**Interview Questions on JAVA and Selenium**

1. **Abstract and interface**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Abstract Class** | **Interface** |
| **1** | Abstract class is achieve 0 to 100% abstraction | It is used to achieve 100% abstraction |
| **2** | All methods should be public or protected | All methods should be public or protected |
| **3** | We cannot make abstract method as final but we can make concrete method as final | We cannot make abstract method as final |
| **4** | We have to write abstract keyword for abstract method | By Defaults all methods are abstract |
| **5** | We cannot create instance of abstract class | We cannot create instance of interface |
| **6** | It is not compulsory to initialize abstract class variables | We should compulsory initialize variables in interface |
| **7** | Inside abstract class we can take constructor | Inside interface we cannot define constructor |

1. **Encapsulation is used and where?**

* Yes we have used encapsulation in our project where we create one class name as Constants. In that class we have defined different constants values.

1. **Abstraction is used in your project?**

* No we didn’t use abstraction in our project.
* It is a way through which we will allow to have multiple implementations of same feature.
* We can achieve abstraction by using
* Abstract class
* Interface

1. **What features of encapsulation?**

* To restrict the data variables
* We can achieve modularity
* We can achieve security
* We can restrict life of variables

1. **In java any data hiding method?**

* While doing overriding and encapsulation we have a data hiding

1. **What is constructor where you have to use?**

It is a special method to initialize the object. Constructor name must be same as Class name.

Constructor must have no explicit return value.

1) Default constructor: No parameters

2) Parameterized Constructor: It contains arguments and parameters.

3) No Argument Constructor: No parameters provided. Programmer will create that constructor

1. **Which access modifiers with we use constructor?**

* Public
* Private
* Protected

1. **What is final?**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Final** | **Finally** | **finalize** |
| 1) | Final is used to apply restrictions on class, method and variable. Final class can't be inherited, final method can't be overridden and final variable value can't be changed. | Finally is used to place important code, it will be executed whether exception is handled or not. | Finalize is used to perform clean up processing just before object is garbage collected. |
| 2) | Final is a keyword. | Finally is a block. | Finalize is a method. |

1. **What is finalize?**
2. **What is singleton class?**

* Constructor is private in singleton class and because of this only one object is created.

1. **Can we use private as a constructor?**

* As you can easily guess, like any method we can provide access specified to the constructor. If it's made private, then it can only be accessed inside the class.

1. **What is static block?**

* Static block is used for initializing the static variables. This block gets executed when the class is loaded in the memory. A class can have multiple Static blocks, which will execute in the same sequence in which they have been written into the program

1. **Can we initialize static members of class by using static block?**

* Yes we can initialize but only for that static block not outside a static block

1. **What is instance block?**

* Instance block has multiple copies in memory
* It is declared globally
* We can access the data members of that block anywhere in the class

1. **What is collection?**

* Collection is framework or API
* It is an Interface
* Collection has classes, Abstract classes, Interfaces where operation are written in form of methods.
* It is variable in Size
* Collection is a heterogeneous – multiple types of objects in same collection
* Predefined support in collection for methods
* Collection is a parent interface
* In collection there have some child interfaces
* List
* Set
* Queue

1. **Explain your framework**

* We have a Hybrid Framework in that we have using POM, Data Driven, Keyword Driven

1. **List out keywords that you have been developed?**

1) openBrowser

2) openUrl

3) getWebElement

4) enterText

5) getText

6) getWindowTitle

7) mouseHover

8) refresh

9) navigateBack

10) navigateForword

11) sleep

12) implicitlyWait

13) explicitlyWait

14) clickOn

15) getScreenShot

16) maximizeWindow

17) minimizeWindow

18) enterText

19) closeBrowser

20) uploadFile

21) handlePopUp

22) navigateTo

23) howManyLinkOnPage

24) click

25) selectFromDropDownList

26) handleAlerts

27) handleDropDown

1. **Do you have apache poi in your project?**

* Yes We have used Apache POI in my Project to read excel files

1. **Explain excel file reading code?**

FileInputStream file= new FileInputStream(“File\_path”);

