***1. What is Selenium WebDriver?***

* Selenium Webdriver is an open source test tool
* Supports cross-browser testing
* Supports scripting in multiple programming languages
* Supports platform compatibility
* Interacts directly with the web browser
* Supports headless browser testing

***2. What are the platforms supported by Selenium Webdriver?***

* Windows
* Mac OS
* Linux

***3. What are the different browsers supported by Selenium Webdriver?***

* Chrome
* Internet Explorer
* Safari
* Firefox
* Opera
* HtmlUnit (Headless)
* PhantomJS (Headless)

*Note: Headless browser is a web browser without Graphical User Interface, so one cannot see the test execution on screen.*

***4. What are the different programming languages supported by Selenium Webdriver?***

* JAVA
* C#
* Ruby
* Python
* PHP
* JavaScript
* Perl

***5. Name any 3 limitations of Selenium WebDriver.***

* Supports only web-based application testing
* Record and playback option is not available
* Captcha and barcode readers cannot be tested

**6.*What are the different types of locators in Selenium?***

Locators are used to identify web elements within the webpage. There are 8 different types of locators in Selenium.

* ID
* Name
* ClassName
* TagName
* LinkText
* PartialLinkText
* CSS Selector
* XPath

***7. What is the command used to launch a browser?***

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11 | WebDriver driver = new ChromeDriver(); // launch Chrome browser    WebDriver driver = new SafariDriver(); // launch Safari browser    WebDriver driver = new InternetExplorerDriver(); // launch IE browser    WebDriver driver = new FirefoxDriver(); // launch Firefox browser    WebDriver driver = new OperaDriver(); // launch Opera browser    WebDriver driver = new HtmlUnitDriver(); // launch headless browser |

***8. What is the command to launch an URL?***

|  |  |
| --- | --- |
| 1 | driver.get("www.letzdotesting.com"); |

***9. What is the command used to get the current page URL?***

|  |  |
| --- | --- |
| 1 | driver.getCurrentUrl(); |

***10. What is the command to get the webpage title?***

|  |  |
| --- | --- |
| 1 | driver.getTitle(); |

***11. What is the command to type values in a textbox?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("username")).sendKeys("Letzdotesting"); |

***12. What is the command to get the text values ?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("username")).getText(); |

***13. What is the command to clear values in a textbox?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("username")).clear(); |

***14. What is the command to click a control?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("loginBtn")).click(); |

***15. What is the command to maximize a browser window?***

|  |  |
| --- | --- |
| 1 | driver.manage().window().maximize(); |

*Note: Selenium does not have any built-in function for minimizing the browser window!*

***16. What is the command to click on a hyperlink?***

|  |  |
| --- | --- |
| 1  2  3 | driver.findElement(By.linkText("Defect tool")).click();    driver.findElement(By.partialLinkText("Defect to")).click(); |

***17. What is the command to find if an element is displayed on a screen?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("loginBtn")).isDisplayed(); |

***18. What is the command to verify if a checkbox/radio is selected?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("tool\_jira")).isSelected(); |

***19. What is the command to verify if a button is enabled?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("loginBtn")).isEnabled(); |

***20. What is the command to verify if a particular text is present on the webpage?***

|  |  |
| --- | --- |
| 1 | driver.getPageSource().contains("Letzdotesting"); |

***21. What are the different commands used for a dropdown list?***

*selectByValue*

|  |  |
| --- | --- |
| 1  2  3 | Select value = new Select(driver.findElement(By.id("marital\_status")));    value.selectByValue("Single"); |

*selectByIndex*

|  |  |
| --- | --- |
| 1  2  3 | Select index = new Select(driver.findElement(By.id("marital\_status")));    index.selectByIndex(3); |

*selectByVisibleText*

|  |  |
| --- | --- |
| 1  2  3 | Select text = new Select(driver.findElement(By.id("marital\_status")));    text.selectByVisibleText("Single"); |

*deselectByValue*

|  |  |
| --- | --- |
| 1  2  3 | Select value = new Select(driver.findElement(By.id("marital\_status")));    value.deselectByValue("Single"); |

*deselectByIndex*

|  |  |
| --- | --- |
| 1  2  3 | Select index = new Select(driver.findElement(By.id("marital\_status")));    index.deselectByIndex(3); |

*deselectByVisibleText*

|  |  |
| --- | --- |
| 1  2  3 | Select text = new Select(driver.findElement(By.id("marital\_status")));    text.deselectByVisibleText("Single"); |

*deselectAll*

|  |  |
| --- | --- |
| 1  2  3 | Select text = new Select(driver.findElement(By.id("marital\_status")));    text.deselectAll(); |

***22. Name any 4 commonly used Assertions in Selenium?***

* Assert.assertEquals
* Assert.assertNotEquals
* Assert.assertTrue
* Assert.assertFalse

***23. What are the different navigation commands?***

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | driver.navigate().back(); // Takes you one page backward based on browser's history    driver.navigate().forward(); // Takes you one page forward based on browser's history    driver.navigate().refresh(); // Refresh your current page    driver.navigate().to("www.letzdotesting.com"); // Takes you to new webpage |

*Note: driver.navigate().to(“www.letzdotesting.com”) and driver.get(“www.letzdotesting.com”) does the same thing! Both are same!!*

***24. What is the command to right click?***

|  |  |
| --- | --- |
| 1  2  3  4  5 | WebElement loginBtn = driver.findElement(By.id("loginBtn"));    Actions rightClick = new Actions(driver); // Actions Class is used    rightClick.contextClick(loginBtn); // contextClick is the method |

