Ques: WATS to display one plus mobile plus as an output in amazon.in App
Exp: //span[text()='OnePlus 13s | Snapdragon® 8 Elite | Best Battery Life Ever on a Compact Phone | Lifetime Display Warranty | 12GB+256GB | Green Silk']/../../../..//span[@class='a-price']

Examp:
//span[text()='OnePlus 13s | Snapdragon® 8 Elite | Best Battery Life Ever on a Compact Phone | Lifetime Display Warranty | 12GB+256GB | Green Silk']/ancestor::div[@class='a-section a-spacing-small a-spacing-top-small']/descendant::span[@class='a-price']

8: xpath Axes:

keywords:
1: child: switch from parent to immediate child
2: parent: switch from child to immediate parent
3: ancestor: switch from child to any parent   Syntax: /ancestor::tagName
4: descendant: switch from parent to any child   Syntax: /descendant::tagname
5: following-sibling: switch to after tag(parent should be same for that tag, on that only we can perform this)
6: preceding-sibling: switch to before tag

Syntax: /following-sibling::tagname
Syntax: /preceding-sibling::tagname

Ques: How many types of locators use to identify element?
-->8 locators

Ques: Diff. between Css and xpath
            css   xpath
1: It is unidirectional   1: It is Multidirectional
2: Css is faster when compared to xpath   2: xpath is slower
3: In css we cannot handle dynamic element   3: xpath we can handle dynamic element
4: In css we cannotg use multiple attributes   4: In xpath we can use multiple attributes
5: In css we dont have sibling function   5: In xpath we have sibling function
6: here we will not be able to identify text   6: Here we can identify the text
----
WebElement Methods

Ques: Diff. between WebDriver and WebElement
1: WebDriver: Its an interface which contains abstract method that are used to perform action on browser.

2: WebElement: Its an interface which contains abstract method that are used to perform action on elements(components).

-->WebElement Methods:
1: click(): It is used to click on buttons, radio buttons,checkboxes.

2: sendkeys(): This method is used to enter text in text field.
A: Enter text: sendkeys(String arg.)

B: It is used to perform keyboard strokes

-->To handle keyboard strokes we have two approaches:
      1: By using Keys class
      2: By using robot class

1: By using keys class
-->keys is a special class present in selenium library to handle keyboard action
-->Keys class can be used in sedkeys()
Examp: sendkeys(keys arg.)

Ques: WATS to perform following action
1: Open browser
2: Open App
3: Enter username & Password
4: Select checkbox without using click method
5: click on login button without using click method

Script:

```
WebDriver driver = new ChromeDriver();
        driver.get("http://localhost/login.do");
        driver.findElement(By.xpath("//input[@id='username']")).sendKeys("admin");
        driver.findElement(By.xpath("//input[@name='pwd']")).sendKeys("manager");

    driver.findElement(By.xpath("//input[@id='keepLoggedInCheckBox']")).sendKeys(Keys.ENTER);
        driver.findElement(By.xpath("//a[@id='loginButton']")).sendKeys(Keys.ENTER);
```

Ques: WATS to login facebook application without using click()

Ques: WATS to copy paste Email text in password field in facebook App
Script:

```
WebDriver driver = new ChromeDriver();
        driver.get("https://www.facebook.com/");
        WebElement ele = driver.findElement(By.xpath("//input[@id='email']"));
        ele.sendKeys("abcdefghi");
        ele.sendKeys(Keys.CONTROL+"a");
        ele.sendKeys(Keys.CONTROL+"c");
        driver.findElement(By.xpath("//input[@id='pass']")).sendKeys(Keys.CONTROL+"v");
```

AssignQues: WATS to enter text in firstname field in facebook App and remove text using backspace key

**Limitations of keys class:
1: It will not support desktop applications

2: By using Robot class
-->Robot class is a special class present in java.awt.package which can handle any form of keyboard strokes
OR
-->It is a class which is used to handle keyboard and mouse action
-->It contains two non-static methods in Robot class

1: keyPress(KeyEvent class)
2: KeyRelease(KeyEvent class)

-->In KeyEvent Class we have static methods

3: isSelected(): This method is used to verify whether checkbox or radiobutton are selected or not
Return type: Boolean