XSSFWorkbook book = new XSSFWorkbook(file);

XSSFSheet sheet= (XSSFSheet)book.getSheet(“SheetName”);

int rows= sheet.getLastRowNum();

system.out.println(“Total number of rows”+rows);

for(int i= 0; i<rows; i++)

{

XSSFRow row = sheet.getRow(i);

int cells = row.getLastCellNum();

for(int j=0; j<cells: j++)

{

XSSFCell cell= row.getCell(0);

try{

syso(cell.getStringCellValue+”\t”);

}

catch(IllegalStateException e)

{

syso(“\*\t”);

}

}

1. **Whatever the data you have fetch where you will save that data?**

* In Object Array[] []

1. **Have you used sql?**

* No but I have a basic knowledge of SQL.

1. **What is TestNG?**

* TestNG is abbreviated as testing new generation
* It is also called as TDD i.e. Test driven development
* Purpose of TestNG: It is systemic test design way
* Advantages:
* It is used to generate HTML reports
* It gives different annotations
* We can define sequence of test cases/priorities
* Dependencies features are there
* Grouping also possible in TestNG
* Data provider feature is there
* We don’t need to main method to execute test cases
* TestNG is an open source

1. **When you will be used TestNG?**

* TestNG is a testing framework when I want to execute and maintain my selenium framework I will go with the TestNG.
* Suppose there are 1000 test case at that time we have to maintain, changes in my project at that time I am using TestNG.

1. **What you can have with TestNG?**
2. **TestNG annotations?**

|  |
| --- |
| @Test |
| @BeforeClass |
| @AfterClass |
| @BeforeMethod |
| @AfterMethod |
| @Test(enable=false) |
| @Test(expectedExceptions = ArithmeticException.class) |
| @Test(timeout = 1000) |
| @BeforeSuite |
| @AfterSuite |
| @BeforeTest |
| @AfterTest |
| @BeforeGroups |
| @AfterGroups |

1. **TestNG annotations sequence?**

* @BeforeSuite
* @BeforeTest
* @BeforeClass
* @BeforeMethod
* @Test
* @AfterMethod
* @AfterClass
* @AfterTest
* @AfterSuite

1. **Where you have to write open browser method?**

* In @BeforeMethod

1. **What is parallelism in TestNG?**

* With the help of parallelism we can execute multiple classes, methods and tests
* In front of suite tag we have to add parallel tag and in that we have to pass methods, class, and tests.
* <suite name="softwaretestingmaterial" parallel="methods" thread-count="2">

1. **How to customize report in TestNG?**

* I reporter interface
* I Test Listener interface

1. **What is I reporter in TestNG?**

* To generate custom reports in TestNG we need to use I-Reporters. To implement reporters, need to implement the I-Reporter interface in your class.

1. **How to implement TestNG listener?**

* We have to create a class that name is Listeners class then we had to extend that class by using iTestListeners.
* **OnStart-** OnStart method is called when any Test starts.
* **onTestSuccess-** onTestSuccess method is called on the success of any Test.
* **onTestFailure-** onTestFailure method is called on the failure of any Test.
* **onTestSkipped-**onTestSkipped method is called on skipped of any Test.
* **onTestFailedButWithinSuccessPercentage-** method is called each time Test fails but is within success percentage.
* **onFinish-** onFinish method is called after all Tests are executed.

1. **What is @DataProvider annotations?**

* It is used to provide data to test cases
* It is a method level annotation
* **Rules:**
* @DataProvider annotation with name attribute
* Data Provider method should return Object Array
* Data provider methods should be written and maintained in separate class
* Test data may come from different files:

-CSV File

-Excel Files

-Database

**-**Property Files

* We use @DataProvider annotation for data provider method which returns Object [][]. Which we can use in @Test annotated method. The @Test method that wants to receive data from this DataProvider(excel file, database) needs to use a dataProvider name equals to the name of this annotation.
* @Test (dataProvider="DataProviderName")

public void loginTest(String Uid, String Pwd){

Soln("UserName is "+ Uid);

Soln("Password is "+ Pwd);

}

* @DataProvider(name=" DataProviderName ")

1. **Input type of @data provider?**

* Two diamensional Object Array[][]

1. **Do you know parameterized testing?**

* To pass multiple data to the application at runtime, we need to parameterize our test scripts.

