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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

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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

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3. How to launch the Browser..?

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

WebDriver driver=new ChromeDriver();
```

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3. How to maximize the browser…?

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

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4. How to minimize the browser…?

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

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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

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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.

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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]"))

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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]"))

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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

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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"));

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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 releative 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

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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']

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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='username']"));

loginButton.click();

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

loginButton.sendKeys("administrator");