Ques: WATS to perform following action
1: Verify checkbox is selected or not
2: select checkbox and verify its selected or not
3: Deselect checkbox and verify its deselected or not

Script:

```
WebDriver driver = new FirefoxDriver();
                driver.get("http://localhost/login.do");
                //identify checkbox
                WebElement chk =
driver.findElement(By.xpath("//input[@id='keepLoggedInCheckBox']"));
                boolean b1 = chk.isSelected();
                //checkbox not selected
                if(b1)
                {
                        System.out.println("checkbox selected");
                }
                else
                {
                        System.out.println("checkbox not selected");
                }
                //checkbox selected
                chk.click();
                boolean b2 = chk.isSelected();
                if(b2)
                {
                        System.out.println("checkbox Selected");
                }
                else
                {
                        System.out.println("checkbox not selected");
                }
                chk.click();
                boolean b3 = chk.isSelected();
                if(b3)
                {
                        System.out.println("checkbox Selected");
                }
                else
                {
                        System.out.println("checkbox not selected");
                }
```

AssignQues: WATS to perform following actions:
1: Open Browser
2: Navigate to facebook App
3: select gender option and verify whether it is selected or not
4: Select other option and verify whether previous option is deselected and selected option is highlighted or not

Script:
```
    WebDriver driver = new ChromeDriver();
    driver.manage().window().maximize();
    driver.get("https://www.facebook.com/");
    driver.findElement(By.xpath("//a[contains(@id,'u_0_0')]")).click();
    WebElement female = driver.findElement(By.xpath("//input[@value='1']"));
    WebElement male = driver.findElement(By.xpath("//input[@value='2']"));
    //Action 1
    female.click();
    boolean b1 = female.isSelected();
    if(b1)
    {
            System.out.println("Female Option Radio Button is selected");
    }
    else
    {
            System.out.println("Female Option Radio Button is not selected");
    }
    //Action 2
    male.click();
    boolean b2 = male.isSelected();
    if(b2)
    {
            System.out.println("Male Option Radio Button is selected");
    }
    else
    {
            System.out.println("Male Option Radio Button is not selected");
    }
    //Action 3
    boolean b3 = female.isSelected();
    if(b3)
    {
            System.out.println("Female Option Radio Button is selected");
    }
    else
    {
            System.out.println("Female Option Radio Button is not selected");
    }
    driver.close();
```

AssignQues: WATS to verify search field is enabled or not in amazon.in app
----
4: isEnabled(): This method is used to verify whether component is enabled or disabled

Examp:
```html
<html>
  <body>
   UN<input type="text" id="user" disabled><br>
   PWD<input type="text" id="pass">
  </body>
</html>
```

Script:
```java
        WebDriver driver = new FirefoxDriver();
            driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/enabled.html");
            boolean un = driver.findElement(By.id("user")).isEnabled();
            boolean pwd = driver.findElement(By.id("pass")).isEnabled();
            //for username
            if(un)
            {
                    System.out.println("UN field is enabled");
            }
            else
            {
                    System.out.println("UN field is disabled");
            }
            //for pwd
            if(pwd)
            {
                    System.out.println("Pwd field is enabled");
            }
            else
            {
                    System.out.println("Pwd field is not enabled");
            }
            driver.close();
```

AssignQues: WATS to verify search field is enabled or not in amazon.in app
----
AssignQues: Test Case:
1: Navigate to instagram.com
2: Verify whether the login button is enabled or not

Script:
```java
WebDriver driver=new ChromeDriver();

                driver.get("https://www.instagram.com/accounts/login/?hl=en");

                driver.manage().window().maximize();
Thread.sleep(3000);
                WebElement ele=driver.findElement(By.xpath("//button[@type='submit']"));
System.out.println(ele.isEnabled());
driver.findElement(By.name("username")).sendKeys("abc");
driver.findElement(By.name("password")).sendKeys("3456456");
```

```
System.out.println("After entering characters");
System.out.println(ele.isEnabled());
```

5: isdisplayed(): This method is used to verify whether element is displayed or not
Return type: boolean

Examp:
```
        WebDriver driver = new ChromeDriver();
                driver.manage().window().maximize();
                driver.get("https://www.amazon.in/");
                Thread.sleep(5000);
                boolean logo = driver.findElement(By.xpath("//a[@id='nav-logo-
sprites']")).isDisplayed();
                if(logo)
                {
                        System.out.println("Amazon logo displayed");
                }
                else
                {
                        System.out.println("Amazon logo not displayed");
                }
                driver.close();
```

AssignQues: Test Case:
1: Navigate to https://www.saucedemo.com/v1/
2: verify whether login button is displayed or not

6: getSize(): This method is used to get height and width of the component as an output

AssignQues: WATS to identify height and width of Email field in facebook App.