1. **Selenium advantages**
2. **Open-Source:**

As mentioned earlier, the biggest strength of Selenium is that it is a freeware and a portable tool. It has no upfront direct costs involved. The tool can be freely downloaded and the support for it is freely available, as it is community-based.

1. **Supports languages:**

Selenium supports a range of languages, including Java, Perl, Python, C#, Ruby, Groovy, Java Script, etc. It has its own script, but it doesn’t limit it to that language. It can work with various languages and whatever the developers/testers are comfortable with.

1. **Supports Operating Systems:**

Selenium can operate and support across multiple Operating Systems (OS) like Windows, Mac, Linux, UNIX, etc. With Selenium Suite of solutions, a tailored testing suite can be created over any platform and then executed on another one. For instance, you can create test cases using Windows OS and run it with ease on a Linux based system.

1. **Support across browsers:**

Selenium provides support across multiple browsers, namely, Internet Explorer, Chrome, Firefox, Opera, Safari, etc. This becomes highly resourceful while executing tests and testing it across various browsers simultaneously.

The browsers supported by the Selenium packages are:

* Selenium IDE can be used with Firefox as a plug-in
* Selenium RC and Webdriver supports diverse browsers such as Internet Explorer

1. **Support for programming language and framework**

Selenium integrates with programming languages and various frameworks. For instance, it can integrate with ANT or Maven type of framework for source code compilation. Further, it can integrate with TestNG testing framework for testing applications and reporting purposes. It can integrate with Jenkins or Hudson for Continuous Integration (CI) and can even integrate with other Open-Source tools to supports other features.

1. **Tests across devices**

Selenium Test Automation can be implemented for Mobile web application automation on Android, IPhone, and Blackberry. This can help in generating necessary results and address issues on a continuous basis.

1. **Constant updates**

Selenium support is community based and an active community support enable constant updates and upgrades. These upgrades are readily available and do not require specific training. This makes Selenium resourceful and cost-effective as well.

1. **Loaded Selenium Suits**

Selenium is not just a singular tool or utility, it a loaded package of various testing tools and so is referred to as a Suite. Each tool is designed to cater to different testing needs and requirements of test environments.

Additionally, Selenium comes with capabilities to support Selenium IDE, Selenium Grid, and Selenium Remote Control (RC).

1. **Ease of implementation**

Selenium offers a user-friendly interface that helps create and execute tests easily and effectively. Its Open-Source features help users to script their own extensions that make them easy to develop customized actions and even manipulate at an advanced level.

Tests run directly across browsers and the users can watch while the tests are being executed. Additionally, Selenium’s reporting capabilities are one of the reasons for choosing it, as it allows testers to extract the results and take follow-up actions.

1. **Reusability and Add-ons**

Selenium Test Automation Framework uses scripts that can be tested directly across multiple browsers. Concurrently, it is possible to execute multiple tests with Selenium, as it covers almost all aspects of functional testing by implementing add-on tools that broaden the scope of testing.

1. **Why you used selenium?**

* Selenium WebDriver is a collection of open source APIs which are used to automate the testing of a web application. Description: Selenium WebDriver tool is used to automate web application testing to verify that it works as expected. It supports many browsers such as Firefox, Chrome, IE, and Safari.

1. **Selenium disadvantage**

* It does not support and non-web-based applications; it only supports web based applications.
* It’s an open source tool so in case of any technical issues you need to rely on the selenium community forums to get your issue resolved.
* You need to know at least one of the supported languages very well in order to automate your application successfully.
* No inbuilt reporting capability so you need plugins like JUnit and TestNG for test reports.
* Lot of challenges with IE browser.

