

TESTING

- validate the application

2 types,

1. Manual Testing
2. Automation Testing

1.Manual:

- Using excel sheet we test the java application.
- It takes more time to test many applications. so we go for automation

2.Automated Testing:

Tools:

1. QTP--Paid
2. Selenium-open source

Selenium Modules:

- selenium IDE
- selenium RC
- Web driver
- selenium GRID
- Appium (Mobile testing)

Now we used web driver

Web driver:

- it is Interface
1. Overview of selenium:
 - * Browser configuration(IE,Chrome, firefox, safari, opera)

2.Web Driver Commands:

- Browser commands
- Browser navigation commands
- web element commands
- Find element commands
- Check box & radio buttons
- Dropdown and multiple select
- Web Table Handling

3. Locators and Xpath:

4. Switches alert and window popup

Steps:

1. Add jars
2. Browser launch

Selenium supporting Browsers:

1. Firefox
2. IE
3. Chrome
4. Safari
5. Opera Mini

Selenium(webdriver) latest version: selenium standalone 3.4.0

- first we have to download latest web driver from internet(i.e), JAR file
- Then create one java project in eclipse .
- In the project we have to create 2 folders like Lib and Drivers
- In the Lib folder , copy the webdriver jar file
- Then right click project → Build path → config Build path → library → add jars(to Add jar file)
- All browsers having own drivers. so we have to download it and copy to drivers folder

Firefox launching:

Firefox driver –v54 = gecko driver-v0.17

```
public class FacebookAccount {  
    public static void main(String[] args) {  
  
        // to configure driver  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        // create the firefox driver  
  
        WebDriver driver = new FirefoxDriver();  
        // url mention  
        driver.get("https://www.facebook.com/");
```

```

        driver.close();
    }
}

```

Output:

Program is running

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows the project structure with packages like Array, Assignment, Dummy, firstproject, kkkkk, Selenium, and selenium.browser containing files such as FacebookAccount.java, GmailAccount.java, InternetExplorer.java, and Operajava.
- Java Editor:** Displays the Java code for `FacebookAccount`:

```

1 package selenium.browser;
2
3 import org.openqa.selenium.WebDriver;
4
5 public class FacebookAccount {
6     public static void main(String[] args) {
7         System.setProperty("webdriver.gecko.driver",
8             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
9         WebDriver driver = new FirefoxDriver();
10        driver.get("https://www.facebook.com/");
11        driver.close();
12    }
13 }

```
- Console:** Shows the command-line output of the Java application:

```

FacebookAccount [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:15:48 PM)
1498056351561 geckodriver INFO Listening on 127.0.0.1:41052
1498056352342 geckodriver:marionette INFO Starting browser \\?\C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]

```
- Bottom Status Bar:** Shows the date and time as 6/21/2017, 8:15 PM.

Program output:



- This browser will close suddenly because we included driver.close()

Close():

- It is used to close the application.
- It will close the current browser.

Quit():

- Destroy the object.
- Close all browser opened in webdriver

Chrome Launching:

chrome driver-v60=chrome driver-v2.30

```
public class GmailAccount {
    public static void main(String[] args) {
        System.setProperty("webdriver.chrome.driver",
        "C:/Users/siva/workspace/Selenium/driver/chromedriver.exe");
```

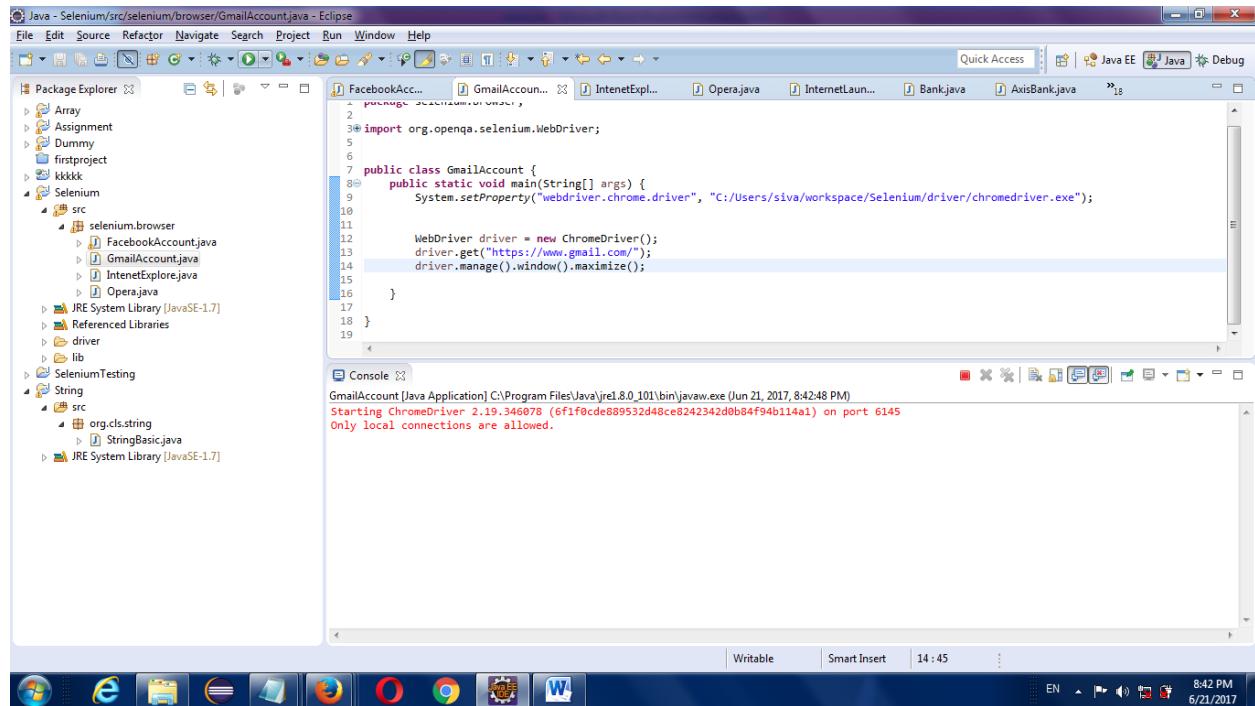
```
WebDriver driver = new ChromeDriver();
driver.get("https://www.gmail.com/");
driver.manage().window().maximize();
```

}

}

Output:

program running

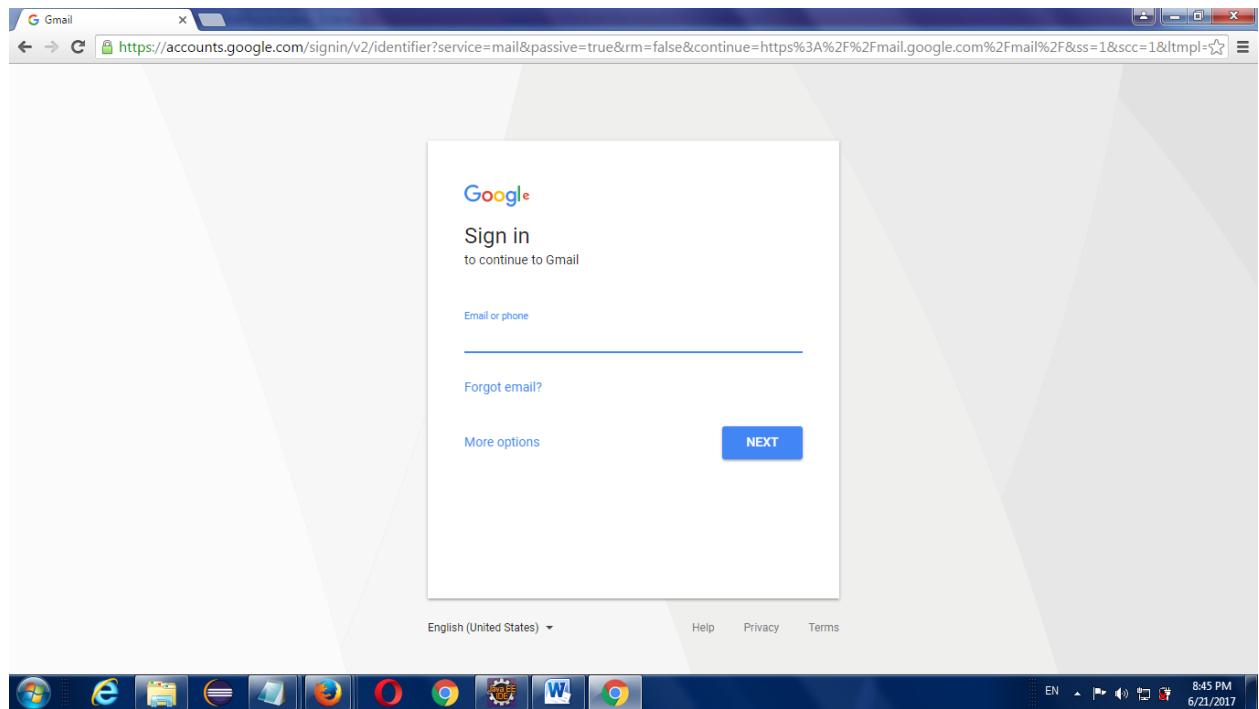


```
Java - Selenium/src/selenium/browser/GmailAccount.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer FacebookAcc... GmailAccou... InternetExpl... Operajava InternetLaun... Bankjava AxisBank.java
src
  1 package selenium.browser;
  2
  3 @import org.openqa.selenium.WebDriver;
  4
  5
  6 public class GmailAccount {
  7     public static void main(String[] args) {
  8         System.setProperty("webdriver.chrome.driver", "C:/Users/siva/workspace/Selenium/driver/chromedriver.exe");
  9
 10         WebDriver driver = new ChromeDriver();
 11         driver.get("https://www.gmail.com/");
 12         driver.manage().window().maximize();
 13
 14     }
 15
 16 }
 17
 18 }
 19

Console
GmailAccount [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:42:48 PM)
Starting ChromeDriver 2.19.346078 (6f1f0cd889532d48ce8242342d0b84f94b114a1) on port 6145
Only local connections are allowed.

Writable Smart Insert 14 : 45 EN 8:42 PM 6/21/2017
```

Output of the program:



IE Launching:

IE-v11.0 = internet driver server-v3.4

```
public class IntenetExplore {
    public static void main(String[] args) {
        System.setProperty("webdriver.ie.driver",
        "C:/Users/siva/workspace/Selenium/driver/IEDriverServer.exe");

        WebDriver driver = new InternetExplorerDriver();
        driver.get("https://www.facebook.com/");
        driver.manage().window().maximize();
    }
}
```

Output:

program is running

Java - Selenium/src/selenium/browser/InternetExplore.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access Java EE Java Debug

Package Explorer

- Array
- Assignment
- Dummy
- firstproject
- kkkkk
- Selenium
- src
 - selenium.browser
 - FacebookAccount.java
 - GmailAccount.java
 - InternetExplore.java
 - Operajava
- JRE System Library [JavaSE-1.7]
- Referenced Libraries
- driver
- lib

SeleniumTesting

String

org.cls.string

StringBasic.java

JRE System Library [JavaSE-1.7]

```

1 package selenium.browser;
2 import org.openqa.selenium.WebDriver;
3 public class InternetExplore {
4     public static void main(String[] args) {
5         System.setProperty("webdriver.ie.driver", "C:/Users/siva/workspace/Selenium/driver/IEDriverServer.exe");
6
7         WebDriver driver = new InternetExplorerDriver();
8         driver.get("https://www.facebook.com/");
9         driver.manage().window().maximize();
10    }
11
12}
13
14
15
16
17

```

Console

```

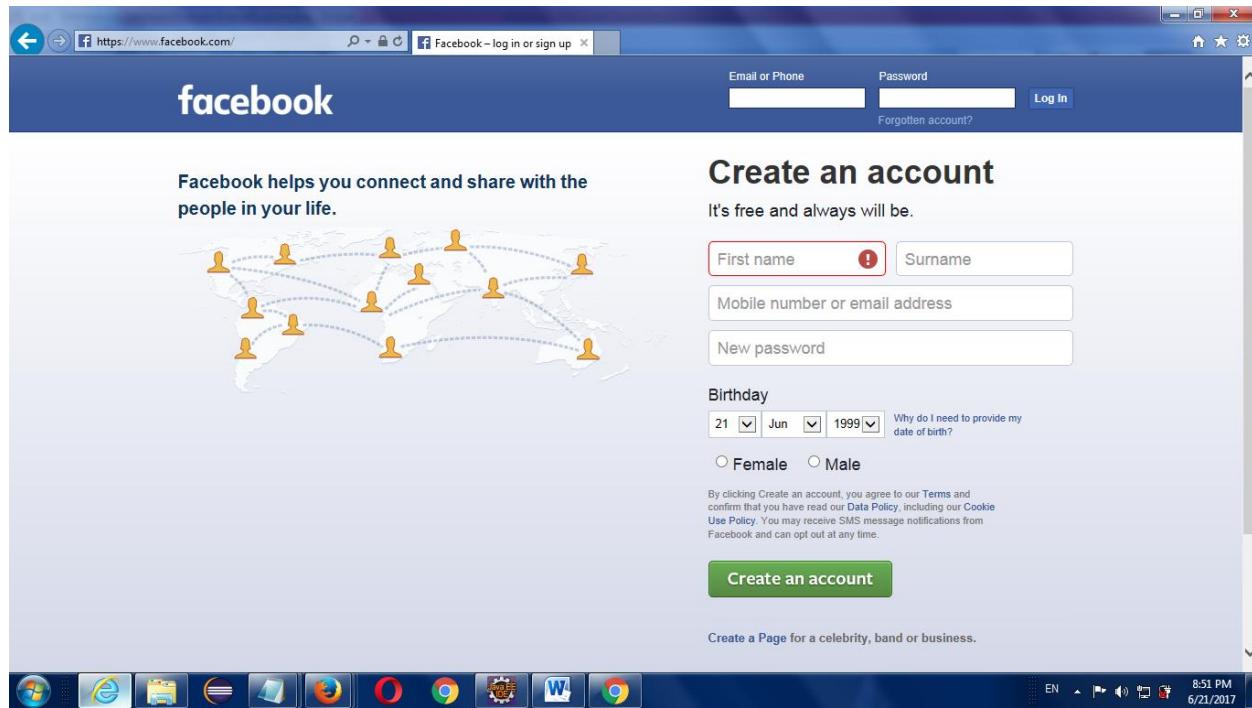
InternetExplore [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:48:41 PM)
Started InternetExplorerDriver server (32-bit)
2.48.0.0
Listening on port 30652
Jun 21, 2017 8:49:03 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: OSS

```

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EN 8:49 PM 6/21/2017

Output of the program



Opera Launching:

Opera-v46=opera driver-v2.27

```
public class Opera {
```

```
    public static void main(String[] args) {
        System.setProperty("webdriver.opera.driver", "C:/Users/siva/workspace/Selenium/driver/operaDriver.exe");
```

```
        WebDriver driver = new OperaDriver();
        driver.get("https://www.facebook.com/");
        driver.manage().window().maximize();
    }
```

```
}
```