7: getLocation()-This method is used to get location of the component
Return type: point

Ques: WATS to display location of login button in facebook app
Script:

```
        WebDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            driver.get("https://www.facebook.com/");
            Point point =
driver.findElement(By.xpath("//button[contains(@id,'u_0_5')]")).getLocation();
            System.out.println(point);
            System.out.println(point.getX());
            System.out.println(point.getY());
            driver.close();
```

8: getRect():
-->it is used to capture the size and location of a webelement
->Retunr type is Rectangle[class in selenium]

9: getCSSValue(): This method is used to identify css value of an element

Examp: Flipkart image

Script:
```
     WebDriver driver = new ChromeDriver();
    driver.manage().window().maximize();
    driver.get("https://www.flipkart.com/");
    WebElement ele = driver.findElement(By.xpath("//img[@title='Flipkart']"));
    Rectangle rect = ele.getRect();
    System.out.println(rect.getDimension());
    System.out.println(rect.getPoint());
    System.out.println(rect.getWidth());
    System.out.println(rect.getHeight());
    System.out.println(rect.getX());
    System.out.println(rect.getY());
    //getCssvalue
    System.out.println(ele.getCssValue("font-family"));
    System.out.println(ele.getCssValue("font-size"));
```

10: clear(): this method is used to remove text from text field
11: getText(): This method is used to display any HTML component text as an output
----
12: getTagName(): This method is used to identify any element html tag as an output
  Return type: String

13: getAttribute(): This method is used to display any component attribute property value as an output
  Return type: String

14: getAriaRole(): This method is used to display type of element in a webpage as output.

Ques: WATS to display tagName, Attribute & Text of forgotten Account in FB Application
Script:
```
        WebDriver driver = new FirefoxDriver();
            driver.get("https://www.facebook.com/");
            //forgotten Account
            WebElement rv = driver.findElement(By.linkText("Forgotten password?"));
            //tagName
            String str = rv.getTagName();
            System.out.println("Element tagname is ="+str);

            //Attribute

            String str1 = rv.getAttribute("href");
            System.out.println("Element Attribute Value="+str1);

            //Text
            String str2 = rv.getText();
            System.out.println("Element text is="+str2);
```

```
                System.out.println(rv.getAriaRole());

                driver.close();
------------------------------------------------------------------------------
```

AssignQues: WATS to perform following actions:
1: Open Browser
2: Navigate to Flipkart App
3: Display defsult text as an output
4: verify text field contains default text or not in flipkart App

Script:

```
        WebDriver driver = new FirefoxDriver();
                driver.get("https://www.flipkart.com/");
                WebElement rv = driver.findElement(By.name("q"));

                String str = rv.getAttribute("placeholder");
                System.out.println(str);
                boolean b = str.isEmpty();
                if(b)
                {
                        System.out.println("Search text field is Empty");
                }
                else
                {
                        System.out.println("Search text field is not Empty");
                }
                driver.close();
-------------------------------------------------------------------------------
```

Handling of Multiple Elements
**findElements(): THis method is used to identify multiple elements in a webpage
-->REturn type: List<WebElement>

Ques: WATS to display all links in below webpage
```
<html>
  <body>
     <a id="L1" href="url">Link1</a><br>
     <a id="L2" href="url">Link2</a><br>
     <a id="L3" href="url">Link3</a><br>
     <a id="L4" href="url">Link4</a><br>
</body>
</html>
```

