Automation Framework
* Keyword driven Automation Framework
* Hybrid driven Automation Framework
* TestNG
  + Annotations
  + Grouping
  + Priority
  + Parallel execution
  + Lot more .....
* POM

Maven –

What is maven

Why maven is required

*VCT – Git*

*BDD - Cucumber*

JAVA : DAY-2

- OOPL

- free software (sun Microsystems)

***- platform(HW + OS ) independent*** programming language

- JAVA(Basic) => J2EE + J2ME + Android

1. Installation

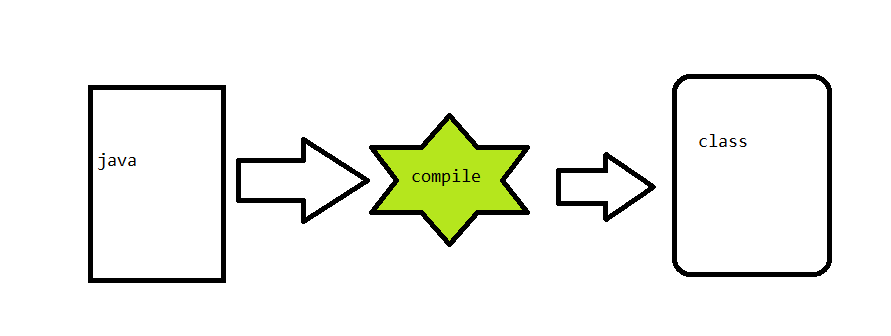
-jdk -> development

- jre -> execute java programs

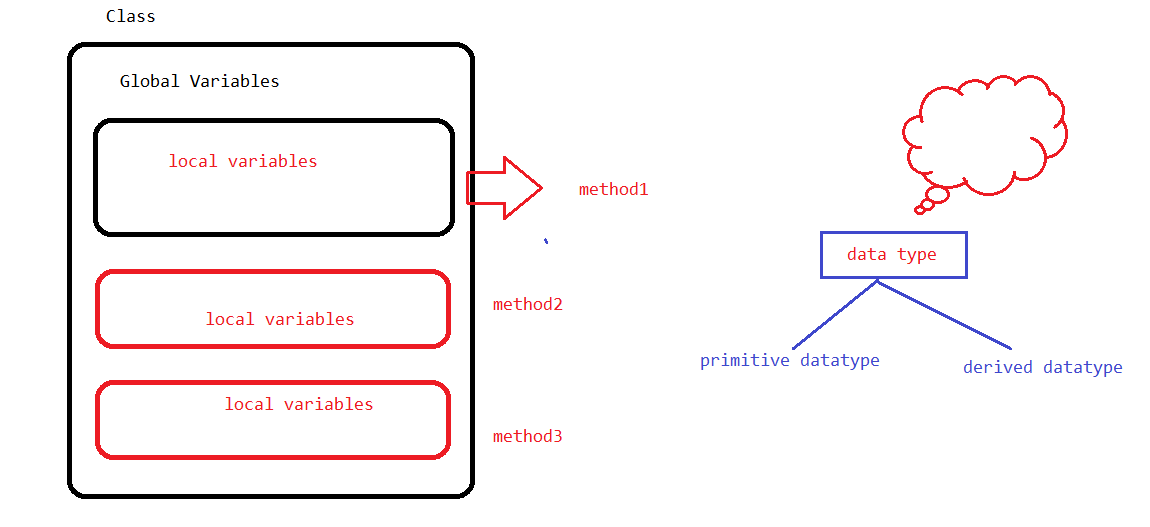
2. Configure Java using environment variables

Java Basics :

- packages ->



Variables and data types



Methods:

return\_type name([arg1, arg2])

{

//logic

}

Scope of a variable :

* Global variable – scope is throughout the class
* Local Variable - only inside the function (outside the function these variables are not accessible )

\* Class - blueprint (sketch of a House )

🡺 Members:

🡪variables

🡪methods

🡪constructor

🡪static IB

🡪instance IB

\* Objects - (House)

