
1. What is Selenium..?

- It is a Open source tool for the Automation testing
 - It is used to do the Automation testing for Web based application
 - It supports different programming language like Java, Python C#
 - It supports different web browsers like Google Chrome, Opera-mini, Microsoft Edge
 - It can run at different Operating system like Window, Linux, Mac
-

2. How to download the chrome driver..?

- Search chrome driver for selenium in the google chrome
 - Download the **chromedriver.exe** based our current chrome version
 - To know the current version of **chromedriver.exe**, Setting--> About Chrome --> Version name detail will available
-

3. How to launch the Browser..?

```
System.setProperty("webdriver.chrome.driver","chromedriver.exe");
```

```
WebDriver driver=new ChromeDriver();
```

3. How to maximize the browser...?

```
driver.manage().window().maximize();
```

4. How to minimize the browser...?

```
driver.manage().window().minimize();
```

5. What is sleep()..?

The sleep() is used to stop the execution of programme for the particular time.

```
Thread.sleep(4000);
```

- We should pass the time duration as argument to the sleep method.
 - We have to call the sleep() method from Thread class
 - The sleep() causes the **InterruptedException** exception
 - We should manually throws the Exception in the method name
 - Else we can handle it by using try-catch
-

6. What is get()..?

The get() is used to hit the link in the browser.

```
driver.get("www.google.com");
```

We should pass the link value as argument in the method as String value.

7. What is findElement()..?

- The findElement() method is used to find the single Web Element in the HTML webpage.
- We should pass the locators to the findElement() as a argument.

```
driver.findElement(By.locator("locator-value"));
```

```
driver.findElement(By.xpath("//*[@id=username]"))
```

8. What is findElements()..?

- The findElements() method is used to find the multiple Web Element in the HTML webpage.
- We should pass the locators to the findElement() as a argument.

```
driver.findElement(By.locator("locator-value"));
```

```
driver.findElements(By.xpath("//*[@id=username]"))
```

9. What are the different between findElement() and findElements()..?

findElement() method:

- This command is used to access any single element on the web page
- It will return the object of the first matching element of the specified locator
- It will throw NoSuchElementException when it fails to identify the element

findElements() method:

- This command is used to uniquely identify the list of web elements within the web page.
 - The usage of this method is very limited
 - If the element doesn't exist on the page then, then it will return value with an empty list
-

10. What are the locators..?

- The locator is used to locate the web element in the HTML web page.
- The locator is classified into different types
 1. By ID
 2. By Name
 3. By Tag Name
 4. By Class name
 5. By Xpath

1. **By ID:** `driver.findElement(By.id("JournalDev"));`

2. **By Name:** `driver.findElement(By.name("JournalDev"));`

3. **By Tag Name:** `driver.findElement(By.tagName("JournalDev"));`

4. **By Class Name:** `driver.findElement(By.className("JournalDev"));`

5. **By Xpath:** `driver.findElement(By.xpath("JournalDev"));`

11. What is the Xpath..?

- Xpath is used to locate an WebElement in the HTML Web page
- Xpath is classified into 2 different types
 1. Relative xpath
 2. Absolute xpath

1. Absolute xpath:

- The simplest XPath locator example in Selenium is to provide the absolute path of an element in the DOM structure.
- It is a xpath from Root of the HTML page.
- It is mentioned by using single slash(\)

Example: `/html/body/div[1]/div/div[2]/header/div/div[2]/a/img`

2. Relative xpath:

- The relative xpath locator is start from middle of the html page.
- It is mentioned by using double slash(\\)

Example: `//*[@id="block-perfecto-main-menu"]/ul/li[6]/a`

12. What are the way to get the Relative xpath..?

We can get the relative xpath by using different ways

- a. Basic xpath
- b. Contains()
- c. Using OR, AND
- d. Starts-with
- e. Text()

a. Basic xpath:

This is the basic method of getting the xpath from the web page

```
Xpath=//tag[@attribute='value'];
```

```
XPath=//div[@name='username']
```

b. Contains():

The contains() is used to find the element when the text is partially matched with the element's text.

```
Xpath=//tag[contains(@attribute='value')];
```

```
XPath=//div[contains(@id,'Name')]
```

c. Using OR, AND Condition:

- In OR expression, two condition are used
- Any one of the condition should be true or may be both condition will true

```
Xpath=//tag[@attribute1='value1' or @attribute2='value2'];
```

```
XPath=//div[@id='FirstName' or @name='LastName']
```

- In AND expression, two condition are used
- Both of two condition should be true

```
Xpath=//tag[@attribute1='value1' and @attribute2='value2'];
```

```
XPath=//*[ @id='FirstName' and @name='FirstName']
```

d. Starts-with():

The Starts-with() is used to find the element when the text of the element is starts with some text.

```
Xpath=//tag[starts-with(@attribute='startvalue')];
```

```
XPath=//input[starts-with(@name,'pass')]
```

e. text():

The text() is used to locate an elements based on exact text of a web element

```
Xpath=//tag[text()='textValue'];
```

```
XPath=//input[text()='username']
```

13. What is click()..?

The click() method is used to click the web element in the HTML Webpage.

```
WebElement loginButton = driver.findElement(By.xpath("//*[@name=login]"));
```

```
loginButton.click();
```

14. What is sendKeys()..?

- The sendKeys() method is used to enter any value to the text field in the HTML Webpage.
- We need to pass the value as an argument to the send keys method by String value.

```
WebElement username= driver.findElement(By.xpath("//*[@name='username']"));
```

```
username.sendKeys("administrator");
```

15. What is clear()..?

- The clear() is used to clear the existing text in the mentioned text field.

```
WebElement username= driver.findElement(By.xpath("//*[@name='username']"));
```

```
username.clear();
```
