AssignQues: Write same script for Facebook App using all manage methods
----
8: getWindowHandle():
-->It is used to get the window ID/session ID of a webpage where driver control is present(Parent window)
-->Return type: String

Script:

```
        //Launch the browser
                WebDriver driver = new ChromeDriver();

                //Maximize the browser window
                driver.manage().window().maximize();

                //Navigate to URL
                driver.get("https://www.naukri.com/");

                //Get the session ID
                String parentId = driver.getWindowHandle();
                System.out.println(parentId);
```

9: getWindowHandles():
--> It is used to get all the window ID of the webpages that are opened by selenium(Parent + Child window)
Return type: set<String>

Script:

```
        WebDriver driver = new ChromeDriver();
                driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(15));
                driver.get("https://www.shoppersstack.com/products_page/25");
                driver.findElement(By.id("compare")).click();

                //get the session Id
                Set<String> allIds = driver.getWindowHandles();
                System.out.println(allIds);
```

Ques: Diff. between getWindowHandle() & getWindowHandles()

getWindowHandle()	getWindowHandles()
1: It is used to get the session ID of Parent window	1: It is used to give the session ID of Parent + child window
2: Return type: String	2: Return type: set<String>

10: switchTo():
-->It is used to switch the driver control to
   1: window()
   2: frame()
   3: alert()
-->Return type of switchTo() is TargetLocator(Interface in selenium)

11: navigate(): It is used to navigate to other application or within the application

-->Return type: Navigation[Interface in selenium]

-->Using navigate methos we can perform following actions:
1: to(String url)
Note: to(): it is the alternate method to open application using URL [Internally calls get()]
2: forward(): using this we can perform forward() action
3: back(): using this we can perform back() action
4: refresh(): using this we can refresh the page

Ques: WATS to perform foll actions:
1: Open Browser
2: Open Facebook App
3: Open Google App
4: Navigate back to facebook App
5: Navigate forward to Google App
6: Refresh the webpage
7: Close the browser

Script:
```
        WebDriver driver = new FirefoxDriver();
            driver.get("https://www.facebook.com/");
            driver.get("https://www.google.com/");
            driver.get("https://www.facebook.com/");
            driver.get("https://www.google.com/");
```

Script:
```
        driver.get("https://www.facebook.com/");
            driver.navigate().to("https://www.google.com/");
            driver.navigate().back();
            driver.navigate().forward();
            driver.navigate().refresh();
            driver.close();
```

Ques: Diff. between get() and navigate()

get()	navigate()
1: It is used to open an application/a webpage	1: It is used to open an application/a webpage
2: It will wait until the webpage is completely loaded	2: It will not wait until the webpage is completely loaded.
3: We can only open the application.	3: We can perform back, forward, and refresh operations.
4: Return type: Void	4: Return type: Navigation

AssignQues: WATS to perform Following actions:
1: Open Browser
2: Open Google App
3: Open Facebook App
4: Navigate back to google
5: Navigate to facebook
6: Refresh the browser
7: Change browser size to 300*500

8: Change browser position to 200*300
9: maximize the browser
10: set browser fullscreen
11: minimize the browser
12: close the browser

Ques: WATS to verify OrangeHRM login page displayed or not

***HTML(HyperText Markup Language)
-->It is used to create webpage and component
-->HTML code is not case sensitive
-->We can write HTML code in Notepad++,Notepad etc
-->HTML code save with .html extension
-->HTML coding should be written using HTML keyword <>.
-->It is made up of tags.
-->Tags: Predefined functions which are used to perform certain set of actions

**Structure of HTML
```
<html>
  <head>
     <title>Selenium</title>
  </head>
  <body>

  </body>
  </html>
```

***Types of tags:
1: Paired Tag: Tag which is having opening tag and closing tag is known as Paired tag.
-->They can have child tags, plain text and attributes
Examp: <html> </html>,<head></head>,<p> </p>,<a> , <title></title>

2: Unpaired tag: Tags which are opened and need not to be closed
-->They are also called as self closing tags.

Examp: <br>,<img>,<input> etc.

Ques: Write HTML code to create webpage
```
<html>
<title>HTML</title>
  <body>
    Welcome
  </body>
  </html>
```

Ques: Write HTML code to create Signup page
```
<html>
  <title>Signup</title>
<body>
Name<input type="text"><br>
Password<input type="password"><br>
```

```html
Email<input type="text"><br>
Contact<input type="text"><br>
Gender<input type="radio">Male<br>
    <input type="radio">Female<br>
 <input type="button" value="signup">
</body>
</html>
```

Ques: Write HTML code to create login page
```html
<html>
 <title>signin</title>
  <body>
   Username<input type="text"><br>
  Password<input type="password"><br>
   <input type="button" value="Login">
 </body>
</html>
```

Ques: Write HTML code for create Listbox
```html
<html>
   <title>Listbox</title>
   <body>
Select Subject
<select>
   <option>selenium</option>
   <option>java</option>
   <option>MT</option>
  </select>
</body>
</html>
```

Ques: Write HTML code to create Link
```html
<html>
<title>Link</title>
<body>
<a href="signup.html">Not yet Reg.</a><br>
<a href="login.html">ALready Reg.</a>
</body>
</html>
```