Script:
```
     WebDriver driver = new FirefoxDriver();
   driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/elements.html");
   //print link1 text
   WebElement ele = driver.findElement(By.id("L1"));
   System.out.println(ele.getText());
   //print all link text
   List<WebElement> ref = driver.findElements(By.tagName("a"));
   for(int a=0;a<ref.size();a++)
```

```
    {
        WebElement rv = ref.get(a);
        System.out.println(rv.getText());
    }
    driver.close();

OR
    for(WebElement rv:ref)
    {
        String str = rv.getText();
        System.out.println(str);
    }
```

AssignQues: WATS to identify total no. of links present in google webpage as an output
Scrfipt:
```
        WebDriver driver = new ChromeDriver();
            driver.get("https://www.google.com/");
            List<WebElement> ref = driver.findElements(By.xpath("//a"));
            int count = ref.size();
            System.out.println(count);
```

AssignQues: WATS to identify total no. of images present in flipkart App as output
Script:
```
        WebDriver driver = new FirefoxDriver();
            driver.get("https://www.flipkart.com/");
            List<WebElement> ref = driver.findElements(By.xpath("//img"));
            System.out.println(ref.size());
```

AssignQues: WATS to print every link href Attribute property value as an output in google webpage
----
***Handling of Autosuggestions:
-->Set of options that are displayed related to text entered in search field.

Ques: WATS to display total no. of Autosuggestion displayed as an output in google webpage
Script:
```
        WebDriver driver = new FirefoxDriver();
            driver.get("https://www.google.com/");
            driver.findElement(By.id("APjFqb")).sendKeys("selenium");
            Thread.sleep(3000);
            List<WebElement> list = driver.findElements(By.xpath("//ul[@class='G43f7e']/li"));
            System.out.println(list.size());
```

Ques: WATS to display all the text of Autosuggestion as an output in google webpage
Script:
```
        WebDriver driver = new FirefoxDriver();
            driver.get("https://www.google.com/");
            driver.findElement(By.id("APjFqb")).sendKeys("selenium");
            Thread.sleep(3000);
            List<WebElement> list = driver.findElements(By.xpath("//ul[@class='G43f7e']/li"));
            System.out.println(list.size());
            for(int i=0;i<list.size();i++)
```

```
                {
                        WebElement ele = list.get(i);
                        System.out.println(ele.getText());
                }
```

AssignQues: WATS to display count and text as an output in Amazon.in App after enetring text PUMA

Questions:

AssignQues: Test Case:

1: Navigate to instagram.com

2: Verify whether the login button is enabled or not

AssignQues: Test Case:

1: Navigate to https://www.saucedemo.com/v1/

2: verify whether login button is displayed or not

AssignQues: WATS to identify height and width of Email field in facebook App.

AssignQues: WATS to select any one of Autosuggestion option in google webpage

----

**Handling of WebTable:

```
<html>

<body>
 <table>
  <tbody>
    <tr>
      <th>Sr.No</th>
      <th>Student</th>
      <th>Marks</th>
    </tr>
     <tr>
      <td>1</td>
      <td>User 1</td>
      <td>80</td>
     </tr>
 <tr>
      <td>2</td>
      <td>User 2</td>
      <td>75</td>
     </tr>
 <tr>
      <td>3</td>
      <td>User 3</td>
      <td>90</td>
     </tr>
 <tr>
      <td>4</td>
```

```
    <td>User 4</td>
    <td>60</td>
    </tr>

<tr>
    <td>5</td>
    <td>User 5</td>
    <td>90</td>
    </tr>

<tr>
    <td></td>
    <td>Total</td>
    <td>395</td>
    </tr>


</tbody>
</table>
</body>
</html>
```

Ques: WATS to display total no. of rows in following webtable as an output
Script:
```
        WebDriver driver = new FirefoxDriver();
                driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/webtable.html");
                //All rows
                List<WebElement> ref = driver.findElements(By.xpath("//tr"));
                System.out.println(ref.size());
```

Ques: WATS to display all the marks in WebTable as an output
Script:
```
        WebDriver driver = new FirefoxDriver();
                driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/webtable.html");
                //All Marks
                List<WebElement> ref = driver.findElements(By.xpath("//td[3]"));
                int s = ref.size();
                for(int i=0;i<s;i++)
                {
                        WebElement rv = ref.get(i);
                        System.out.println(rv.getText());
                }
                driver.close();
```

AssignQues: WATS to verify sum of Marks is equal to Total Marks displayed in webtable or not
----