JAVA : (50/50)

**Java** ,C#, Ruby, Python,Perl, Php,js

* Basic Syntax - class, variables, methods, return types for methods
* Looping and Conditional Statements in java
* Types of variables – local variables, global variables, static variables, constants
* Difference between **classes** and **interfaces**
* **OOPS Concepts - abstraction, encapsulation, polymorphism , inheritance**
* **String –** String functions (atleast one program)
* **Exception Handling –** try, catch, throw, throws, finally, Userdefined Exceptions
* **Treads ( Optional )**
* **Collections –** List , Set, Map, Queues
* **File Handling –** Read a file, Write a file. ( text, properties )
* **Generics - Must**

Selenium – Browser Automation Tool

* Selenium IDE (record and playback option)
* Selenium RC ( Selenium 1.0 )
* Selenium WebDriver ( Selenium 2.0, 3.0 (3.141.59), 4.0 )
* Selenium Gird (Distributed Execution)

Frameworks

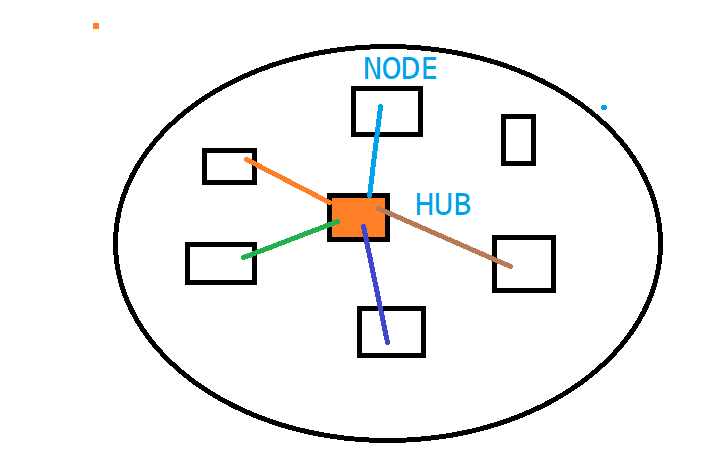
* Function Driven Automation Framework
* Data Driven Automation Framework
* Keyword Driven Automation Framework
* Hybrid Driven Automation Framework
* TestNG
  + Annotations
  + How to generate test execution reports
  + Control test annotation execution
  + Execute the tests in parallel ( 2 or n )
  + How to achieve data driven testing in testNG
  + How to use xml file for test execution
  + How to create batch file
  + How to create groups in testNG
* Page Object Model
* BDD ( if time permits )

Maven

* What is maven
* Why it is required
* How to create a maven project
* How to add dependencies
* Life cycle of maven
* How to execute maven using command prompt
* Verify the reports

Jenkins – High level (CI \ CD)

Selenium :

* Free ,open source
* Supports multiple programming languages (**Java** , C#, Ruby, Python, Perl, php, js )
* Platform independent - (linux, Windows, MAC.. )
* Multiple Browsers ( almost all popular browsers )
* No Dedicated machine is required \*\*\*\*\*\*\* \*\*\*
* Parallel Execution ( at a time you can open more than one browser )
* Distributed Execution
* 

Testing –

* Process
  + Functional Testing
  + Integration Testing
  + System testing
  + UAT
  + Adhoc Testing
  + Usability Testing
  + Environment Testing
  + Smoke Testing
  + Sanity Testing
  + Compatibility testing
  + **Regression Testing – application altered** 
    - **new feature is added to the application,**
    - **existing feature is removed**
    - **existing feature is enhanced**
  + **Drawbacks of Manual Testing :**
    - **Time Consuming (9-6)**
    - **Person Mood**
    - **Domain Knowledge**
    - **Boring**
    - **Max one time, two, third,....... not possible**

***Why Automation*** –

We relay on tools to test the application.

* + - 24X7
    - N –number of times you can execute your script
    - Process
    - No need to have domain knowledge / **tool knowledge**
    - Save lot of time and effort

What are the Different Tools –

* + QTP \ UFT (Paid tool from HP)
  + Telerik
  + Selenium
  + Robotium
  + EggPlant
  + TestComplete
  + Visual Studio
  + SoapUI
  + AutoIT
  + Sikuli

Why Selenium :

* Free ,open source
* Supports multiple programming languages (**Java** , C#, Ruby, Python, Perl, php, js )
* Platform independent - (linux, Windows, MAC.. )
* Multiple Browsers ( almost all popular browsers )
* No Dedicated machine is required \*\*\*\*\*\*\* \*\*\*
* Parallel Execution ( at a time you can open more than one browser )
* Distributed Execution

POC – Proof of concept (using Record and playback )

* Identify 2 – 3 automation tools
* End-to-End Tests
* Pros/Cons
* Customer selection

Selenium IDE :

* To perform POC on an application
* **Chrome** and **Mozilla** as an add-on

Demo Application :

**actiTime**

Day-3

Selenium IDE :

|  |  |
| --- | --- |
| Command | Description |
| Open | Launch the application |
| Click | Performs mouse left click operation |
| Type | Performs keyboard type operation |
|  |  |

Target : means webElement

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Identifier** | **Description** | **Priority** |
| 1 | Id | Property of a html tag | 1 |
| 2 | Name | Property of a html tag | 2 |
| 3 | Tagname | Property of html tag |  |
| 4 | Classname | Property of html tag |  |
| 5 | linkText | Text on WebElement |  |
| 6 | partialLinkText | Partial Text of a WebElement |  |
| 7 | cssSelector | Expression (parent to child in HTML DOM) |  |
| 8 | xpath | Expression (either parent to child or vice versa in HTML DOM) | 3 |

---------------------