



Top 30 Selenium Interview Questions & Answers

1) What is Selenium and what is composed of?

Selenium is a suite of tools for automated web testing. It is composed of

- **Selenium IDE (Integrated Development Environment)** : It is a tool for recording and playing back. It is a firefox plugin
- **WebDriver and RC**: It provide the APIs for a variety of languages like Java, .NET, PHP, etc. With most of the browsers Webdriver and RC works.
- **Grid**: With the help of Grid you can distribute tests on multiple machines so that test can be run parallel which helps in cutting down the time required for running in browser test suites

2) What is Selenium 2.0 ?

Web testing tools Selenium RC and WebDriver are consolidated in single tool in Selenium 2.0

3) How will you find an element using Selenium?

In Selenium every object or control in a web page is referred as an elements, there are different ways to find an element in a web page they are

- ID
- Name
- Tag
- Attribute
- CSS
- Linktext
- PartialLink Text
- Xpath etc

4) List out the test types that are supported by Selenium?

For web based application testing selenium can be used

The test types can be supported are

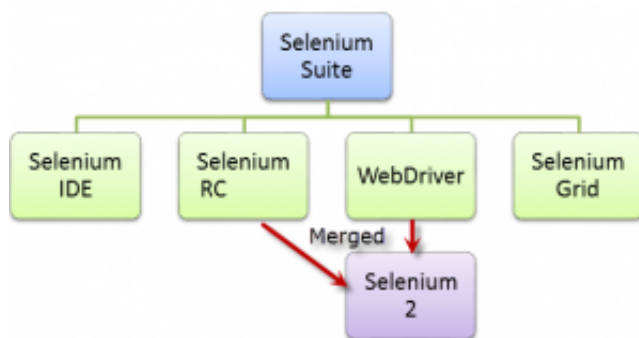
- a) Functional
- b) Regression

For post release validation with continuous integration automation tool could be used

- a) Jenkins
- b) Hudson
- c) Quick Build
- d) CruiseCont

5) Explain what is assertion in Selenium and what are the types of assertion?

Assertion is used as a verification point. It verifies that the state of the application conforms to what is expected. The types of assertion are “assert” , “verify” and “waitFor”.



6) Mention what is the use of X-path?

X-Path is used to find the WebElement in web pages. It is also useful in identifying the dynamic elements.

7) Explain the difference between single and double slash in X-path?

Single slash '/'

- Single slash (/) start selection from the document node
- It allows you to create 'absolute' path expressions

Double Slash '//'

- Double slash (//) start selection matching anywhere in the document
- It enables to create 'relative' path expressions

8) List out the technical challenges with Selenium?

Technical challenges with Selenium are

- Selenium supports only web based applications
- It does not support the Bitmap comparison
- For any reporting related capabilities have to depend on third party tools
- No vendor support for tool compared to commercial tools like HP UFT
- As there is no object repository concept in Selenium, maintainability of objects becomes difficult

9) What is the difference between type keys and type commands ?

TypeKeys() will trigger JavaScript event in most of the cases whereas .type() won't. Type key populates the value attribute using JavaScript whereas .typekeys() emulates like actual user typing

10) What is the difference between verify and assert commands?

Assert: Assert allows to check whether an element is on the page or not. The test will stop on the step failed, if the asserted element is not available. In other words, the test will terminated at the point where check fails.

Verify: Verify command will check whether the element is on the page, if it is not then the test will carry on executing. In verification, all the commands are going to run guaranteed even if any of test fails.

11) What is JUnit Annotations and what are different types of annotations which are useful ?

In JAVA a special form of syntactic meta-data can be added to Java source code, this is know as Annotations. Variables, parameters, packages, methods and classes are annotated some of the JUnit annotations which can be useful are

- Test
- Before
- After
- Ignore
- BeforeClass
- AfterClass
- RunWith

12) While using click command can you use screen coordinate?

To click on specific part of element, you would need to use clickAT command. ClickAt command accepts element locator and x, y co-ordinates as arguments-

clickAt (locator, cordString)

13) What are the advantages of Selenium?

- It supports C#, PHP, Java, Perl, Python
- It supports different OS like Windows, Linux and Mac OS
- It has got powerful methods to locate elements (Xpath, DOM , CSS)
- It has highly developer community supported by Google

14) Why testers should opt for Selenium and not QTP?

Selenium is more popular than QTP as

- Selenium is an open source whereas QTP is a commercial tool
- Selenium is used specially for testing web based applications while QTP can be used for testing client server application also
- Selenium supports Firefox, IE, Opera, Safari on operating systems like Windows, Mac, linux etc. however QTP is limited to Internet Explorer on Windows.
- Selenium supports many programming languages like Ruby, Perl, Python whereas QTP supports only VB script

15) What are the four parameter you have to pass in Selenium?

Four parameters that you have to pass in Selenium are

- Host
- Port Number
- Browser
- URL

16) What is the difference between setSpeed() and sleep() methods?

Both will delay the speed of execution.