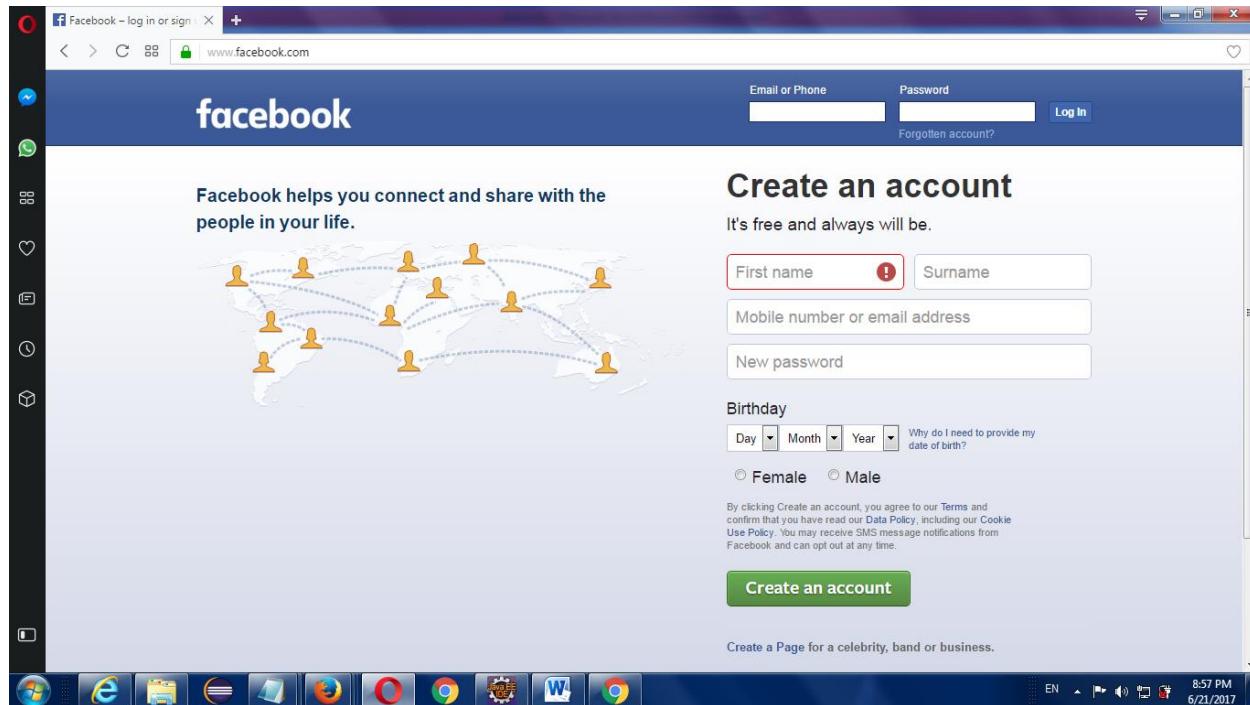
Output:

Program is running

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows the project structure with packages like Array, Assignment, Dummy, firstproject, kkkkk, Selenium, and SeleniumTesting.
- Operajava.java:** The source code for the Opera launcher. It imports the WebDriver from org.openqa.selenium package and sets the system property for the Opera driver path. It then creates a new OperaDriver instance, navigates to the Facebook homepage, and maximizes the window.
- Console Output:** Displays the terminal output of the Java application. It shows the application starting, the OperaDriver version (2.27), port (24778), and a message indicating only local connections are allowed. It also shows the creation of a session and the detected dialect (OSS).
- Taskbar:** At the bottom, the taskbar shows icons for various applications including Windows Start, Internet Explorer, File Explorer, Task View, Firefox, Chrome, and others.

Output of the program



Object Identification / locators:

- Id
- Class
- Name
- Xpath
- Link
- Partiallinktext
- Linktext

Firefox plug-ins to find locator:

1. Firebug
 2. Firepath
- Add these 2 plug-ins in firefox- To find the locators
 - In locators we can define 2 types (i.e.)
 - / → Absolute path (shows Full HTML DOM structure)
 - // → Relative path(shows particular locators or tag value)
 - In finding Xpath, matching node should be only one

Example program:

```
public class Dummy {  
    public static void main(String[] args) throws InterruptedException {
```

```

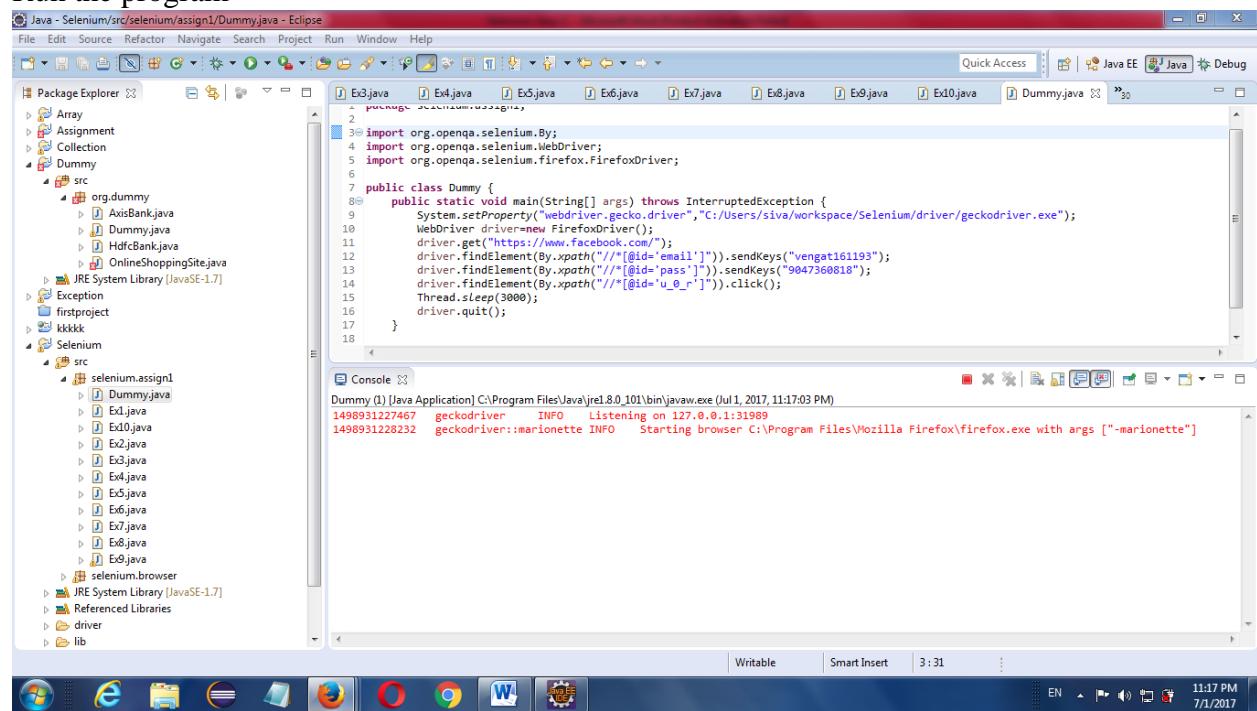
System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
    WebDriver driver=new FirefoxDriver();
    driver.get("https://www.facebook.com/");
    driver.findElement(By.xpath("//*[@id='email']")).sendKeys("vengat161193");
    // Here we can give Xpath or particular identification like id/class/ whatever shown in webelement

    driver.findElement(By.xpath("//*[@id='pass']")).sendKeys("9047360818");
    driver.findElement(By.xpath("//*[@id='u_0_r']")).click();
    Thread.sleep(3000);
    driver.quit();
}

```

Output:

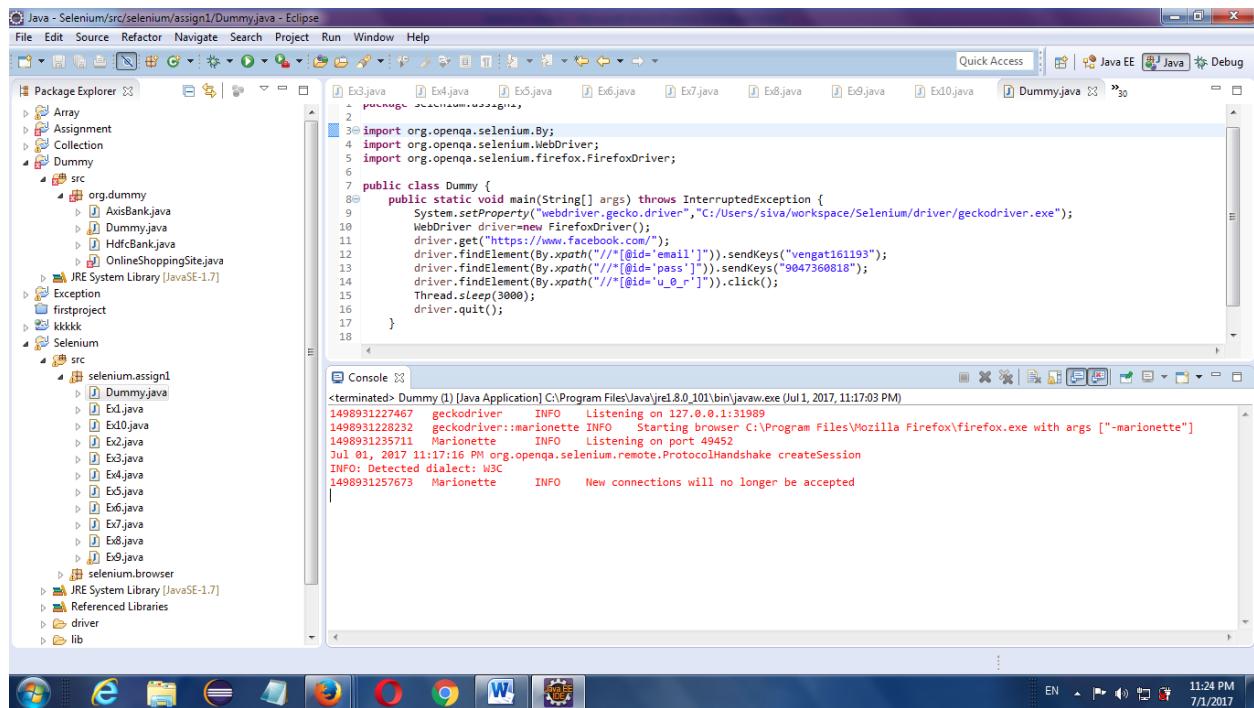
Step 1:
Run the program



Step 2;
Automating the fb login page



Step 3:
Quit the browser because here we used quit() method



- **findElement()** → is a method, it is used to find the locators
- **sendKeys()** → is a method, it is used to enter the value
- **click()** → is a method, it is used to click the login button or whatever
- **Thread.sleep(3000)** → it is used wait for some time(here,3000ms) to execute

Browser Commands:

Some basic methods:

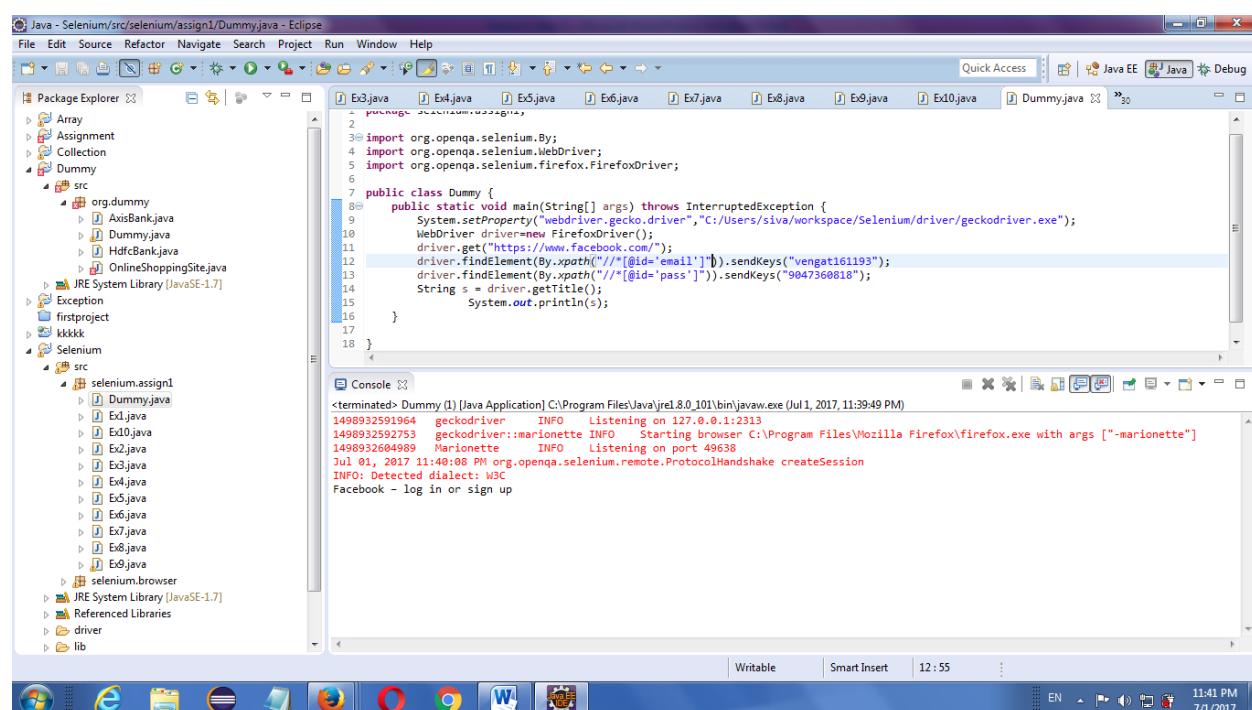
getTitle()

- It is a method, used to print the title of the page

Example program:

```
public class Dummy {  
    public static void main(String[] args) throws InterruptedException {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        driver.findElement(By.xpath("//*[@id='email']")).sendKeys("vengat161193");  
  
        driver.findElement(By.xpath("//*[@id='pass']")).sendKeys("9047360818");  
        String s = driver.getTitle();  
        System.out.println(s);  
    }  
}
```

Output:



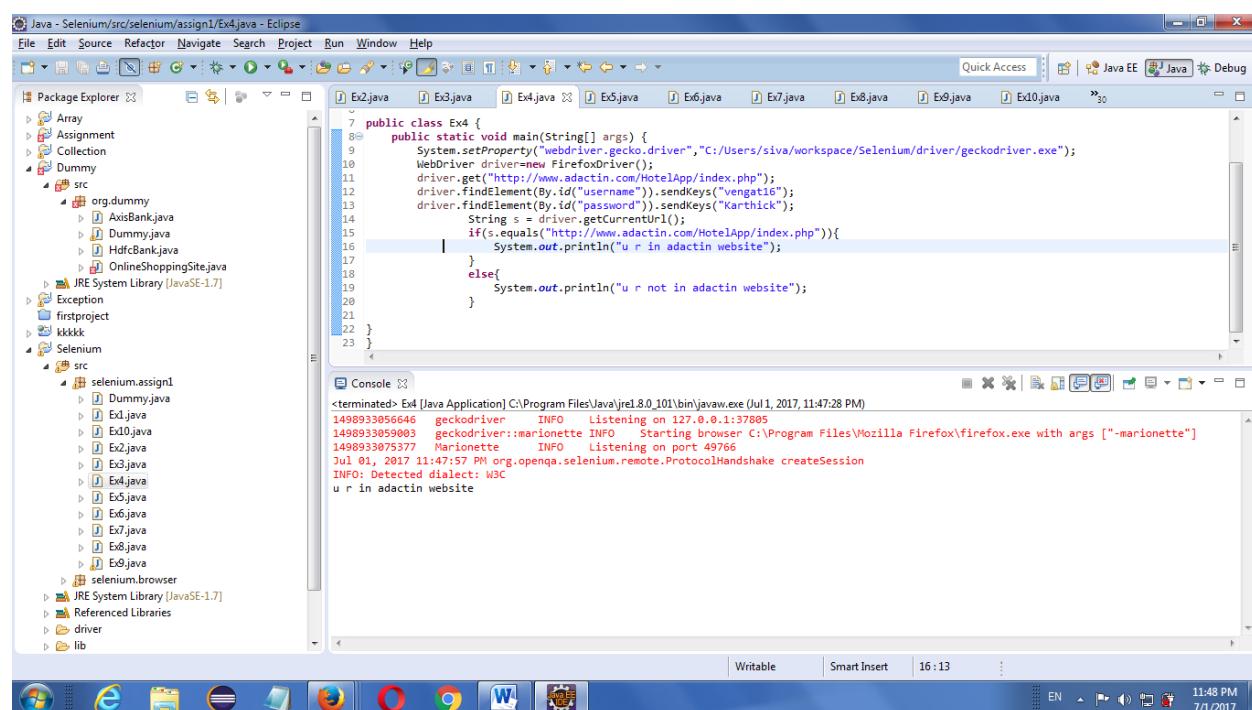
getCurrenturl():

- It is a method, used to check whether particular page is open or not

Example program:

```
public class Ex4 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver=new FirefoxDriver();
        driver.get("http://www.adactin.com/HotelApp/index.php");
        driver.findElement(By.id("username")).sendKeys("vengat16");
        driver.findElement(By.id("password")).sendKeys("Karthick");
        String s = driver.getCurrentUrl();
        if(s.equals("http://www.adactin.com/HotelApp/index.php")){
            System.out.println("u r in adactin website");
        }
        else{
            System.out.println("u r not in adactin website");
        }
    }
}
```

Output:



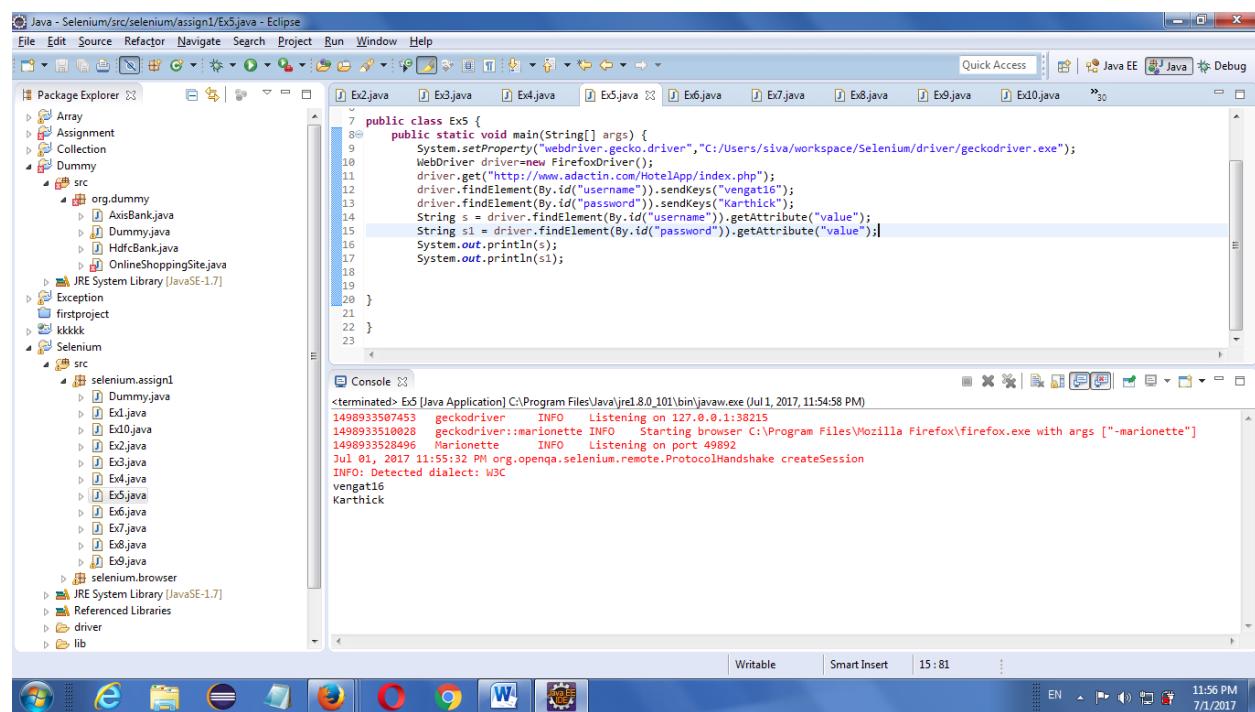
getAttribute() and getText():

It is a method, used to print the value whatever you gave in the text box

Example program:

```
public class Ex5 {  
    public static void main(String[] args) {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("http://www.adactin.com/HotelApp/index.php");  
        driver.findElement(By.id("username")).sendKeys("vengat16");  
        driver.findElement(By.id("password")).sendKeys("Karthick");  
        String s = driver.findElement(By.id("username")).getAttribute("value");  
        String s1 = driver.findElement(By.id("password")).getAttribute("value");  
        System.out.println(s);  
        System.out.println(s1);  
  
    }  
}
```

Output:



NoSuchElementException:

- It is throws when particular id/xpath/class or whatever is not available in DOM structure

isDisplayed():

It is a method, used to check the particular id/value is available or not

Example program:

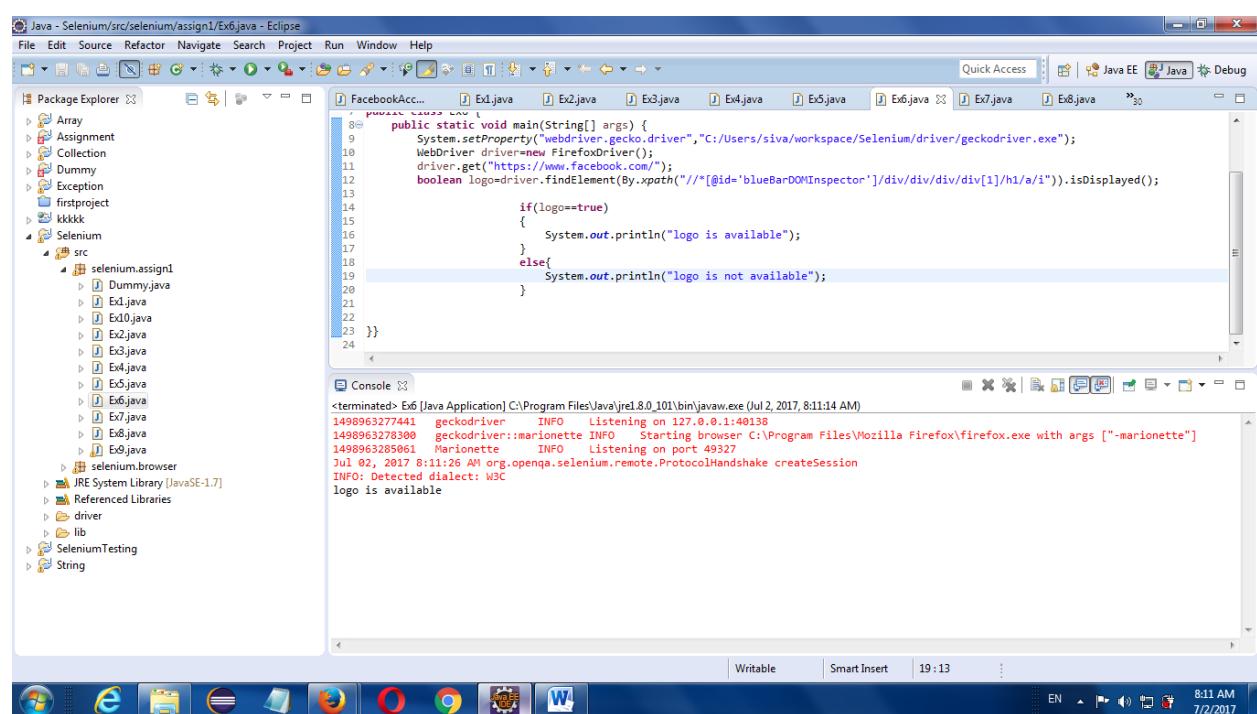
```
public class Ex6 {
    public static void main(String[] args) {

        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver=new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        boolean logo=driver.findElement(By.xpath("//*[@id='blueBarDOMInspector']/div/div/div/div[1]/h1/a/i")).isDisplayed();

        if(logo==true)
        {
            System.out.println("logo is available");
        }
        else{
            System.out.println("logo is not available");
        }

    }
}
```

Output:



The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows the project structure with packages like Array, Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Selenium, selenium.assign1, selenium.browser, and selenium.testing.
- Code Editor:** Displays the Java code for Ex6.java, specifically the isDisplayed() check for the Facebook logo.
- Console:** Shows the terminal output of the Java application running. It includes log messages from the geckodriver and Marionette, and the printed result "logo is available".
- Bottom Bar:** Shows the Windows taskbar with various application icons.

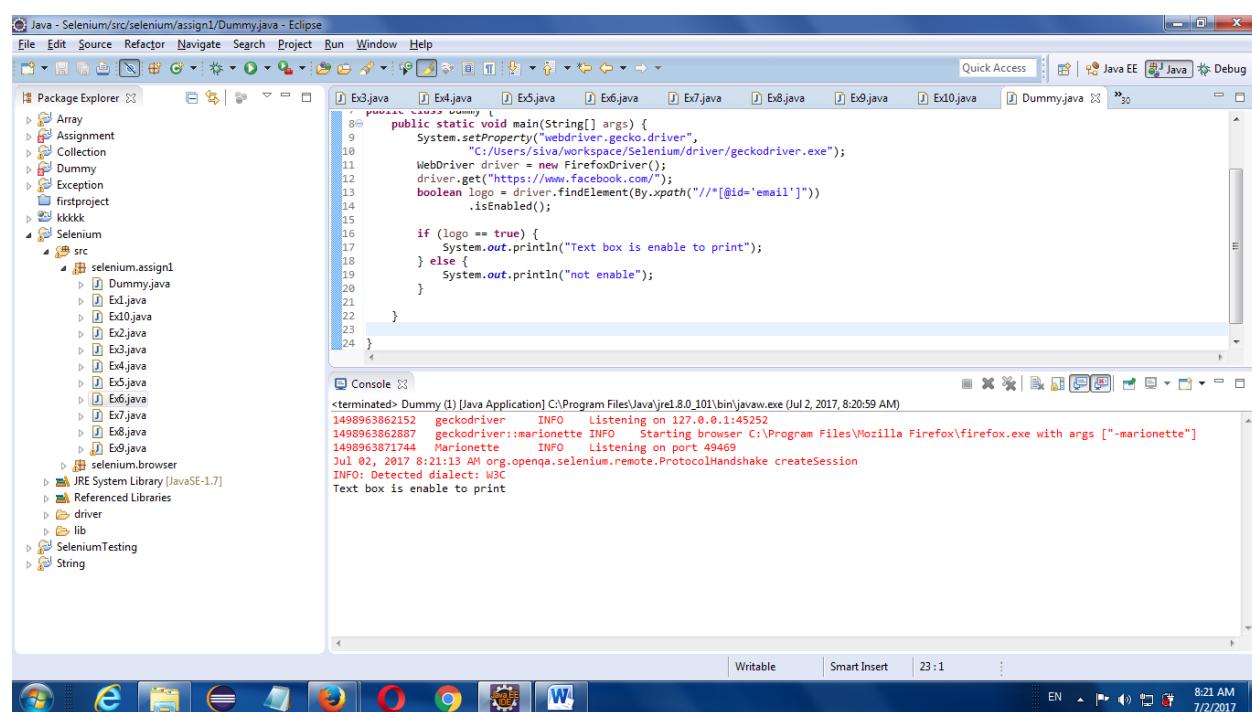
isEnabled:

- It is a method, is used to check particular text box is enable to print or not

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        boolean logo = driver.findElement(By.xpath("//*[@id='email']"))  
                           .isEnabled();  
  
        if (logo == true) {  
            System.out.println("Text box is enable to print");  
        } else {  
            System.out.println("not enable");  
        }  
    }  
}
```

Output:



The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows the project structure with packages like Array, Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Selenium, selenium.assign1, selenium.browser, JRE System Library [JavaSE-1.7], Referenced Libraries, driver, lib, SeleniumTesting, and String.
- Editor:** Displays the Java code for the `Dummy` class, specifically the `main` method which uses Selenium to check if the email input field is enabled.
- Console:** Shows the terminal output of the application's execution. It includes log messages from the geckodriver and Marionette, and the printed result "Text box is enable to print".
- Bottom Status Bar:** Shows the current time as 8:21 AM and the date as 7/2/2017.

isSelected:

- It is a method, used to check the particular radio button is selected or not

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        driver.findElement(By.xpath("//*[@id='u_0_g']"))  
            .click();  
        boolean logo = driver.findElement(By.xpath("//*[@id='u_0_g']"))  
            .isSelected();  
        if (logo == true) {  
            System.out.println("button is selected");  
        } else {  
            System.out.println("not selected");  
        }  
    }  
}
```

Navigate commands:

1.navigate().to():

- It is a method, used to navigate one website to another website.

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        driver.navigate().to("https://www.google.com/");  
    }  
}
```

2.refresh():

- It is a method, used to refresh the navigation website.

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",
```

```

        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
WebDriver driver = new FirefoxDriver();
driver.get("https://www.facebook.com/");
driver.navigate().to("https://www.google.com/");
driver.navigate().refresh();
}
}

```

3.back():

- It is a method, used to move back to the first page.

Example program:

```

public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.navigate().to("https://www.google.com/");
        driver.navigate().back();
    }
}

```

4.forward():

- It is a method, used to move forward to next page.