Ques: Write HTML code to create Table
```html
<html>
<title>Table</title>
<body>
 <table border=2>
  <tbody>
     <tr>
       <th>Sr.No</th>
       <th>Book type</th>
       <th>Cost</th>
     </tr>
```

```html
    <tr>
     <td>1</td>
     <td>Selenium</td>
     <td>6000</td>
     </tr>
 <tr>
     <td>2</td>
     <td>Java</td>
     <td>5000</td>
     </tr>
 <tr>
     <td>3</td>
     <td>MT</td>
     <td>4000</td>
     </tr>
 <tr>
     <td>4</td>
     <td>Sql</td>
     <td>2000</td>
     </tr>
</tbody>
</table>
</body>
</html>
```

Note: td means table data
      th means table heading
      tr means table row

**Summary Point:
1: UN<input type="text" id="user" class="username">
2: ALready Reg.
3: <select>
   <option>selenium</option>
   <option>java</option>
   <option>MT</option>
  </select>
4: <table border=2>
  <tbody>
     <tr>
      <th>Sr.No</th>
      <th>Book type</th>
      <th>Cost</th>
     </tr>
     <tr>
      <td>1</td>
      <td>Selenium</td>
      <td>6000</td>
     </tr>

1: Tagname: Any keyword which is located immediately after < angular braces.

Examp: input,a,select,option,table,tbody,tr,th,td

2: Attribute: Any keyword after tagname with = symbol until > angular braces.
Examp: PropertyName='PropertyValue' OR PropertyName=\"PropertyValue\"
     AttributeName='AttributeValue' OR AttributeName=\"AttributeValue\"
      type='text' OR   type=\"text\"

3: Text: Any keyword after > angular braces
Examp: Already Reg., java, 1,selenium,6000

Ques: Why HTML code is required in selenium?
1: To identify component, selenium uses component HTML code
2: To perform action on any component, selenium should recognize component

-->Procedure to inspect HTML code for an element in a webpage
1: Right click on webpage and select inspect element in a webpage
2: Move the mouse pointer and click on element
Result: Specific HTML Code will be highlighted.

LOCATORS
-->Identifying Component uniquely in webpage is known as locator.
-->To identify component in selenium we use findElement() method which takes By arg.
  driver.findElement(By arg.);
-->This findElement method identifies components by using locator type.
--> "By" is the abstract class which contains static methods and each method return type is "By"
-->These static methods are known as Locator types.

**Locators Types:
1: tagname(): used to locate component using HTML tag.
2: id(): used to locate component using HTML Attribute.
3: classname(): used to locate component using HTML Attribute.
4: name(): used to locate component using HTML Attribute.
5: Linktext():used to locate component using HTML Text.
6: PartialLinktext(): used to locate component using HTML Text.
7: cssSelector: used to locate component using Expression.
8: xpath: used to locate component using Expression.

**sendkeys(): It is used to enter text in text field
**clear(): It is used to remove the text from text field.
**click(): It is used to perform mouse click action.

1: tagName(): This locator type is used to identify the component using HTML tag
SyntaX: By.tagName("HTML Tag");

Ques: WATS to enter Username in below webpage
<html>
 <body>
  UN<input type="text">
</body>
</html>

Script:
```
        //Launch the Browser
                WebDriver driver = new FirefoxDriver();

                //Maximize the browser window
                driver.manage().window().maximize();

                //Navigate to the application
                driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/tagname.html");

                //identify component with help of locator type
                By un = By.tagName("input");

                //identify component/WebElement on a webpage
                WebElement ele = driver.findElement(un);

                //perform action
                ele.sendKeys("admin");
```

AssignQues: Test Case
1: Open Browser
2: Naviagte to Facebook App
3: Enter Email and Password

Script:
```
        //Launch the Browser
                WebDriver driver = new FirefoxDriver();
                //Maximize the browser window
                driver.manage().window().maximize();
                //Navigate to the application
                driver.get("https://www.facebook.com/");
                //Identify component  with help of locator type
                By mail = By.id("email");
                //Search for element in webpage
                WebElement ele = driver.findElement(mail);
                ele.sendKeys("abc@gmail.com");
                //enter password
                By pwd = By.id("pass");
                WebElement ele1 = driver.findElement(pwd);
                ele1.sendKeys("manager");
```

**Limitation:
-->If webpage contains multiple components with the same tagName, we use tagName locator to identify
  all the components. while executing script selenium will perform all the actions on first component
with tagName.

2: id(): This locator type is used to identify the component using id attribute property value.
Syntax: By.id("id attribiute property value");

Note: id locator can be use only if html code contains id attribute

Ques:WATS to enter username and password in below webpage

```
<html>
  <body>
   UN<input type="text"><br>
  PWD<input type="password" id="pass"><br>
 <input type="checkbox" id="check">Remember password
 </body>
</html>
```

Script:
```
        WebDriver driver = new FirefoxDriver();
                driver.get("file:///C:/Users/Alpha/Desktop/HTML/E32/id.html");
                //username
                By un = By.tagName("input");
                WebElement ele = driver.findElement(un);
                ele.sendKeys("admin");
                //password
                By pwd = By.id("pass");
                WebElement ele1 = driver.findElement(pwd);
                ele1.sendKeys("manager");
                //checkbox
                By box = By.id("check");
                WebElement ele2 = driver.findElement(box);
                ele2.click()
```

AssignQues: WATS to search for iphones mobile in Amazon.in App