- Java is strictly type cast

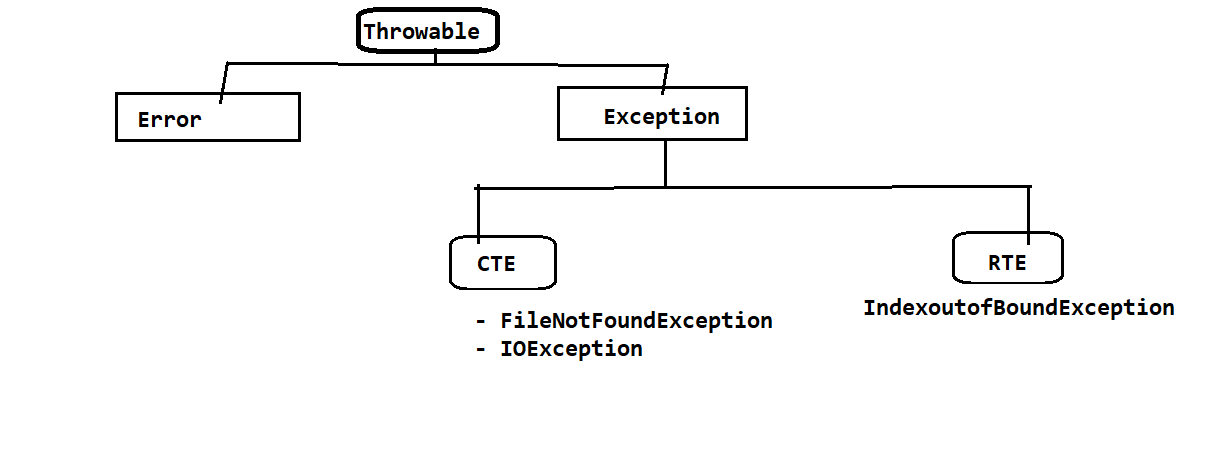
- for

- while

- do,while

- foreach

Exceptions:



Try

Catch

Throw

Throws

Finally

Selenium 30/05/2020

1. Free
2. Multi language (java,c#,ruby,python,perl,js)
3. Supports almost all the popular browsers
4. Supports parallel execution
5. No dedicated machine is required
6. Distributed Execution (using GRID)

Selenium IDE:

Implemented using java script

* Beginners
* IDE
* Record and Play

Verify and Assert :

Identification :

- id

- name

- className

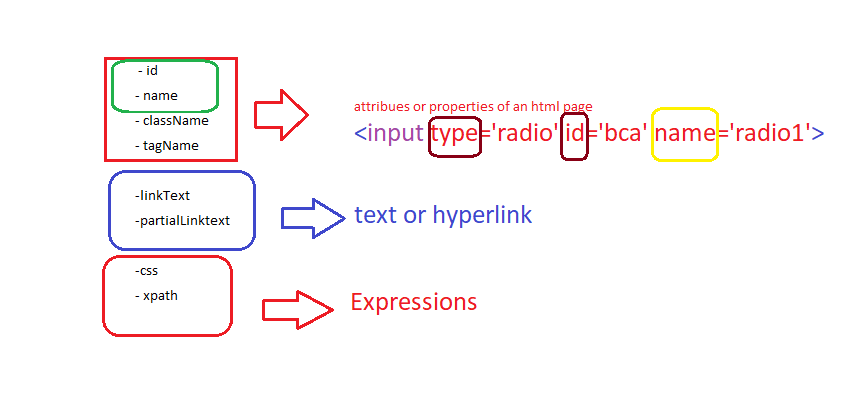
- tagName

-linkText

-partialLinktext

-css

- xpath



CSS:

**htmltag\_name**[attribute=’value’]

**htmltag\_name#idvalue OR #idvalue**

**htmltag\_name.classValue OR .classValue**

**PARENT TO CHILD – css\_expression > chid\_tag**

**XPATH:**

1. **BASIC** 
   1. **//html\_tag[@attibure=’value’]**
   2. **//a[@id='loginButton']/div**
2. **Functions :** 
   1. **text()**
      1. **LOGIN BUTTON IN ACTITIME - //div[text()='Login ']**
      2. **//td[text()='Please identify yourself']**
   2. **contains(arg1,arg2)**
      1. **arg1 -> attribute or text function**
      2. **arg2 -> partial value for attribute or text**
      3. **Ex: TEXT ON LOGIN SCREEN - //td[contains(text(),'Please')]**
      4. **Ex: ACTITIME LOGO - //img[contains(@src,'timer.png')]**
   3. **starts-with(arg1,arg2)**
      1. **arg1 -> attribute or text function**
      2. **arg2 -> partial value for attribute or text**
      3. **Ex: Google Search for Intellipaat - //h3[starts-with(text(),'Intellipaat')]**
3. **LOGICAL OPERATORS** 
   1. **AND - > when both the conditions are satisfied** 
      1. **//td[@class='nfo' and @data-spec='year']**
   2. **OR -> If any one condition is satisfied then it returns the element**
      1. **print all text boxes present in the page - //input[@type='text' or @type='password']**
      2. **Redbus.in cal🡪 //td[text()='2' and (@class='current day' or @class='we day' or @class='wd day')]**
      3. **OR THE SAME XPATH CAN BE USED WITH NOT - //td[text()='6' and not(@class='past day')]**
      4. **OR WITH OPERATOR - //td[text()='' and @class!='past day']**
4. **Traversing**
   1. **TRAVERSING FROM PARENT TO CHILD - to reduce the search portion in the HTML file**
      1. **//div[@data-hveid='CBAQAA']//h3**
   2. **TRAVERSING FROM CHILD TO PARENT – Dependent and independent element**
      1. **//div[div[div[p[text()='AI-401 | AI-775']]]]//span[@class='actual-price']**
5. **Axes Functions**
   1. **following-sibling**
      1. **Sample from Wikipedia page - //th[text()='Directed by']/following-sibling::td**
      2. **//div[@id='toc']//li[a[span[text()='Production']]]/following-sibling::li**
   2. **preceding-sibling**
      1. **//div[@id='toc']//li[a[span[text()='Production']]]/preceding-sibling::li**
   3. **parent**
      1. **//div[@id='toc']//span[text()='Production']/parent::a/parent::li/preceding-sibling::li**
   4. **child**
      1. **//th[text()='Directed by']/following-sibling::td/child::a**
   5. **ancestor** 
      1. **//p[text()='SG-905']/ancestor::div[@class='dept-options-section clearfix']//span[@class='actual-price']**
         1. **Write xpath to the independent element**
         2. **use ancestor and specify the ancestor tag**
         3. **traverse back to the required child element**
   6. **following**
      1. **//div[@id='toc']//span[text()='Production']/parent::a/parent::li/following::li**
   7. **preceding**
      1. **//div[@id='toc']//span[text()='Production']/parent::a/parent::li/preceding::li**

**Sample Xpath :**

**- GSM ARENA**

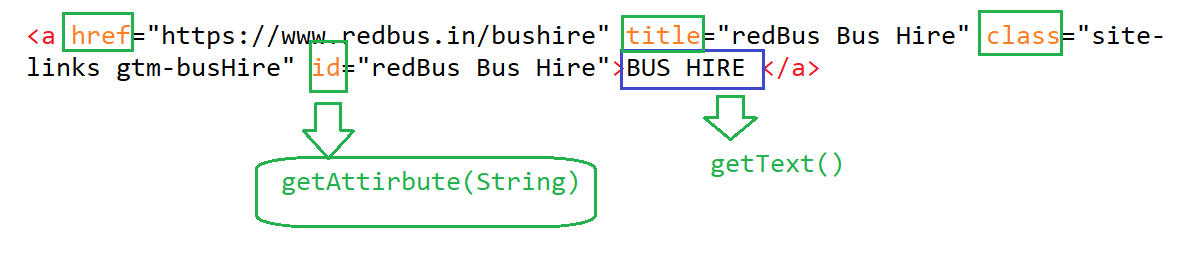
**//th[text()='Platform']/ancestor::tbody//td[@class='nfo']**