1. **Limitations of selenium**
2. **How to handle desktop applications?**

* By using AutoIt
* Sequelian

1. **Any another way to handle desktop applications**
2. **What is autoit?**

* AutoIt v3 is a freeware BASIC tool to automate the desktop operations. It uses a combination of mouse movement and window/control operations to automate desktop tasks.

1. **Exceptions in selenium?**

* IllegalStateException
* WebDriverExeptions
* StaleElementException
* Timeout exception
* NoSuchElementException
* IllegalArgumentException
* NoAlertPresentException
* NowindowPresentException

1. **No such element exceptions how to handle?**

* By using Waits in Selenium

1. **What is xpath?**

* A query language to search web elements on web Pages.
* 2 Types of Xpath
* Absolute Xpath

**-**Which is return write from the parent of DOM to the element that we want to find.

**-**It Will be always starts with the HTML tag

**-**It will starts with “/” single slash

* Relative Xpath

**-**It is an xpath immediate to the element.

**-**Relative Xpath starts with “//” double slash

**-**But this is immediate path to locate that element.

1. **xpath axceses**

* Parent
* Child
* Following-Sibling
* Preceding-Sibling
* Ancestor
* Descendent
* Self
* Ancestor or Self
* Descendent or Self

1. **Xpath functions?**

* Contains
* Starts with
* Text
* Last
* Position

1. **Have to take dynamic Xpath with example?**

* We can take dynamic Xpath by Using Xpath Functions

1. **What is dynamic Xpath?**

* It is Xpath which is continuously changing in its behaviour such as its attribute

1. **How to handle calendar**
2. **How to add Date inside script**

**public** **class** DateDemo {

**public** **static** **void** main(String[] args) {

DateFormat format = **new** SimpleDateFormat("dd:MM:yyyy");

**Date date = new Date();**

**String currentdate = format.format(date);**

**System.*out*.println(currentdate);**

**}**

**}**

1. **Tell mi your roles in your project.**
2. **Object Repository (config.properties) for POM?**

* In this we have to save data in Key Value pair.
* The collection of all the objects and all WebElement

1. **POM objects?**

* All the WebElement on web page is called as objects in POM

1. **Equivalent functions of POM**

* Whatever the operations performed on WebElements that is equivalent functions of POM

1. **GUI testing?**
2. **Log Defect**
3. **Explain agile in your company?**

* 80% agile used in my company.

1. **Tell mi backlogs.**

* Product backlog is mentioned by product owner which contains every requirement of the product
* Sprint backlog is treated as subset of product backlog which contains the requirement related to particular sprint only.

1. **Do you know sprint meeting? Why it will be conducted?**
2. **Sprint retrospective?**

* It is kind of meeting at the completion of 1 sprint
* Discuss about different what we have to done and what defects it will be done

1. **Have you work on different test case i.e. functional test, integration?**
2. **Which test scripts you have written?**

* Functional (regression, retesting, smoke, sanity) these test scripts we have to wrote.

1. **What are the functional test cases in your project?**
2. **How to check button is enable or not?**

* isEnabled method is there by using this method we can check the button is enable or not

1. **Methods of web driver?**

get()  
getCurrentUrl();  
getTitle()  
findElements()  
findElement()  
getPageSource()  
close()  
quit()