***25. What is the command to mouse hover?***

|  |  |
| --- | --- |
| 1  2  3  4  5 | WebElement loginBtn = driver.findElement(By.id("loginBtn"));    Actions move = new Actions(driver); // Actions Class is used    move.moveToElement(loginBtn); // moveToElement is the method |

***26. What is the command to double-click?***

|  |  |
| --- | --- |
| 1  2  3  4  5 | WebElement loginBtn = driver.findElement(By.id("loginBtn"));    Actions doubleClk = new Actions(driver); // Actions Class is used    doubleClk.doubleClick(loginBtn); // doubleClick is the method |

***27. What is the command used to scroll down to a web element?***

|  |  |
| --- | --- |
| 1  2  3  4  5 | WebElement loginBtn = driver.findElement(By.id("loginBtn"));    JavascriptExecutor js = (JavascriptExecutor) driver;    js.executeScript("arguments[0].scrollIntoView();", loginBtn); |

***28. What is the command to drag and drop?***

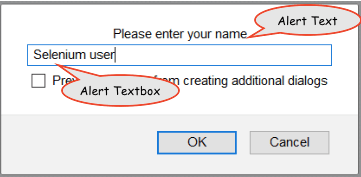
|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | WebElement sourceTarget = driver.findElement(By.id("loginBtn"));    WebElement destinationTarget = driver.findElement(By.id("submitbtn"));    Actions drgDrp = new Actions(driver); // Actions Class is used    drgDrp.dragAndDrop(sourceTarget, destinationTarget); // dragAndDrop is the method |

***29. What is the command used to get the attribute values of an element?***

|  |  |
| --- | --- |
| 1 | driver.findElement(By.id("loginBtn")).getAttribute("value"); |

***30. What is the command used to get the CSS properties of a web element?***

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9  10  11 | driver.findElement(By.id("loginBtn")).getCssValue("color");    driver.findElement(By.id("loginBtn")).getCssValue("font-size");    driver.findElement(By.id("loginBtn")).getCssValue("background-color");    driver.findElement(By.id("loginBtn")).getCssValue("height");    driver.findElement(By.id("loginBtn")).getCssValue("width");    driver.findElement(By.id("loginBtn")).getCssValue("font-family"); |

***31. How to handle alert pop-ups?***[](https://i0.wp.com/letzdotesting.com/wp-content/uploads/2018/06/Alert.png)

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | driver.switchTo().alert().accept(); // To click OK option or to accept the alert pop-up    driver.switchTo().alert().dismiss(); // To click Cancel option or to dismiss the alert pop-up    driver.switchTo().alert().getText(); // To get the alert pop-up text message    driver.switchTo().alert().sendKeys("Hello"); // To type values in the alert textbox |

***32. What is the difference between findElement() and findElements()?***

* findElement() – Finds the first matching element in the DOM & returns a single element.
* findElements() – Finds all the matching elements in the DOM & returns a list of elements.

*Note: findElements() will not throw an exception if an element is not found. It just returns the list size as zero, whereas findElement() will throw element not found exception.*

***33. What is the difference between driver.close() and driver.quit()?***

* driver.close() – Used to close current active browser window
* driver.quit() – Used to close all browser windows

***34. What are the two types of waits available in Selenium Webdriver?***

*Implicit Wait* – Used to provide default wait between every consecutive test steps. It’s applicable for the entire driver instance. Example below,

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7 | WebDriver driver = new FirefoxDriver();    driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS); // waits for 10 seconds irrespectively before actions    driver.get("www.letzdotesting.com");    WebElement search = driver.findElement(By.id("searchTextbox")); |

*Explicit Wait* – Used to halt the execution for a certain amount of time until certain conditions are met. It’s applicable for a particular instance only. Example below,

|  |  |
| --- | --- |
| 1  2  3 | WebDriverWait wait = new WebDriverWait(driver, 20); // wait for 20 seconds until the element becomes clickable    WebElement element = wait.until(ExpectedConditions.elementToBeClickable(By.id("loginBtn"))); |

***35. How to handle iFrames?***

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | driver.switchTo().frame(3); // Based on index    driver.switchTo().frame("myframe"); // Based on name or ID    driver.switchTo().frame(WebElement); // Based on WebElement    driver.switchTo().parentFrame(); // Switching to parent frame    driver.switchTo().defaultContent(); // switching to the main frame |

***36. Name any two testing frameworks that can be integrated with Selenium Webdriver?***

* JUnit
* TestNG

***37. Name any two build management tools that can be integrated with Selenium Webdriver?***

* Gradle
* Maven

***38. What software do you need to run Selenium Webdriver in JAVA?***

* Eclipse or IntelliJ IDE
* Gradle or Maven build tool
* Junit or TestNG testing framework
* Selenium WebDriver library
* Browser Drivers (Chrome, IE, Safari, Firefox etc.,)

***39. Name any advanced framework design that can be used with Selenium Webdriver?***

* Page Object Model
* Log4j
* Data-driven testing
* Dependency Injection (Example: Pico Container)
* Object Repository

***40. Name any 5 Exceptions that you got while working with Selenium Webdriver.***

* ElementNotVisibleException
  + Throws when an element is present on DOM page, but not visible to interact
* StaleElementReferenceException
  + Throws when an element is not present on DOM page
* NoAlertPresentException
  + Throws when an alert is not presented on the screen
* NoSuchAttributeException
  + Throws when an attribute of an element is missing
* NoSuchElementException
  + Throws when an element