Example program:

```

public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.navigate().to("https://www.google.com/");
        driver.navigate().back();
        driver.navigate().forward();
    }
}

```

Radio button:

- We can able to select only one at a time

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        driver.findElement(By.xpath("//*[@id='u_0_g']"))  
            .click();  
    }  
}
```

Xpath:

- Structure or combination of absolute path and relative path

To print both radio button:

Example program:

```
public class Dummy {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        for (int i = 1; i <= 2; i++) {  
            Thread.sleep(3000);  
            String s = driver.findElement(  
                By.xpath("//*[@id='u_0_k']/span[" + i + "]/label"))  
                .getText();  
            System.out.println(s);  
        }  
    }  
}
```

Output:

```
Debug - Selenium/src/selenium/assign1/Dummy.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Debug Package Explorer
<terminated> Dummy (1) [Java Application]
<terminated, exit value:0> C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 12:47:09 PM)
1 package selenium.assign1;
2
3 import org.openqa.selenium.By;
4
5 public class Dummy {
6     public static void main(String[] args) throws InterruptedException {
7         System.setProperty("webdriver.gecko.driver",
8             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
9         WebDriver driver = new FirefoxDriver();
10        driver.get("https://www.facebook.com/");
11        for (int i = 1; i <= 2; i++) {
12            Thread.sleep(3000);
13            String s = driver.findElement(By.xpath("//*[@id='u_0_k']/span[" + i + "]/label")).getText();
14            System.out.println(s);
15        }
16    }
17 }
18 }

Console
<terminated> Dummy (1) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 12:47:09 PM)
1498979835818 geckodriver INFO Listening on 127.0.0.1:1724
1498979836302 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-m marionette]
1498979846015 Marionette INFO Listening on port 51001
Jul 02, 2017 12:47:27 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Female
Male
```

Eclipse Debugging steps:

- When our test case not working properly, we can check step by step execution by using debugging method
- It is used run a program step by step in eclipse.
- Mark some lines from left corner of the program
- Then right click → debug as
- Then click to check step over/step down/step info in the eclipse top

Finding Xpath using different ways:

1. //label[contains(text(), “female”)]
2. //label[@class='58mg'][1]
 - If we get 2 matching points , we give 1 or 2
3. //input[@id='email']
4. //*[@id='email']
 - If we use *, consider any tag

EXERCISE 1:

Program 1: Go to adactin.com website and give username &password and login

Program:

```
public class Ex3 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
```

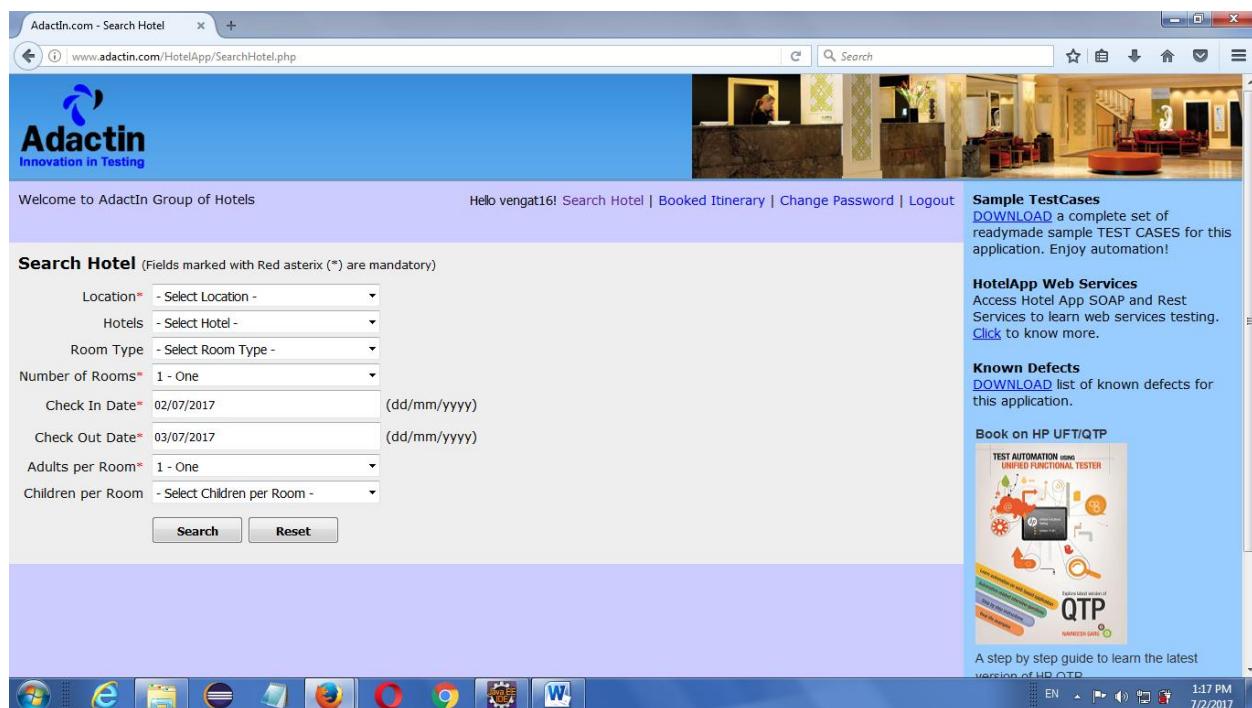
```

    "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
WebDriver driver = new FirefoxDriver();
driver.get("http://www.adactin.com/HotelApp/index.php");
driver.findElement(By.id("username")).sendKeys("vengat16");
driver.findElement(By.id("password")).sendKeys("Karthick");
driver.findElement(By.id("login")).click();

}
}

```

Output



Program 2: Go to adactin.com website and check that same webpage is opened

Program:

```

public class Ex4 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://www.adactin.com/HotelApp/index.php");
        driver.findElement(By.id("username")).sendKeys("vengat16");
        driver.findElement(By.id("password")).sendKeys("Karthick");
        String s = driver.getCurrentUrl();
        if (s.equals("http://www.adactin.com/HotelApp/index.php")) {
            System.out.println("u r in adactin website");
        } else {
            System.out.println("u r not in adactin website");
        }
    }
}

```

Output

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows a Java project named "selenium.assign1" containing several files: Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Ex10.java.
- Code Editor:** Displays the content of `Ex4.java`. The code sets up a FirefoxDriver, navigates to the Adactin website, and prints the URL if it matches the expected value.
- Console:** Shows the terminal output of the Java application. It includes log messages from the geckodriver and Marionette, and the printed URL "u r in adactin website".
- Bottom Bar:** Includes standard Windows-style icons for file operations and system status information like date and time.

Program 3: Go to adactin.com website, give user name & password and print that user name and password

Program:

```
public class Ex5 {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://www.adactin.com/HotelApp/index.php");  
        driver.findElement(By.id("username")).sendKeys("vengat16");  
        driver.findElement(By.id("password")).sendKeys("Karthick");  
        String s = driver.findElement(By.id("username")).getAttribute("value");  
        String s1 = driver.findElement(By.id("password")).getAttribute("value");  
        System.out.println(s);  
        System.out.println(s1);  
    }  
}
```

Output

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Displays the project structure under "selenium.assign1".
- Editor:** Shows the Java code for "Ex5.java".
- Console:** Displays the terminal output of the Java application "Ex5". The log includes:
 - <terminated> Ex5 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:23:48 PM)
 - 1498982830958 geckodriver INFO Listening on 127.0.0.1:33175
 - 1498982831756 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
 - 1498982839775 Marionette INFO Listening on port 51439
 - Jul 02, 2017 1:24:00 PM org.openqa.selenium.remote.ProtocolHandshake createSession
 - INFO: Detected dialect: W3C
 - vengat16
 - Karthick
- Bottom Bar:** Shows various icons for file operations, including a Windows icon, a file icon, a save icon, a browser icon, and a search icon.

Program 4: Facebook registration

Program:

```
public class Ex10 {
    public static void main(String[] args) {

        System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver=new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.findElement(By.xpath("//input[@name='firstname']")).sendKeys("Vengat");

        driver.findElement(By.xpath("//input[@name='lastname']")).sendKeys("Ram");

        driver.findElement(By.xpath("//input[@name='reg_email__']")).sendKeys("9876543210");

        driver.findElement(By.xpath("//input[@name='reg_passwd__']")).sendKeys("123456");

        driver.findElement(By.xpath("//label[contains(text(),'Male')]")).click();

        driver.findElement(By.xpath("//button[@type='submit']")).click();

    }
}
```

Output



Program 5: Go to facebook.com, check the facebook logo is available or not

Program:

```
ublic class Ex6 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        boolean logo = driver
            .findElement(
                By.xpath("//*[@id='blueBarDOMInspector']/div/div/div[1]/h1/a/i"))
            .isDisplayed();

        if (logo == true) {
            System.out.println("logo is available");
        } else {
            System.out.println("logo is not available");
        }
    }
}
```

Output

```
public class Ex6 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        boolean logo = driver
            .findElement(
                By.xpath("//*[@id='blueBarDOMInspector']/div/div/div[1]/h1/a/i"))
            .isDisplayed();

        if (logo == true) {
            System.out.println("logo is available");
        } else {
            System.out.println("logo is not available");
        }
    }
}
```

Console

```
<terminated> Ex6 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:31:41 PM)
1498982508848 geckodriver INFO Listening on 127.0.0.1:43663
1498982514824 geckodriver:marionette:INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
1498982528644 Marionette:INFO Listening on port 51656
Jul 02, 2017 1:32:14 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
logo is available
```

Program 6: Go to adactin.com website, give wrong user name & password and click login. Check the error msg(invalid login details) shown or not)

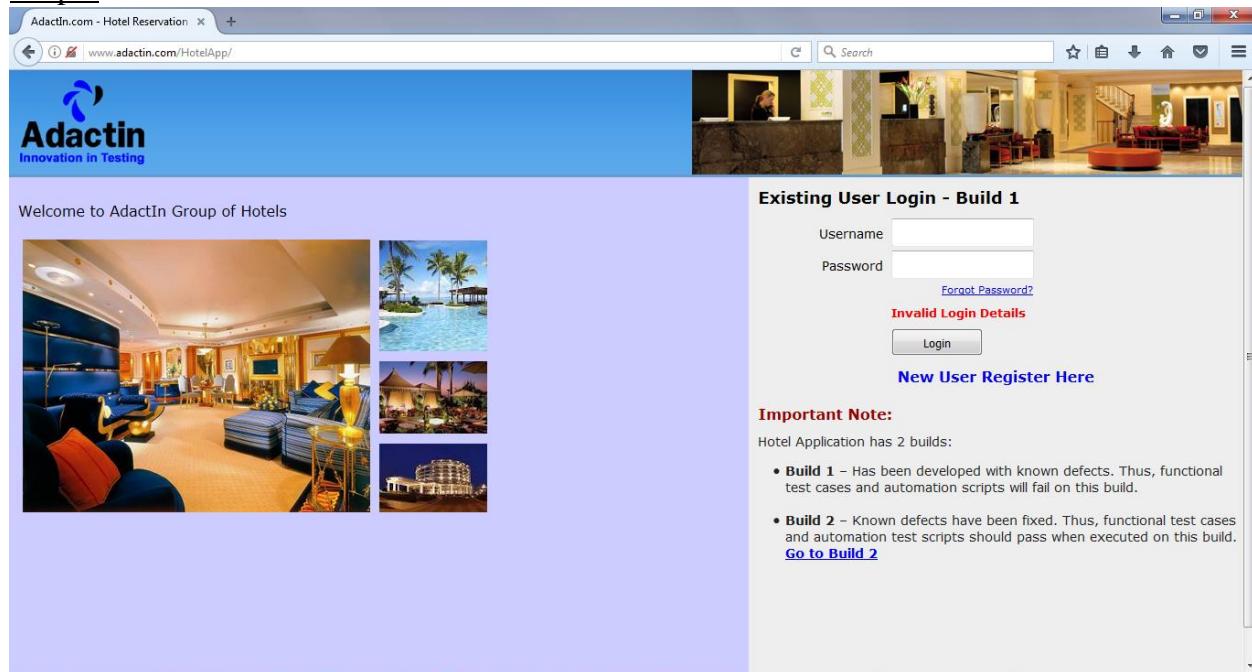
Program:

```
public class Ex9 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://www.adactin.com/HotelApp/");
        driver.findElement(By.id("username")).sendKeys("test");
        driver.findElement(By.id("password")).sendKeys("123456");
        driver.findElement(By.id("login")).click();
        boolean b = driver
            .findElement(
                By.xpath("//*[@id='login_form']/table/tbody/tr[5]/td[2]/div/b"))

        .isDisplayed();

        if (b = true) {
            System.out.println("invalid msg shown");
        } else {
            System.out.println("not");
        }
    }
}
```

Output



Welcome to AdactIn Group of Hotels

Existing User Login - Build 1

Username:
Password:

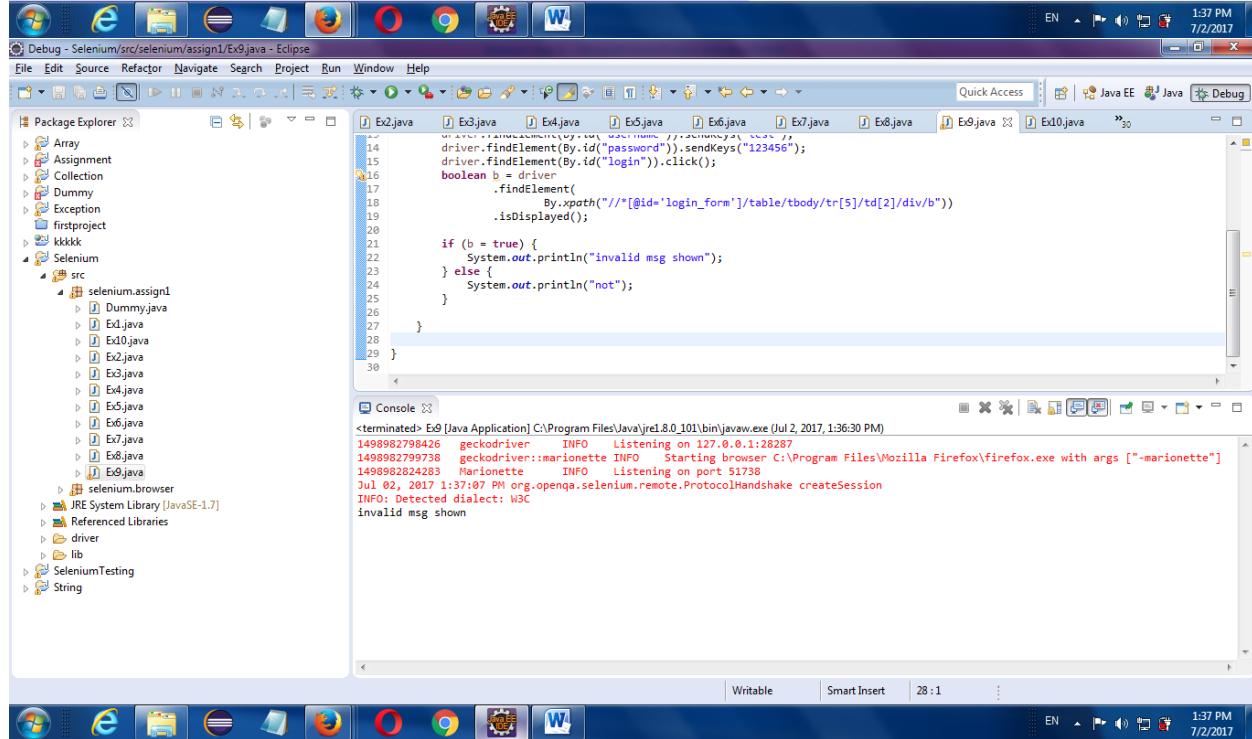
[Forgot Password?](#)

Invalid Login Details

[New User Register Here](#)

Important Note:
Hotel Application has 2 builds:

- **Build 1** - Has been developed with known defects. Thus, functional test cases and automation scripts will fail on this build.
- **Build 2** - Known defects have been fixed. Thus, functional test cases and automation test scripts should pass when executed on this build.
[Go to Build 2](#)



Debug - Selenium/src/selenium/assign1/Ex9.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access Java EE Java Debug

Package Explorer

src

- selenium.assign1
- Dummy.java
- Ex1.java
- Ex0.java
- Ex2.java
- Ex3.java
- Ex4.java
- Ex5.java
- Ex6.java
- Ex7.java
- Ex8.java
- Ex9.java
- Ex0.java

Ex9.java