1. **What is search context?**

* It is a parent Interface of WebDriver

1. **Methods of web element?**

|  |  |
| --- | --- |
| **Modifier and Type** | **Method and Description** |
| Void | [**clear**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#clear--)()  If this element is a text entry element, this will clear the value. |
| Void | [**click**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#click--)()  Click this element. |
| [**WebElement**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html) | [**findElement**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#findElement-org.openqa.selenium.By-)([**By**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/By.html) by)  Find the first [**WebElement**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html) using the given method. |
| java.util.List<[**WebElement**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html)> | [**findElements**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#findElements-org.openqa.selenium.By-)([**By**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/By.html) by)  Find all elements within the current context using the given mechanism. |
| java.lang.String | [**getAttribute**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getAttribute-java.lang.String-)(java.lang.String name)  Get the value of the given attribute of the element. |
| java.lang.String | [**getCssValue**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getCssValue-java.lang.String-)(java.lang.String propertyName)  Get the value of a given CSS property. |
| [**Point**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/Point.html) | [**getLocation**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getLocation--)()  Where on the page is the top left-hand corner of the rendered element? |
| [**Rectangle**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/Rectangle.html) | [**getRect**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getRect--)() |
| [**Dimension**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/Dimension.html) | [**getSize**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getSize--)()  What is the width and height of the rendered element? |
| java.lang.String | [**getTagName**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getTagName--)()  Get the tag name of this element. |
| java.lang.String | [**getText**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#getText--)()  Get the visible (i.e. |
| Boolean | [**isDisplayed**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#isDisplayed--)()  Is this element displayed or not? This method avoids the problem of having to parse an element's "style" attribute. |
| Boolean | [**isEnabled**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#isEnabled--)()  Is the element currently enabled or not? This will generally return true for everything but disabled input elements. |
| Boolean | [**isSelected**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#isSelected--)()  Determine whether or not this element is selected or not. |
| Void | [**sendKeys**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#sendKeys-java.lang.CharSequence...-)(java.lang.CharSequence... keysToSend)  Use this method to simulate typing into an element, which may set its value. |
| Void | [**submit**](https://seleniumhq.github.io/selenium/docs/api/java/org/openqa/selenium/WebElement.html#submit--)()  If this current element is a form, or an element within a form, then this will be submitted to the remote server. |

1. **What is WebDriver?**

* Selenium WebDriver is an API which includes interfaces, Abstract classes, and readymade methods.

1. **Hierarchy of selenium**
2. **Components of selenium**

* Selenium IDE (It is a tool which can be only plug in Firefox only, less programming freedom)
* Selenium RC (Selenium RC(selenium 1.0) was injecting the javascript in Web Browser to perform operations on WebElement)
* Selenium WebDriver (Selenium(2.0) Selenium WebDriver is an API which includes interfaces, Abstract classes, and readymade methods)

1. **How to fetch attribute of web element?**

* To get the attribute value using selenium webdriver, we can use 'element.getAttribute(attributeName)'

1. **Throw and throws**

|  |  |  |
| --- | --- | --- |
| **No.** | **Throw** | **throws** |
| 1) | Java throw keyword is used to explicitly throw an exception. | Java throws keyword is used to declare an exception. |
| 2) | Checked exception cannot be propagated using throw only. | Checked exception can be propagated with throws. |
| 3) | Throw is followed by an instance. | Throws is followed by class. |
| 4) | Throw is used within the method. | Throws is used with the method signature. |
| 5) | You cannot throw multiple exceptions. | You can declare multiple exceptions e.g. public void method()throws IOException, SQLException. |
| 6) | Throw is used to throw the exception Explicitly | Throws is used to propagate the exception |

1. **Handling exceptions in Selenium script is compulsory or not?**

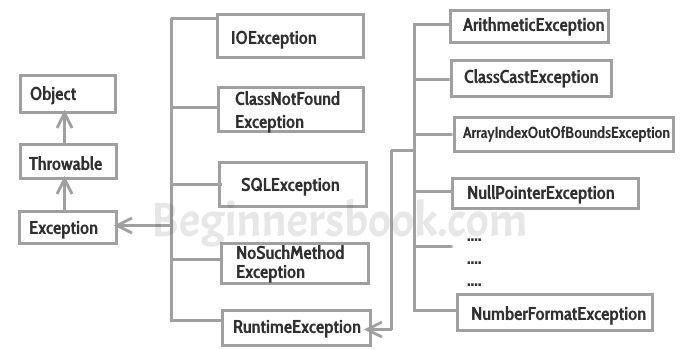
* It is not compulsory but if you can write an efficient script then we have to write exceptions