Thread.sleep () : It will stop the current (java) thread for the specified period of time. Its done only once

- It takes a single argument in integer format

Ex: thread.sleep(2000)- It will wait for 2 seconds

- It waits only once at the command given at sleep

SetSpeed () : For specific amount of time it will stop the execution for every selenium command.

- It takes a single argument in integer format

Ex: selenium.setSpeed("2000")- It will wait for 2 seconds

- Runs each command after setSpeed delay by the number of milliseconds mentioned in set Speed

This command is useful for demonstration purpose or if you are using a slow web application

17) What is same origin policy? How you can avoid same origin policy?

The "**Same Origin Policy**" is introduced for security reason, and it ensures that content of your site will never be accessible by a script from another site. As per the policy, any code loaded within the browser can only operate within that website's domain.

To avoid "Same Origin Policy" proxy injection method is used, in proxy injection mode the Selenium Server acts as a client configured **HTTP proxy**, which sits between the browser and application under test and then masks the AUT under a fictional URL

18) What is heightened privileges browsers?

The purpose of heightened privileges is similar to Proxy Injection, allows websites to do something that are not commonly permitted. The key difference is that the browsers are launched in a special mode called heightened privileges. By using these browser mode, Selenium core can open the AUT directly and also read/write its content without passing the whole AUT through the Selenium RC server.

19) How you can use "submit" a form using Selenium ?

You can use "submit" method on element to submit form-

element.submit () ;

Alternatively you can use click method on the element which does form submission

20) What are the features of TestNG and list some of the functionality in TestNG which makes it more effective?

TestNG is a testing framework based on JUnit and NUnit to simplify a broad range of testing needs, from unit testing to integration testing. And the functionality which makes it efficient testing framework are

- Support for annotations
- Support for data-driven testing
- Flexible test configuration
- Ability to re-execute failed test cases

21) Mention what is the difference between Implicit wait and Explicit wait?

Implicit Wait: Sets a timeout for all successive Web Element searches. For the specified amount of time it will try looking for element again and again before throwing a NoSuchElementException. It waits for elements to show up.

Explicit Wait : It is a one-timer, used for a particular search.

22) Which attribute you should consider throughout the script in frame for “if no frame Id as well as no frame name”?

You can use.....`driver.findElements(By.xpath("//iframe"))`....

This will return list of frames.

You will need to switch to each and every frame and search for locator which we want.

Then break the loop

23) Explain what is the difference between find elements () and find element () ?

find element ():

It finds the first element within the current page using the given “locating mechanism”. It returns a single WebElement

findElements () : Using the given “locating mechanism” find all the elements within the current page. It returns a list of web elements.

24) Explain what are the JUnits annotation linked with Selenium?

The JUnits annotation linked with Selenium are

- @Before public void method() – It will perform the method () before each test, this method can prepare the test
- @Test public void method() – Annotations @Test identifies that this method is a test method environment
- @After public void method()- To execute a method before this annotation is used, test method must start with test@Before

25) Explain what is Datadriven framework and Keyword driven?

Datadriven framework: In this framework, the test data is separated and kept outside the Test Scripts, while test case logic resides in Test Scripts. Test data is read from the external files (Excel Files) and are loaded into the variables inside the Test Script. Variables are used for both for input values and for verification values.

Keyworddriven framework: The keyword driven frameworks requires the development of data tables and keywords, independent of the test automation. In a keyword driven test, the functionality of the application under test is documented in a table as well as step by step instructions for each test.

26) Explain how you can login into any site if it's showing any authentication popup for password and username?

Pass the username and password with url

- Syntax-http://username:password@url
- ex- http://creyate:tom@www.gmail.com

27) Explain how to assert text of webpage using selenium 2.0 ?

```
WebElement el = driver.findElement(By.id("ElementID"))
```

```
//get test from element and stored in text variable
```

```
String text = el.getText();
```

```
//assert text from expected
```

```
Assert.assertEquals("Element Text", text);
```

28) Explain what is the difference between Borland Silk and Selenium?

Silk Test Tool

- Borland Silk test is not a free testing tool
- Silk test supports only Internet Explorer and Firefox
- Silk test uses test scripting language
- Silk test can be used for client server applications

Selenium Test Tool

- Selenium is completely free test automation tool
- Selenium supports many browsers like Internet Explorer, Firefox, Safari, Opera and so on
- Selenium suite has the flexibility to use many languages like Java, Ruby,Perl and so on
- Selenium can be used for only web application

29) What is Object Repository ?

An object repository is an essential entity in any UI automations which allows a tester to store all object that will be used in the scripts in one or more centralized locations rather than scattered all over the test scripts.

30) Explain how Selenium Grid works?

Selenium Grid sent the tests to the hub. These tests are redirected to Selenium Webdriver, which launch the browser and run the test. With entire test suite, it allows for running tests in parallel.

31) Can we use Selenium grid for performance testing?

Yes. But not as effectively as a dedicated performance testing tool like Loadrunner.

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