```
14 driver.findElement(By.id("username")).sendKeys("test");
15 driver.findElement(By.id("password")).sendKeys("123456");
16 driver.findElement(By.id("login")).click();
17 boolean b = driver
18 .findElement(
19 By.xpath("//*[@id='login_form']/table/tbody/tr[5]/td[2]/div/b"))
20 .isDisplayed();
21
22 if (b == true) {
23 System.out.println("invalid msg shown");
24 } else {
25 System.out.println("not");
26 }
27 }
28
29 }
30 }
```

Console

```
<terminated> Ex9 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:36:30 PM)
1498982798426 geckodriver INFO Listening on 127.0.0.1:28287
1498982799738 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1498982824283 Marionette INFO Listening on port 51738
Jul 02, 2017 1:37:07 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
invalid msg shown
```

Program 7: Go to google.com, check the google logo is available or not

Program:

```
public class Ex7 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.google.co.in/");
        boolean logo = driver.findElement(By.xpath("//*[@id='hplogo']"))
```

```

        .isDisplayed();

if (logo == true) {
    System.out.println("logo is available");
} else {
    System.out.println("logo is not available");
}

}

```

Output

The screenshot shows the Eclipse IDE interface. On the left, the Package Explorer view displays a project structure under 'Selenium'. Inside 'src', there's a package named 'selenium.assign1' containing several Java files: Dummy.java, Ex1.java, Ex10.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, and Ex10.java. The 'Ex7.java' file is currently selected and shown in the center editor area. The code in 'Ex7.java' is identical to the one provided above. Below the editor is the 'Console' view, which shows the terminal output of the Java application. The output indicates that the logo is available:

```

<terminated> Ex7 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:39:26 PM)
1498982971773 geckodriver INFO Listening on 127.0.0.1:40360
1498982972883 Marionette:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [->marionette]
1498982986974 Marionette INFO Listening on port 51838
Jul 02, 2017 1:39:50 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
logo is available

```

Program 8: Go to google.com, click gmail and check the title is Gmail or not

Program:

```

public class Ex8 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.google.co.in/");
        driver.findElement(By.xpath("//*[@id='gbw']/div/div/div[1]/div[1]/a"))
            .click();
        String s = driver.getTitle();

        if (s.equals("Gmail")) {
            System.out.println("Gmail ACC");
        } else {

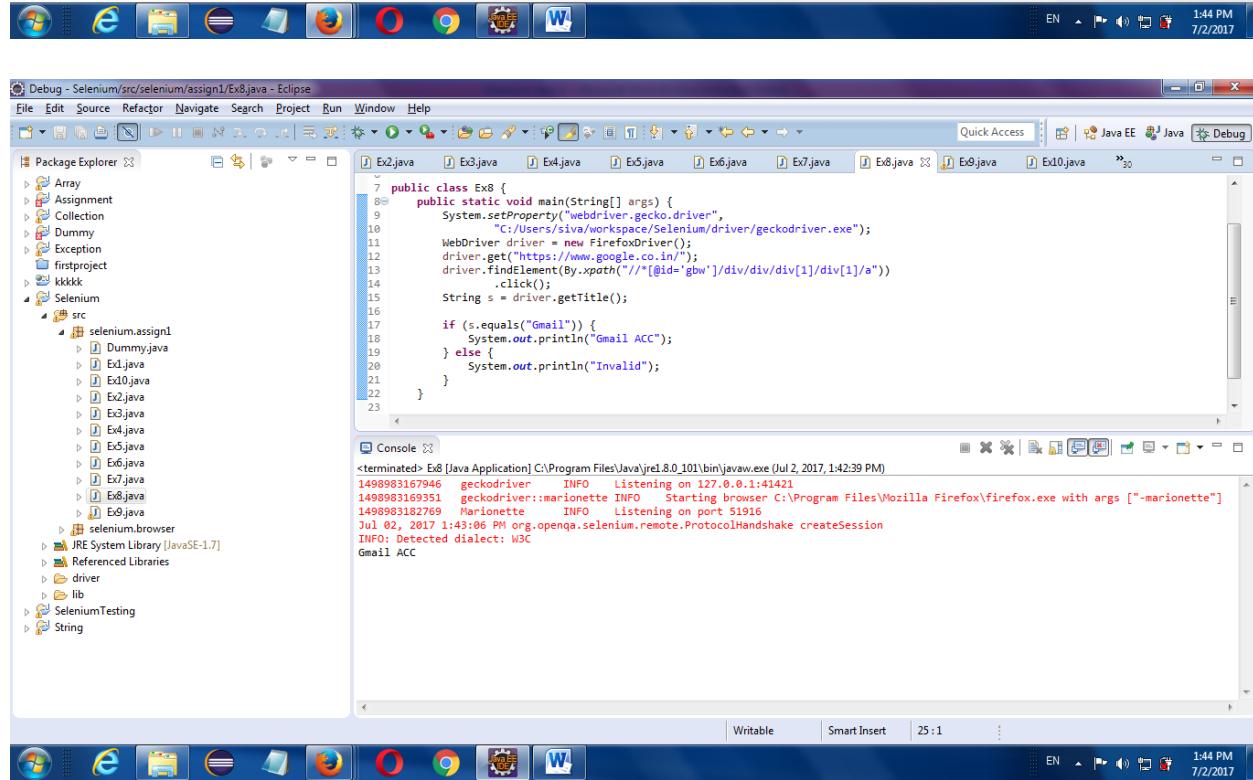
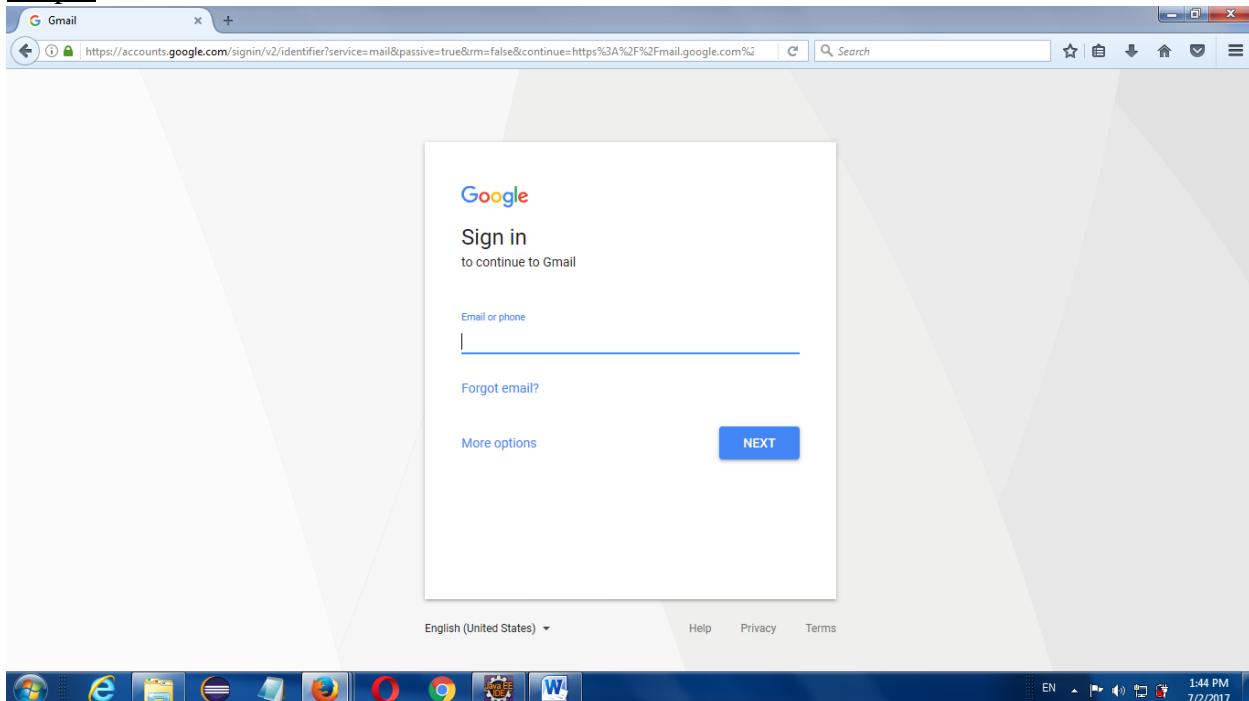
```

```

        System.out.println("Invalid");
    }
}

```

Output

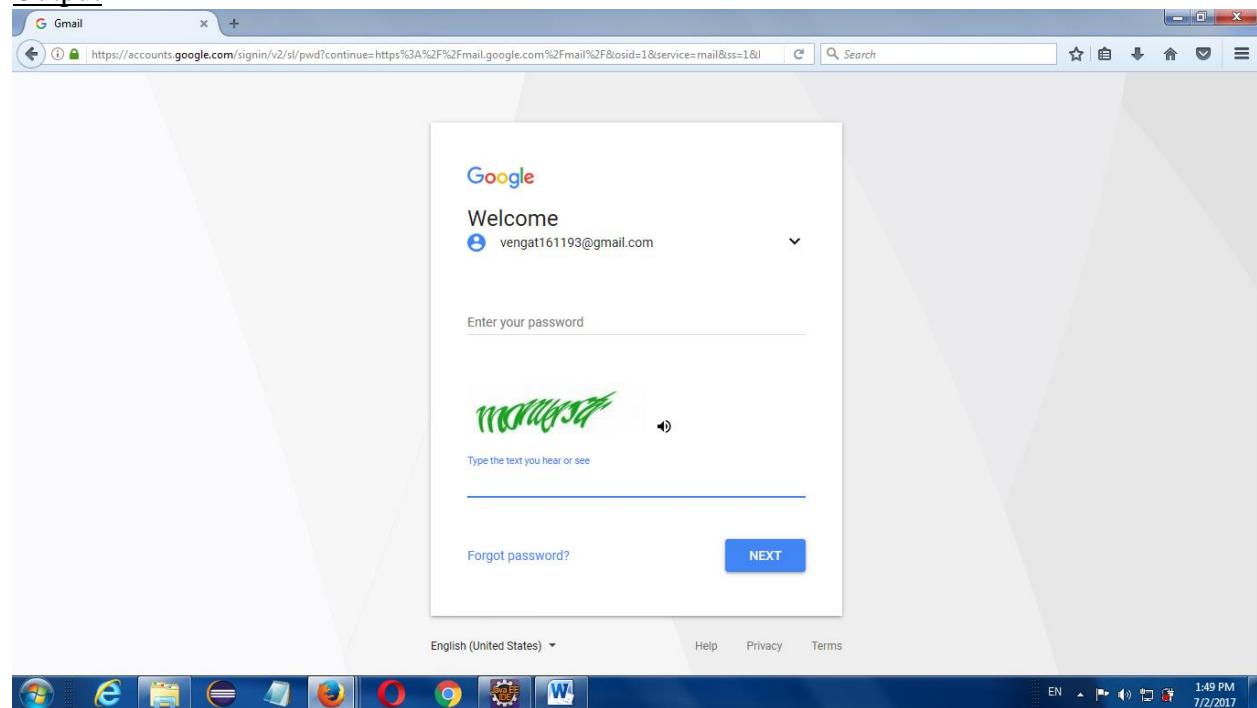


Program 9: Gmail Account Login

Program:

```
public class Ex2 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/ServiceLogin/identifier?service=mail&passive=true&rm=false&continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&ss=1&scc=1&ltmpl=default&ltmplcache=2&emr=1&osid=1&flowName=GlifWebSignIn&flowEntry=ServiceLogin");  
        driver.findElement(By.xpath("//*[@id='identifierId']")).sendKeys(  
                           "vengat161193");  
        driver.findElement(By.xpath("//*[@id='identifierNext']/content/span"))  
                           .click();  
        Thread.sleep(3000);  
        driver.findElement(  
                           By.xpath("//*[@id='password']/div[1]/div/div[1]/input"))  
                           .sendKeys("123456");  
        driver.findElement(By.xpath("//*[@id='passwordNext']/content")).click();  
    }  
}
```

Output

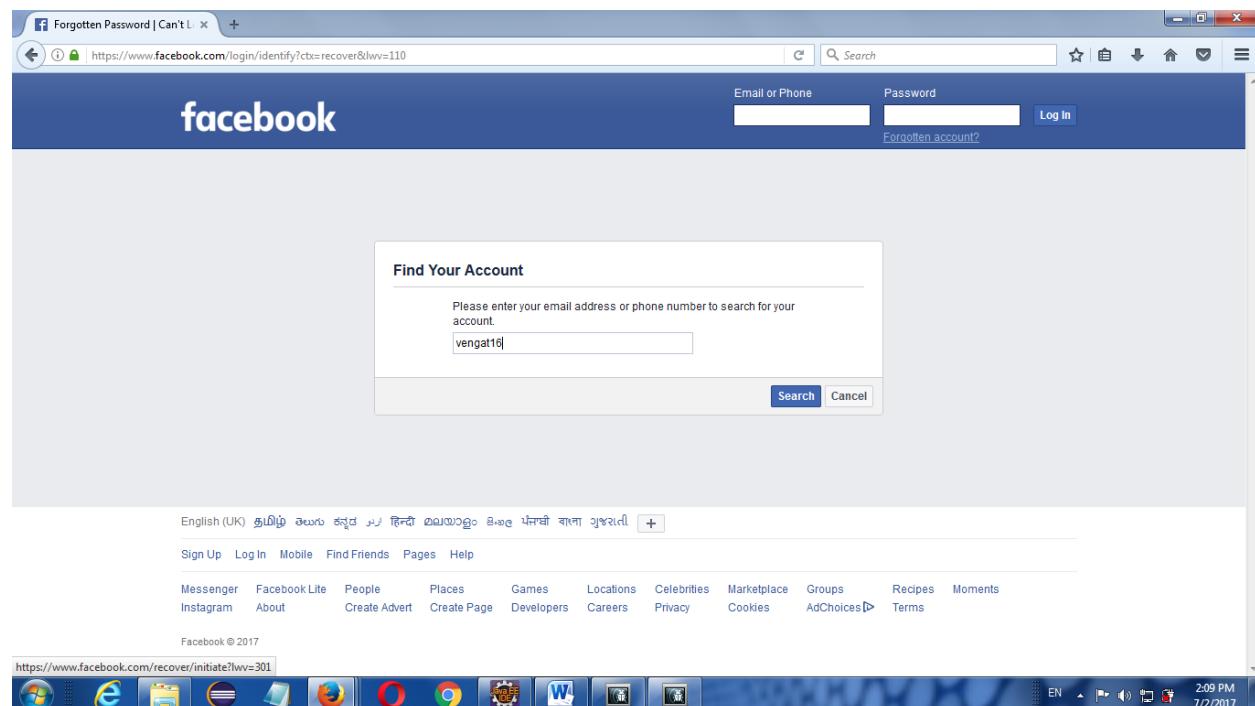


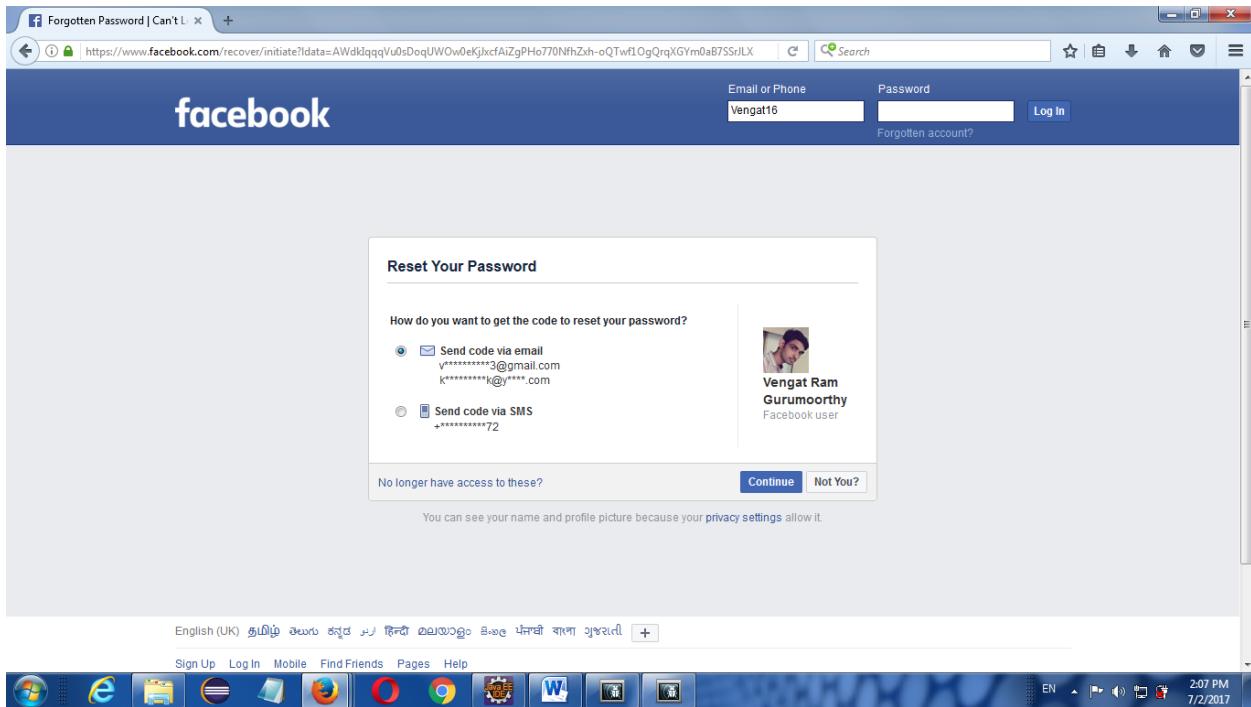
Program 10: Go to facebook.com, click forgot password and give email

Program:

```
public class Ex1 {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        driver.findElement(  
            By.xpath("//*[@id='login_form']/table/tbody/tr[3]/td[2]"))  
            .click();  
        driver.findElement(By.xpath("//*[@id='identify_email']")).sendKeys("vengat16");  
        driver.findElement(By.xpath("//*[@id='u_0_3']")).click();  
    }  
}
```

Output





CHECK BOX:

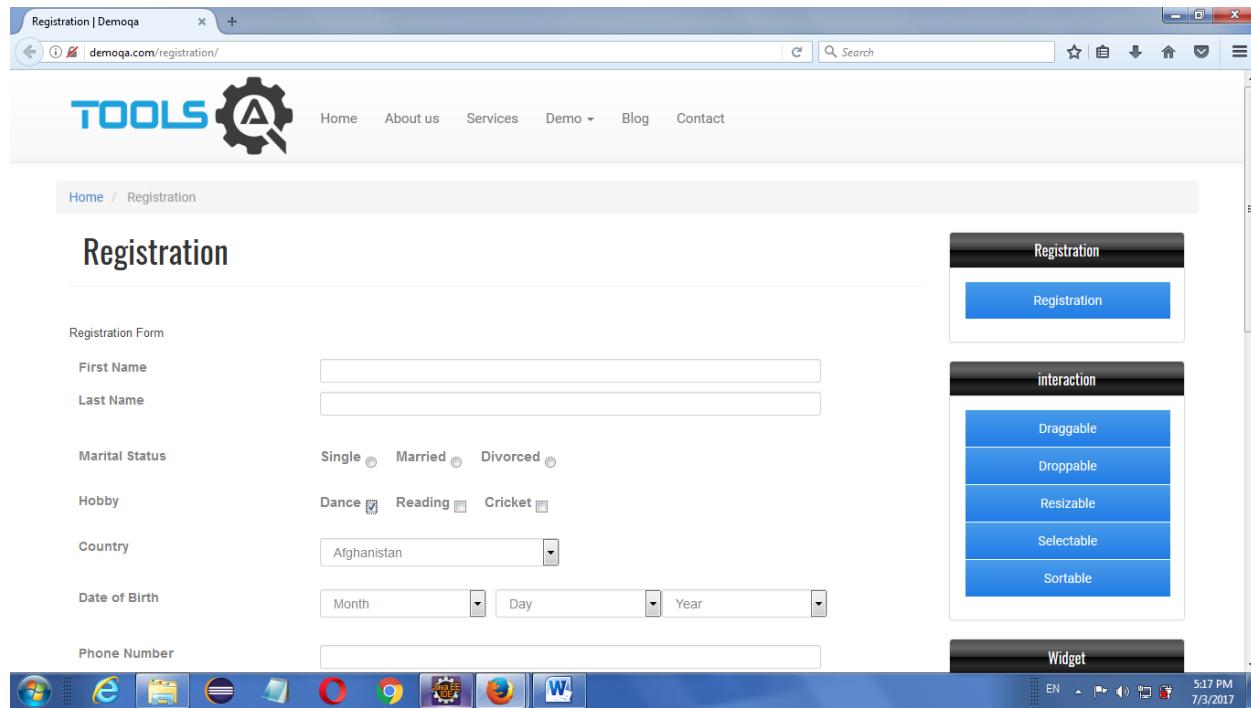
- In check box, we can able to select more than one value at a time.

Select one value:

Example program:

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver=new FirefoxDriver();
        driver.get("http://demoqa.com/registration/");
        driver.findElement(By.xpath("//input[@value='dance']")).click();
    }
}
```

output:



Select more than one value:

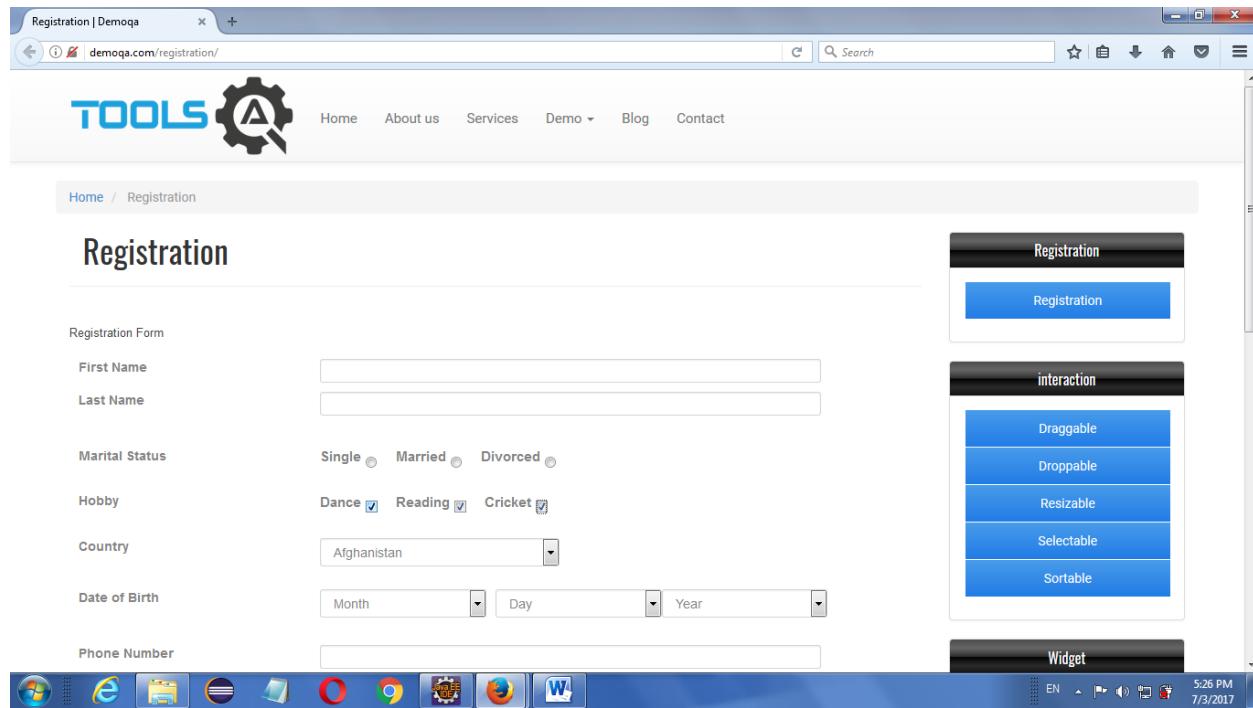
Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("http://demoqa.com/registration/");  
        List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));  
        for(WebElement x:w){  
            x.click();  
        }  
    }  
}
```

Here,

- //input[@type='checkbox'] → if xpath we give like, we get 3 matching nodes, so using for loop we can able to select 3 checkbox at a time
- **findElements** → is a method, used to select more than one value
- **WebElement** → is a interface
- **By** → is a class name

Output:

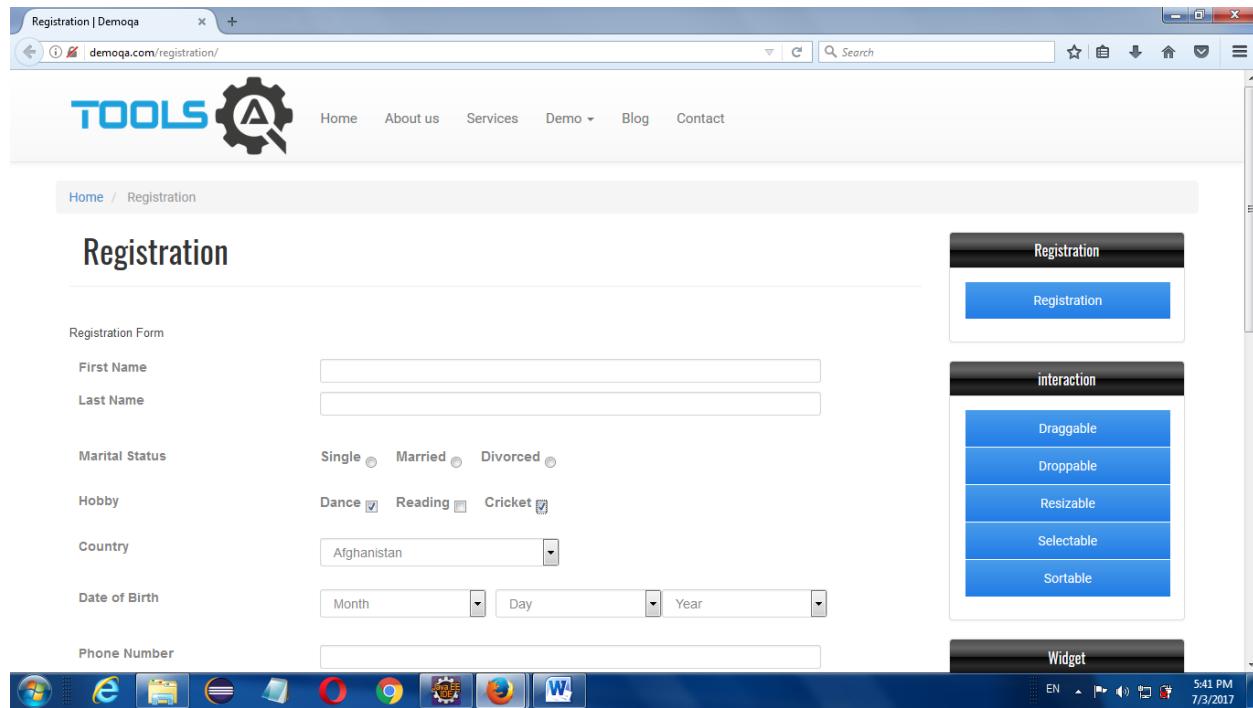


To select two values:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("http://demoqa.com/registration/");  
        List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));  
        for(WebElement x:w){  
            if(x.getAttribute("value").equals("dance")||x.getAttribute("value").equals("cricket ")){  
                x.click();  
            }  
        }  
    }  
}
```

Output:



Using normal for loop to select all checkbox:

```
public class Dummy {  
    public static void main(String[] args) {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("http://demoqa.com/registration/");  
        List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));  
        for(int i=0;i<w.size();i++){  
            w.get(i).click();  
        }  
    }  
}
```

Using normal for loop to select two checkbox:

```
public class Dummy {  
    public static void main(String[] args) {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get("http://demoqa.com/registration/");  
        List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));  
        for(int i=0;i<w.size();i++){  
            if(i==1 || i==2){  
                w.get(i).click();  
            }  
        }  
    }  
}
```

```

        if(w.get(i).getAttribute("value").equals("dance")||w.get(i).getAttribute("value").equals("cricket")){
            w.get(i).click();
        }
    }
}

```

To print the selected value

Example program:

```

public static void main(String[] args) {
    System.setProperty("webdriver.gecko.driver",
                       "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
    WebDriver driver = new FirefoxDriver();
    driver.get("http://demoqa.com/registration/");
    List<WebElement> w = driver.findElements(By
                                              .xpath("//input[@type='checkbox']"));
    for (int i = 0; i < w.size(); i++) {
        if (w.get(i).getAttribute("value").equals("dance")
            || w.get(i).getAttribute("value").equals("cricket")) {
            w.get(i).click();
        }
        if (w.get(i).isSelected()) {
            System.out.println(w.get(i).getAttribute("value"));
        }
    }
}

```

Output:

The screenshot shows the Eclipse IDE interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations. The Package Explorer view on the left shows a project structure with packages like Collection, Dummy, Exception, firstproject, kkkkk, and Selenium, and source files Ex1.java through Ex10.java. The central editor window displays Java code for a class named Dummy. The code uses Selenium WebDriver to interact with a demoqa.com registration page, specifically targeting checkboxes. The bottom Console tab shows the terminal output of the Java application, including log messages from geckodriver and marionette, and an error message indicating a reference error for the 'accordion' variable.