1. **What exceptions you have to handle?**
2. **How will you handle timeout exceptions by using exceptions?**
3. **When we get WebDriver exceptions?**

* It is a generic at the time of some problems occur on webDriver

1. **When we get timeout exceptions**
2. **Have you handle null pointer exceptions**

* It is the type of exception it comes when any variable assign a null value and when we are trying to used that null object at that time we will get null pointer exception

1. **Exceptions hierarchy** 
2. **Checked and unchecked exceptions?**

* Checked:
* This exceptions are checked by compiler
* Comes at run time
* Exceptions indicated by run time exceptions class and Childs except runtime exceptions class called checked exceptions
* It can be propagated using throws
* Unchecked:
* This exceptions are not checked by compiler
* Comes at run time
* Exceptions indicated by run time exceptions class and child’s of runtime exceptions class are runtime exceptions or unchecked exceptions
* It cannot be propagated using throws

1. **Which exceptions you can propagate?**

* Checked Exceptions we can propagate

1. **Run time exceptions types with example?**

* Arithmetic exceptions
* Class cast Exceptions
* Array Index out of bound Exceptions
* Null pointer exceptions
* Number format Exceptions

1. **What is Extend Report?**

Extent Report is a HTML reporting library for Selenium WebDriver for Java which is to a great degree simple to use and makes excellent execution reports. We can use this tool within our TestNG automation framework. As an automation tester its obligation to catch great reporting and present to administration group.

1. **How to take screenshot?**

* By using Three ways
* AShot
* Robot Class
* TakeScreenShot

1. **Difference between hash set and set?**

* Set is an interface, HashSet - implementation of interface. It is recommended to use interface instead of implementation when you declaring variables.
* If go further into details, interface in Java it is a set of methods, and if some class wants to implement this interface, it must implement all of this methods.
* Set interface represents a set of some objects, non-ordered, without random-element access. HashSet - implementation of Set interface, based on .hashCode()(unique identification code of object) function

1. **Difference between linked list and list**

|  |  |
| --- | --- |
| **List** | **Linked List** |
| It is a parent class of Linked list | LinkedList internally uses a doubly linked list to store the elements. |
| List is growable in size | LinkedList is A synchronized. |
|  | Manipulation with LinkedList is faster than ArrayList because it uses a doubly linked list, so no bit shifting is required in memory. |
|  | LinkedList class can act as a list and queue both because it implements List and Deque interfaces. |
|  | LinkedList is better for manipulating data. |

1. **Difference between == and .equals**

* (==) Compare Reference
* (.equals) compare content

1. **Why string is immutable?**

* It not growable in nature
* It is not variable in size
* Objects cannot be change once it initializes they can be worked as constants in java

1. **What is stringbuffer stringbuilder and string?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **String** | **String Buffer** | **String Builder** |
| **1** | String is immutable in nature | StringBuffer is mutable in nature | StringBuilder is mutable in nature |
| **2** | String is secure than the String buffer and String Builder | Objects of string buffer class are synchronized | Objects of string builder class are not synchronized |
| **3** |  | In string buffer it will focus on single thread at a time | In string builder it will focus on multiple thread at a time |
| **4** |  | String Buffer is thread safe. | String builder is not thread safe |
| **5** |  | String Buffer is slower in execution. | String builder is faster in execution. |
| **6** |  | String Buffer does not allow null keys or value | String builder allows one null key and any number of null values. |

1. **Can you tell me software defect lifecycle**

* New
* Assigned
* Open
* Fixed
* Retest
* Verified
* Closed

1. **What is software testing life cycle**

* Requirement Analysis
* Test Planning
* Test Design
* Test Environment Setup
* Test Execution
* Test Closure

1. **Bug is fixed which type of testing is performing**

* Retesting and regression Testing

1. **Sequence of TestNG tag**

* <Suite>

<Test>

<Classes>

<Class>

</Class>

</Classes>

</Test>

</Suite>

1. **How to exclude a method without using touching a script**

* By using testNg.xml

1. **XML File**
2. **Ignore is class level or method level**

* Both class level and method level

1. **Why u used apache poi?**
2. **Explain POM?**

* It is approach to design pattern
* For each and every page on web application we can create a separate java class.
* And for each web element we can create separate method.