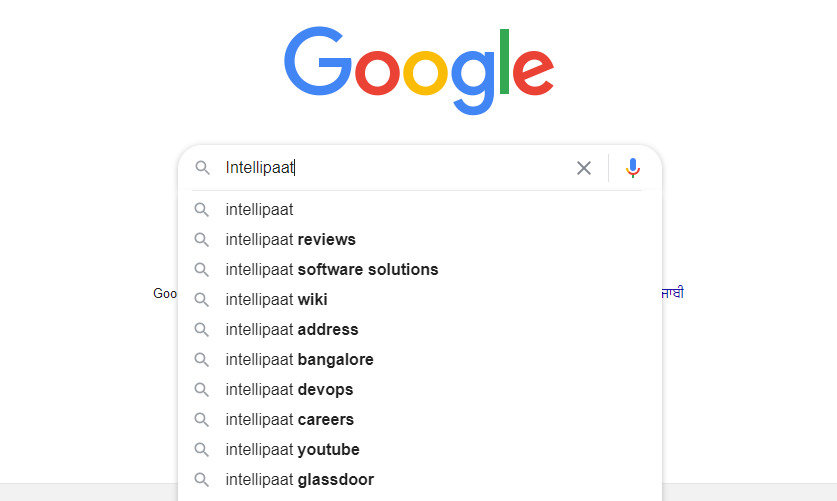
**SELENIUM WEBDRIVER SETUP.**

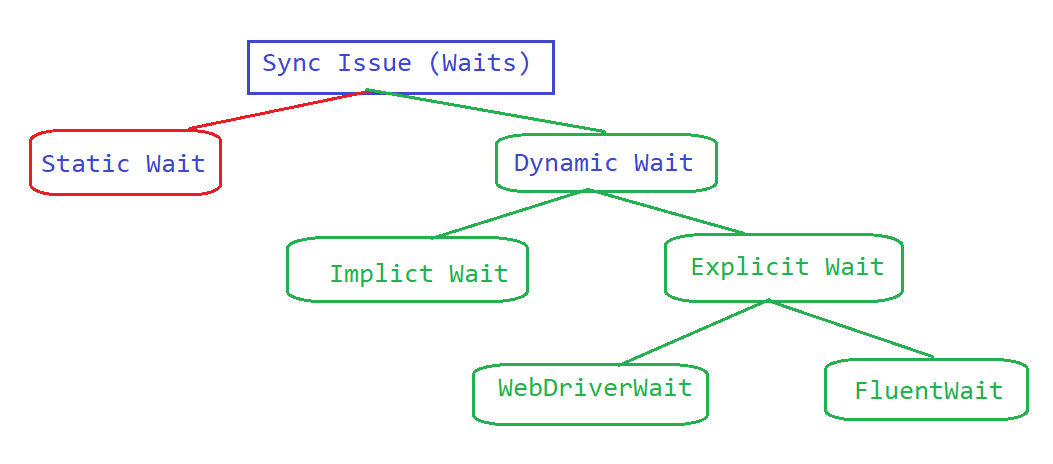
1. **Eclipse software**
2. **Create Java project and configure Selenium**
   1. **Attach java libs**

**Selenium Setup:**

1. **HelloWorld- Selenium**
2. **Handling Tool Tip in Selenium:**

* **Tool tip small information about the webElement.**
* **alt or title property**
* ****

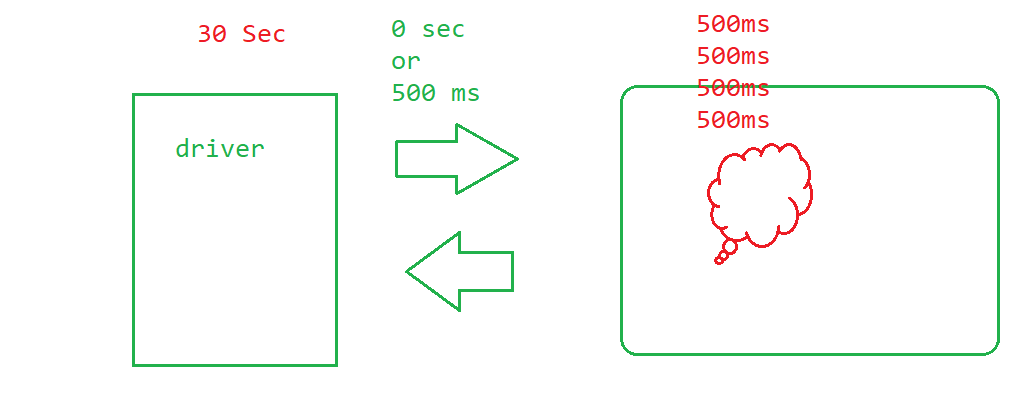
1. **Auto Suggestions:**
   1. **Suggestions given by application based on the user search criteria**
   2. 
   3. **we have to use findElements when we are playing with multiple Elements**
2. **Synchronization issue**

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Usually Tool Execution speed is much faster than the Application execution speed. because of which some tests may fail.

We have to reduce the tool execution speed.

* 1. **Static Waits**
     1. Thread.sleep(ms)
     2. NEVER USE STATIC WAITS!!!
  2. **Dynamic Waits**
     1. **Implicit wait**
        1. Changing the default wait time of a driver Object.
        2. As soon as you create a Object we have to change the default time of driver

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* + 1. **Explicit Wait**
       1. **WebDriverWait**
       2. **FluentWait**