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://demoqa.com/registration/");
        List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));
        for(int i=0;i<w.size();i++){
            if(w.get(i).getAttribute("value").equals("dance")||w.get(i).getAttribute("value").equals("cricket")){
                w.get(i).click();
            }
            if(w.get(i).isSelected()){
                System.out.println(w.get(i).getAttribute("value"));
            }
        }
    }
}
```

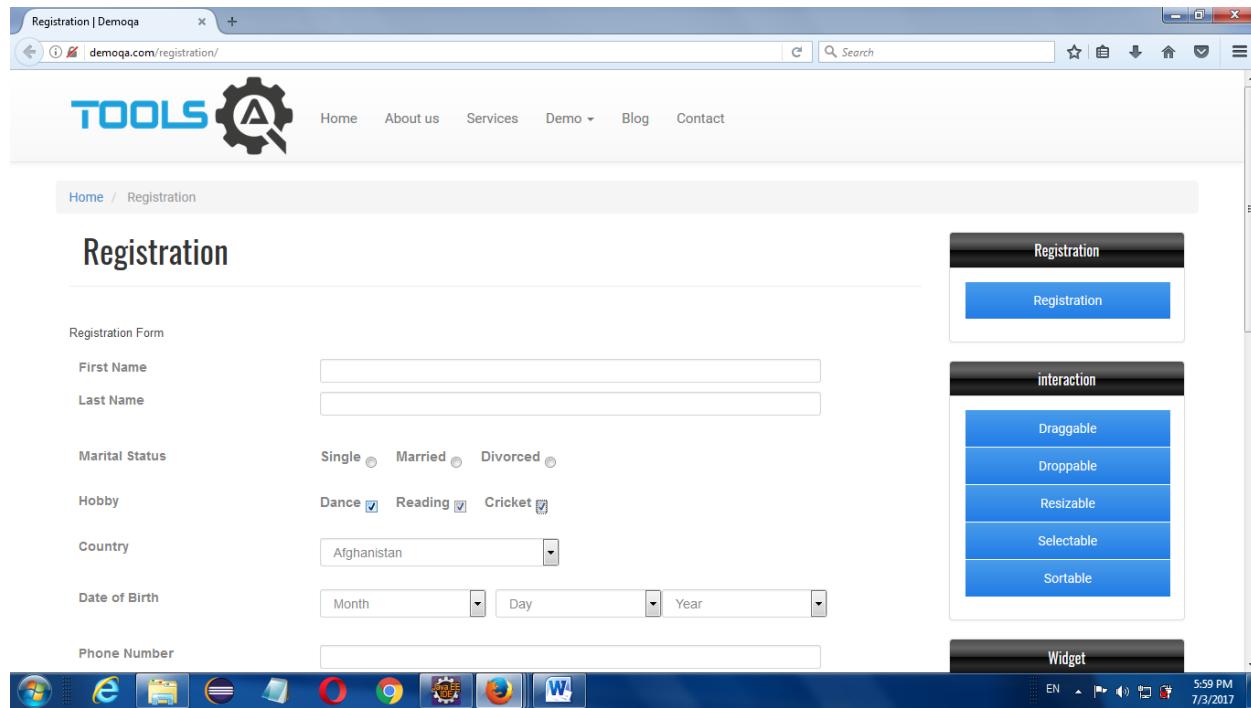
```
<terminated> Dummy (2) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 5:53:40 PM)
1499084622915 geckodriver INFO Listening on 127.0.0.1:31382
1499084623728 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
1499084631068 Marionette INFO Listening on port 51319
Jul 03, 2017 5:53:52 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
JavaScript error: http://demoqa.com/registration/, line 514: ReferenceError: accordion is not defined
dance
cricket
```

To select the unselected value:

Example program:

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://demoqa.com/registration/");
        List<WebElement> w = driver.findElements(By
                                                 .xpath("//input[@type='checkbox']"));
        for (int i = 0; i < w.size(); i++) {
            if (w.get(i).getAttribute("value").equals("dance")
                || w.get(i).getAttribute("value").equals("cricket")) {
                w.get(i).click();
            }
            if (!w.get(i).isSelected()) {
                w.get(i).click();
            }
        }
    }
}
```

Output:



DROP DOWN:

1.Single value

2.Multiple value

1.SINGLE VALUE

To print all the options:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee"));  
        Select s=new Select(w);  
        List<WebElement> o = s.getOptions();  
        for (WebElement x:o) {  
            System.out.println(x.getAttribute("value"));  
        }  
    }  
}
```

Output:

The screenshot shows the Eclipse IDE interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help, Quick Access, Java EE, Java, and Debug. The Package Explorer view on the left shows a project structure with packages like Collection, Dummy, Exception, firstproject, kkkkk, Selenium, and selenium.assign2, containing files such as Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, Ex10.java, and Dummy.java. The central editor view displays Java code for a 'Dummy' class. The bottom Console view shows the execution output of the Java application, which prints the options available in a dropdown menu. The system tray at the bottom right shows icons for various applications and the date and time (6:19 PM, 7/3/2017).

```
11 public class Dummy {
12     public static void main(String[] args) {
13         System.setProperty("webdriver.gecko.driver",
14             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
15         WebDriver driver = new FirefoxDriver();
16         driver.get("http://ironspider.ca/forms/dropdowns.htm");
17         WebElement w = driver.findElement(By.name("coffee"));
18         Select s=new Select(w);
19         List<WebElement> o = s.getOptions();
20         for (WebElement x:o) {
21             System.out.println(x.getAttribute("value"));
22         }
23     }
24 }
25 }
```

```
<terminated> Dummy (2) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 6:17:25 PM)
1499806048514 geckodriver INFO Listening on 127.0.0.1:33216
1499806049326 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499806055955 Marionette INFO Listening on port 51799
Jul 03, 2017 6:17:36 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
black
cream
sugar
regular
crisp
```

To print all text

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://ironspider.ca/forms/dropdowns.htm");
        WebElement w = driver.findElement(By.name("coffee"));
        Select s=new Select(w);
        List<WebElement> o = s.getOptions();
        for (WebElement x:o) {
            System.out.println(x.getText());
        }

    }
}
```

Output :

The screenshot shows the Eclipse IDE interface. In the top center, there's a tab bar with multiple tabs labeled Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Dummy.java. Below the tabs is a toolbar with various icons. On the left, the Package Explorer shows a project structure with several Java files under a Selenium package. The main editor window displays Java code for a class named Dummy. The code uses Selenium WebDriver to interact with a dropdown menu on a specific website. The terminal window at the bottom shows the execution of the Java application, displaying the text "Black", "With cream", "With sugar", "With cream & sugar", and "Crisp (har har...)".

```
11 public class Dummy {
12     public static void main(String[] args) {
13         System.setProperty("webdriver.gecko.driver",
14             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
15         WebDriver driver = new FirefoxDriver();
16         driver.get("http://ironspider.ca/forms/dropdowns.htm");
17         WebElement w = driver.findElement(By.name("coffee"));
18         Select s=new Select(w);
19         List<WebElement> o = s.getOptions();
20         for (WebElement x:o) {
21             System.out.println(x.getText());
22         }
23     }
24 }
25 }
```

```
<terminated> Dummy (2) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 6:20:53 PM)
1499086256066 geckodriver INFO Listening on 127.0.0.1:23272
1499086256831 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
14990862564135 Marionette INFO Listening on port 51887
Jul 03, 2017 6:21:04 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Black
With cream
With sugar
With cream & sugar
Crisp (har har...)
```

Using normal for loop:

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
            "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://ironspider.ca/forms/dropdowns.htm");
        WebElement w = driver.findElement(By.name("coffee"));
        Select s=new Select(w);
        List<WebElement> o = s.getOptions();
        for (int i=0;i<=o.size();i++) {
            System.out.println(o.get(i).getAttribute("value"));
        }
    }
}
```

Here,

- **getAttribute()**→ to print particular tag(value) value
- **getText()**→ to print all text

SELECT:

We can perform select by 3 ways

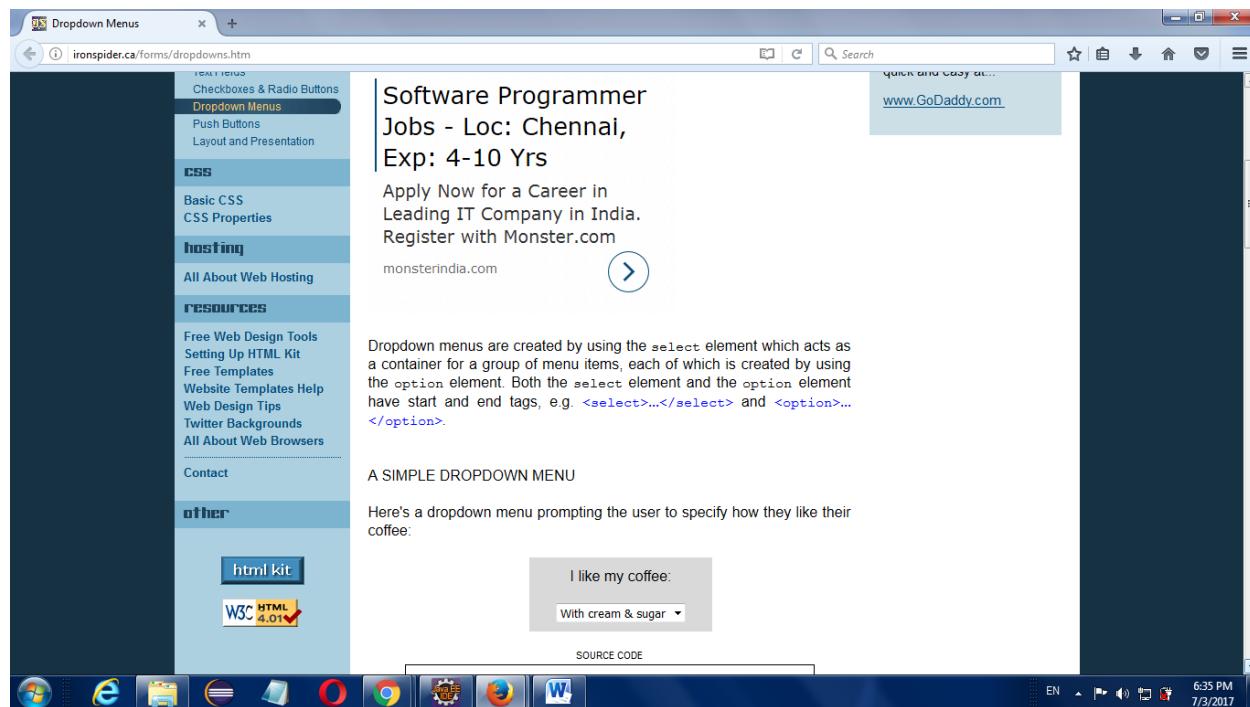
1. SelectByIndex
 2. SelectByValue
 3. SelectByVisibletext

1.selectByIndex:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee"));  
        Select s=new Select(w);  
        s.selectByIndex(3);  
    }  
}
```

Output:



2.selectByValue:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee"));  
        Select s=new Select(w);  
        s.selectByValue("regular");  
    }  
}
```

3.selectByVisibleText:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee"));  
        Select s=new Select(w);  
        s.selectByVisibleText("With cream & sugar");  
    }  
}
```

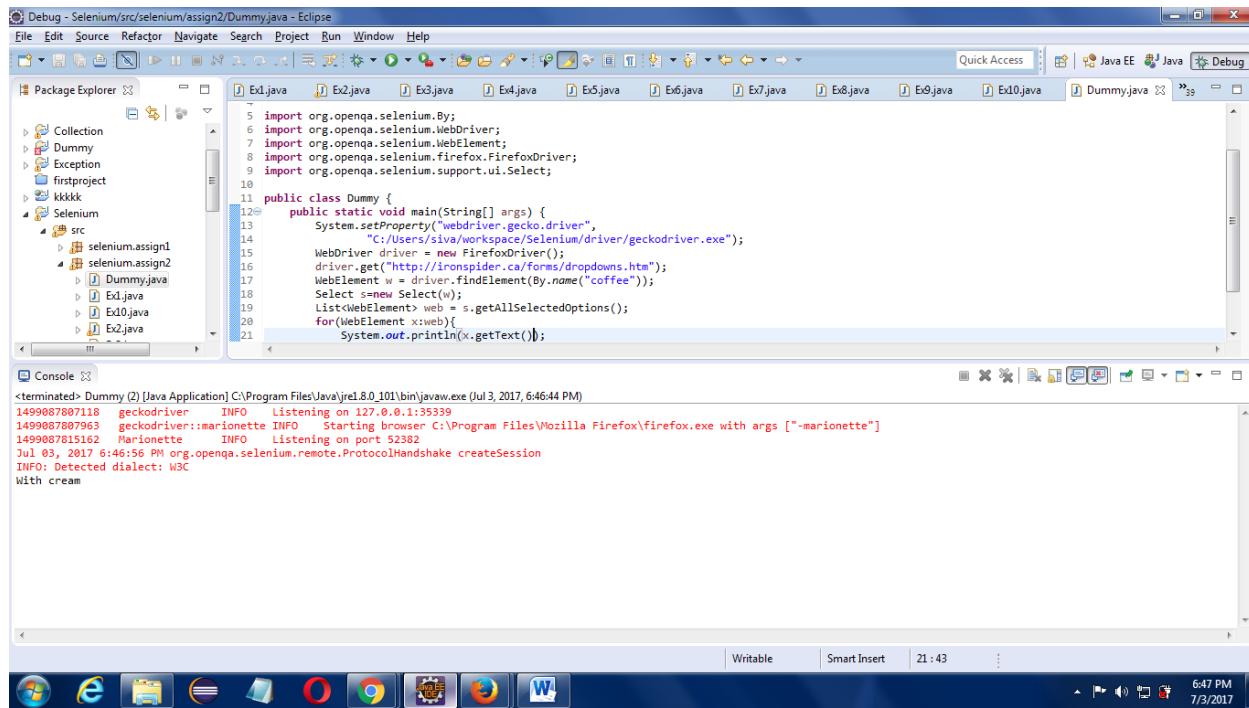
getAllSelectedOptions()