1. **What is page factory?**

* It is class of selenium which is used to initialize WebElement
* Advanced enhanced POM
* Selenium Page Factory. The Page Factory Class in Selenium is an extension to the Page Object design pattern. It is used to initialize the elements of the Page Object or instantiate the Page Objects itself. It is used to initialize elements of a Page class without having to use 'FindElement' or 'FindElements'.

1. **Mechanism of page factory class?**
2. **Why automation is important?**
3. **Explain maven?**

* Apache Maven provides support for managing the full lifecycle of a test project. Maven is used to define project structure, dependencies, build, and test management. Using pom.xml(Maven) you can configure dependencies needed for building testing and running code.

1. **How will you improve testing efficiency by using automation?**

* Robust
* Efficiency

1. **Do you know BDD?**

* Test cases development by behaviour of our application as per client knowledge is achieve by cucumber or behave

1. **What is TDD?**

* Test Driven Development (Functionalities, features User story based test case have been written) is archive by using TestNG or Junit

1. **Testing levels in TestNG**

* Unit Testing
* Integration Testing
* System Testing
* Acceptance Testing

1. **Types of testing**

* Unit Testing
* Integration Testing
* System Testing
* Acceptance Testing
* Smoke Testing
* Sanity
* Retesting
* Regression Testing
* End to End Testing
* Functional Testing
* Ad-Hoc Testing
* Exploratory Testing
* BlackBox Testing
* WhiteBox Testing

1. **Black box testing and white box testing where you have to use in your project?**
2. **Testing lifecycle?**

* Requirement Analysis
* Test Planning
* Test Design
* Test Environment Setup
* Test Execution
* Test Closure

1. **What is Test plan?**

* It is the first phase of the testing process. Here roles, planning resources and tools selection is to be done.

1. **Traceability matrix?**

* It is called as requirement traceability matrix created by tem lead which traces the requirement to the test cases that are needed to verify whether the requirement is fulfilled or not.

1. **User stories?**

* Whatever the product owner requirement gathering for business that is called as user stories.

1. **Difference between User stories and test cases?**

* Whatever the product owner requirement gathering for business that is called as user stories.
* On the basic user stories step by step execution is done that is called as test cases

1. **Acceptance criteria?**

* The detailed information about user stories

1. **Explain 2nd project**
2. **Features of java**
3. **What are objects**
4. **What is polymorphism?**

* The Thing which have multiple forms. It has been achieved by method overloading

1. **Have you used in your project?**

* Yes we can used polymorphism in our project
* It is used in login method.
* First method is used to read data from properties file and second method is used to read data from excel files
* Another method is used to take screenshot method 1st method is used to takeScreenshot, by using Ashot
* Another method is find element method

1. **What is run time/dynamic polymorphism?**

|  |  |  |
| --- | --- | --- |
| **No.** | **Method Overloading** | **Method Overriding** |
| 1) | Method overloading is used to increase the readability of the program. | Method overriding is used to provide the specific implementation of the method that is already provided by its super class. |
| 2) | Method overloading is performed within class. | Method overriding occurs in two classes that have IS-A (inheritance) relationship. |
| 3) | In case of method overloading, parameter must be different. | In case of method overriding, parameter must be same. |
| 4) | Method overloading is the example of compile time polymorphism. | Method overriding is the example of run time polymorphism. |
| 5) | In java, method overloading can't be performed by changing return type of the method only. Return type can be same or different in method overloading. But you must have to change the parameter. | Return type must be same or covariant in method overriding. |

1. **Can we override static method?**

* No.

1. **What languages you know rather than java**
2. **What cvs (central versioning system)/ csv you have used?**

* SVN(Subversive Network)

1. **What is git**
2. **Git commands**
3. **Which tool is used for bug tracking**

* Mantis

1. **Procedure to find defect to solve defect whole cycle?**

* New
* Assigned
* Open
* Fixed
* Retest
* Verified
* Closed

1. **Any steps to logging the bug?**

* Explain Mantis bug tracking steps

1. **What are breaking points?**

* By using this we can debug our program

1. **How you debug a program?**

* By using Breaking points(ctrl+f6)

1. **What are alerts?**

* Alert interface provides the below few methods which are widely used in Selenium Webdriver. 1) void dismiss() // To click on the 'Cancel' button of thealert. ... 2) void accept() // To click on the 'OK' button of the alert. driver.switchTo().alert().accept(); 3) String getText() // To capture the alert message 4) sendkeys

1. **Notification popus how to handle popups?**

* By using Window Handling

1. **Action class**

- By using action class we can handle all the mouse and keyboards events it belongs to selenium.

- keyevents.pgUp , keyevents.pgDown.

1. **Action class constructor takes what arguments?**

* driver

1. **How to handle frames?**

* By using switchTo() method and switch that particular frame.

1. **How to handle dropdowns?**

* By using select class

1. **Do you know about last and position?**

* It is the functions of xpath

1. **How to scroll page?**

* By using JavaScript
* By using robot class

1. **What is java script?**

* It is scripting language, It is a light weight language also called as client side language
* It is interpreted by browser engine when web page is load inside browser.
* It is used to control browser to perform browser level validation to make webpages resopnsive

1. **Components of selenium?**

Selenium has 4 special components that is:

* Selenium IDE (Integrated Development Environment)
* Selenium GRID
* Selenium(RC) 1.0 (Also called as Remote Control)
* Selenium 2.0/3.0 (Also called as Webdriver)

1. **Why we used selenium WebDriver as compared to selenium rc**
2. **What is selenium grid?**

* Selenium grid is used to cross browser testing or cross platform testing

1. **How will you perform cross browser testing without grid?**
2. **Why used frames in DOM?**

* When we want to add a HTML peace of code or entire HTML inside a existing DOM then we go with frames so that changes made in the frames won’t affect existing DOM or min DOM

1. **How to handle radio buttons.**

* By using simple click method

1. **Which test cases you won't automates which test cases you won't automates in your projects?**

* GUI testing
* Arrangement
* Colours
* Alignment
* Size of elements

1. **Do you think 100% automation is possible?**

* No

1. **In my sql what is keymark?**
2. **Where you used to store your globel environment variables**

* Config.properties file

1. **How will you read property file.**

* By using property file code

1. **How to add date in script?**
2. **Difference between Get and Navigate?**

* Get loads whole page or it will wait for loading whole page where as navigate doesnot wait for whole page it will directly perform operations on webelements and navigate has some methods navigateBack(), navigateForward() and navigateRefresh.

1. **How will you set page load timeout or implicit wait?**

* Page load timeout is a method is used as same as implicit wait. Their arguments are also same (duration , TimeUnit)

1. **Difference between implicit wait and explicit wait?**
2. **When we have to go with WebDriver wait.**

* We have using webDriver wait not using fluent wait.
* By using WebDriver wait we can pooling every time which time you have to specify
* We can ignore exceptions
* We can timeout
* We can wait until the webelement is visible or not

1. **WebDriver wait methods?**

* Polling
* Ignore
* Timeout
* Until

1. **Selenium server and standalone server**
2. **What is firebug?**
3. **Have you ever used selenium ide?**
4. **What is maven how to use maven as compare to simple project what is jenkins tool?**

* Maven is a build tool.
* Maven is used to define project structure, dependencies, build, and test management. Using pom.xml(Maven) you can configure dependencies needed for building testing and running code. Maven automatically downloads the necessary files from the repository while building the project.

1. **Have you ever used TestNG xml in command line**
2. **How many ways to invoke TestNG.xml**
3. **How to create TestNG.xml**

* Right click on whatever folder that you have been create testng.xml file
* Go to TestNG and click convert to TestNG