- It is a method, used to print all selected options

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee"));  
        Select s=new Select(w);  
        List<WebElement> web = s.getAllSelectedOptions();  
        for(WebElement x:web){  
            System.out.println(x.getText());  
        }  
    }  
}
```

Output:



```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.support.ui.Select;

public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://ironspider.ca/forms/dropdowns.htm");
        WebElement w = driver.findElement(By.name("coffee"));
        Select s=new Select(w);
        List<WebElement> web=s.getAllSelectedOptions();
        for(WebElement x:web){
            System.out.println(x.getText());
        }
    }
}
```

```
<terminated> Dummy (2) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 6:46:44 PM)
1499087807118 geckodriver INFO Listening on 127.0.0.1:35339
1499087807963 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499087815162 Marionette INFO Listening on port 52382
Jul 03, 2017 6:46:56 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
With cream
```

2. MULTIPLE VALUE

isMultiple():

- It is a method, used to check we can able to select multiple values or not

Example program:

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://ironspider.ca/forms/dropdowns.htm");
        WebElement w = driver.findElement(By.name("coffee2"));
        Select s=new Select(w);
        boolean b = s.isMultiple();
        System.out.println(b);
    }
}
```

Output:

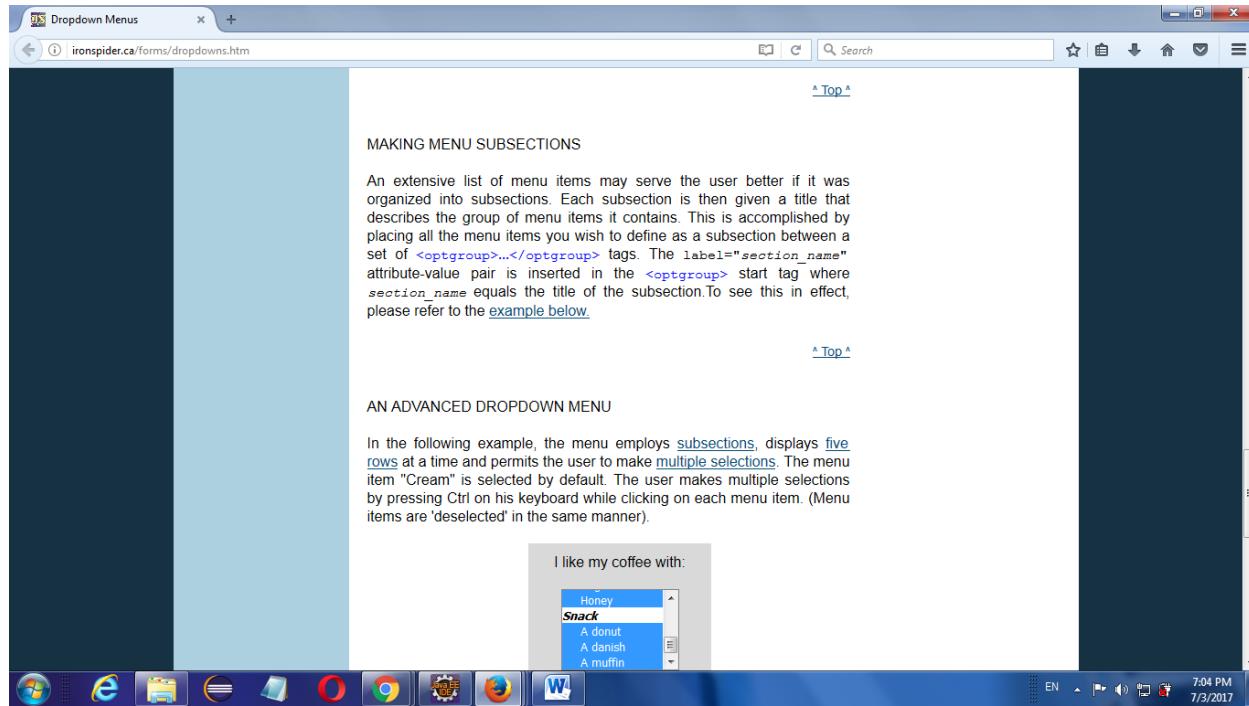
```
Debug - Selenium/src/selenium/assign2/Dummy.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer
src
  selenium.assign1
    selenium.assign1
      Dummy.java
      Ex1.java
      Ex2.java
      Ex3.java
      Ex4.java
      Ex5.java
      Ex6.java
      Ex7.java
      Ex8.java
      Ex9.java
      Dummy.java
firstproject
kkkk
Selenium
  selenium.assign2
    Dummy.java
    Ex1.java
    Ex2.java
    Ex3.java
    Ex4.java
    Ex5.java
    Ex6.java
    Ex7.java
    Ex8.java
    Ex9.java
    Dummy.java
Ex1.java
Ex2.java
Ex3.java
Ex4.java
Ex5.java
Ex6.java
Ex7.java
Ex8.java
Ex9.java
Dummy.java
Console
<terminated> Dummy (2) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 6:55:10 PM)
1499088318182 geckodriver INFO Listening on 127.0.0.1:23289
1499088319153 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499088329159 Marionette INFO Listening on port 52573
Jul 03, 2017 6:55:30 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
true
```

SelectByIndex:

Example program:

```
public class Dummy {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://ironspider.ca/forms/dropdowns.htm");
        WebElement w = driver.findElement(By.name("coffee2"));
        Select s=new Select(w);
        List<WebElement> web = s.getOptions();
        for(int i=0;i<web.size();i++){
            s.selectByIndex(i);
        }
    }
}
```

Output:

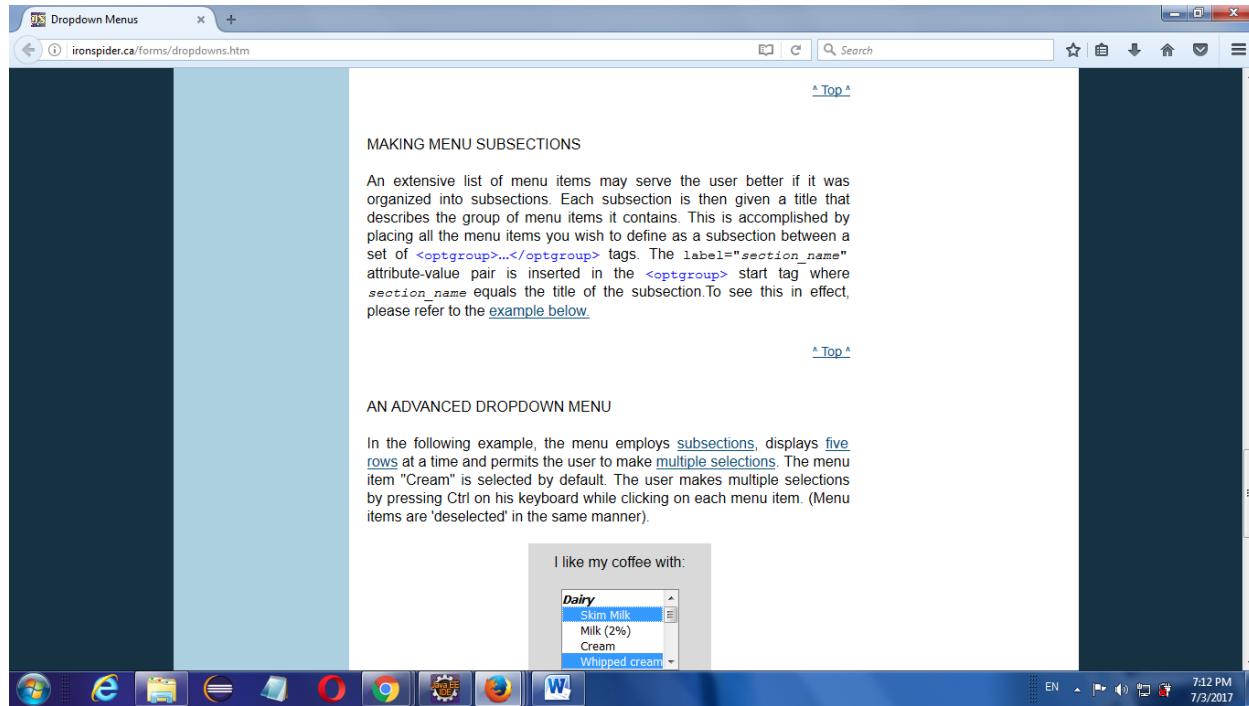


2.selectByValue

Example Program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee2"));  
        Select s=new Select(w);  
        List<WebElement> web = s.getOptions();  
        s.selectByValue("skim");  
        s.selectByValue("whipped");  
    }  
}
```

Output:



EXERCISE 2:

Program 1: Gmail registration

Program:

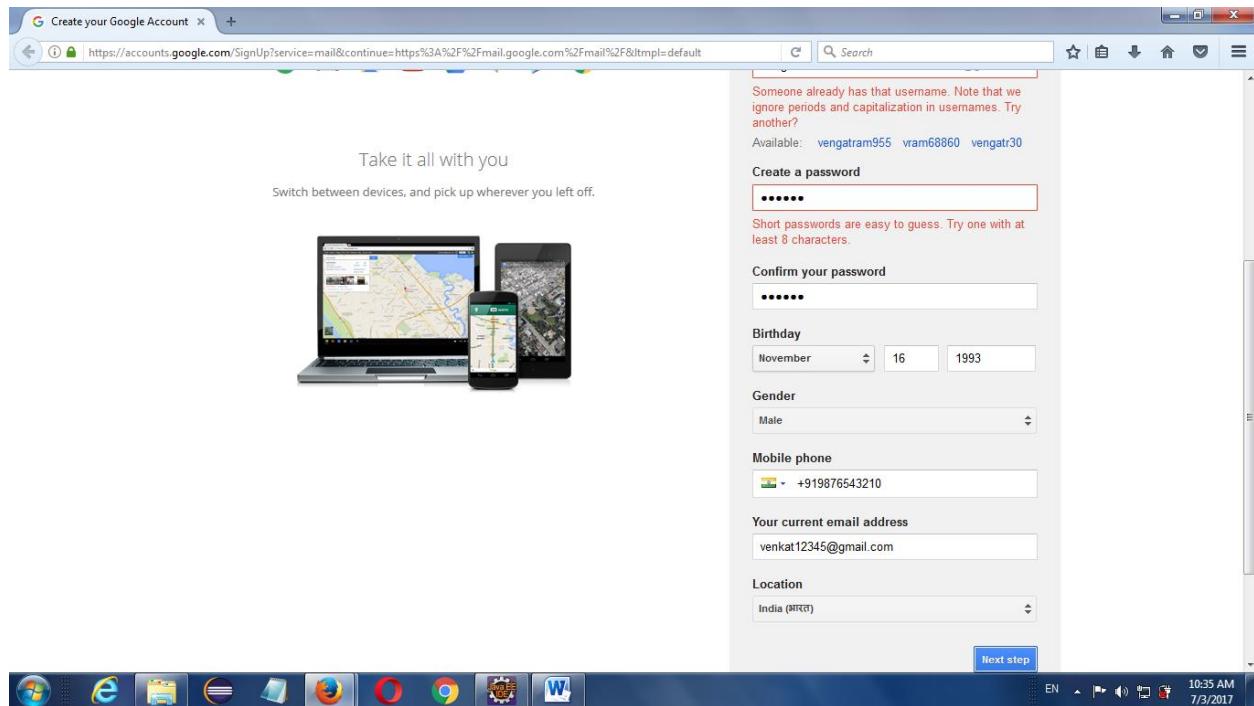
```
public class Ex2 {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/SignUp?service=mail&continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&ltmpl=default");  
        driver.findElement(By.xpath("//input[@id='FirstName']")).sendKeys(  
                           "Vengat");  
        driver.findElement(By.xpath("//input[@id='LastName']")).sendKeys("Ram");  
        driver.findElement(By.xpath("//input[@id='GmailAddress']")).sendKeys(  
                           "Vengat161193");  
        driver.findElement(By.xpath("//input[@id='Passwd']"))  
                           .sendKeys("123456");  
        driver.findElement(By.xpath("//input[@id='PasswdAgain']")).sendKeys(  
                           "123456");  
        driver.findElement(By.xpath("//*[@id='BirthMonth']/div[1]")).click();  
        driver.findElement(By.xpath("//div[contains(text(),'November')]"))  
                           .click();  
        driver.findElement(By.xpath("//input[@id='BirthDay']")).sendKeys("16");  
        driver.findElement(By.xpath("//input[@id='BirthYear']")).sendKeys(  
                           "1990");  
    }  
}
```

```

        "1993");
driver.findElement(By.xpath("//*[@id='Gender']/div[1]")).sendKeys(
        "Male");
driver.findElement(By.xpath("//input[@id='RecoveryPhoneNumber']"))
        .sendKeys("9876543210");
driver.findElement(By.xpath("//input[@id='RecoveryEmailAddress']"))
        .sendKeys("venkat12345@gmail.com");
driver.findElement(By.xpath("//*[@id='i1']")).click();
driver.findElement(By.xpath("//div[contains(text(),'India')]")).click();
driver.findElement(By.xpath("//*[@id='submitbutton']")).click();
}
}

```

Output:



Program 2: Facebook registration

Program:

```

public class Ex1 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.findElement(By.xpath("//input[@name='firstname']")).sendKeys(
                "Vengat");
        driver.findElement(By.xpath("//input[@name='lastname']")).sendKeys(
                "Ram");
        driver.findElement(By.xpath("//input[@name='reg_email__']")).sendKeys(
                "9876543210");
    }
}

```

```

        driver.findElement(By.xpath("//input[@name='reg_passwd__']")).sendKeys(
                "123456");
        WebElement w1 = driver.findElement(By.xpath("//*[@id='day']"));
        Select s1 = new Select(w1);
        s1.selectByValue("16");
        WebElement w2 = driver.findElement(By.xpath("//*[@id='month']"));
        Select s2 = new Select(w2);
        s2.selectByValue("11");
        WebElement w3 = driver.findElement(By.xpath("//*[@id='year']"));
        Select s3 = new Select(w3);
        s3.selectByValue("1993");

        driver.findElement(By.xpath("//label[contains(text(),'Male')]"))
                .click();
        driver.findElement(By.xpath("//button[@type='submit']")).click();

    }
}

```

Output:



Program 3:Yahoo registration

Program:

```

public class Ex5 {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/g
eckodriver.exe");
        WebDriver driver=new FirefoxDriver();

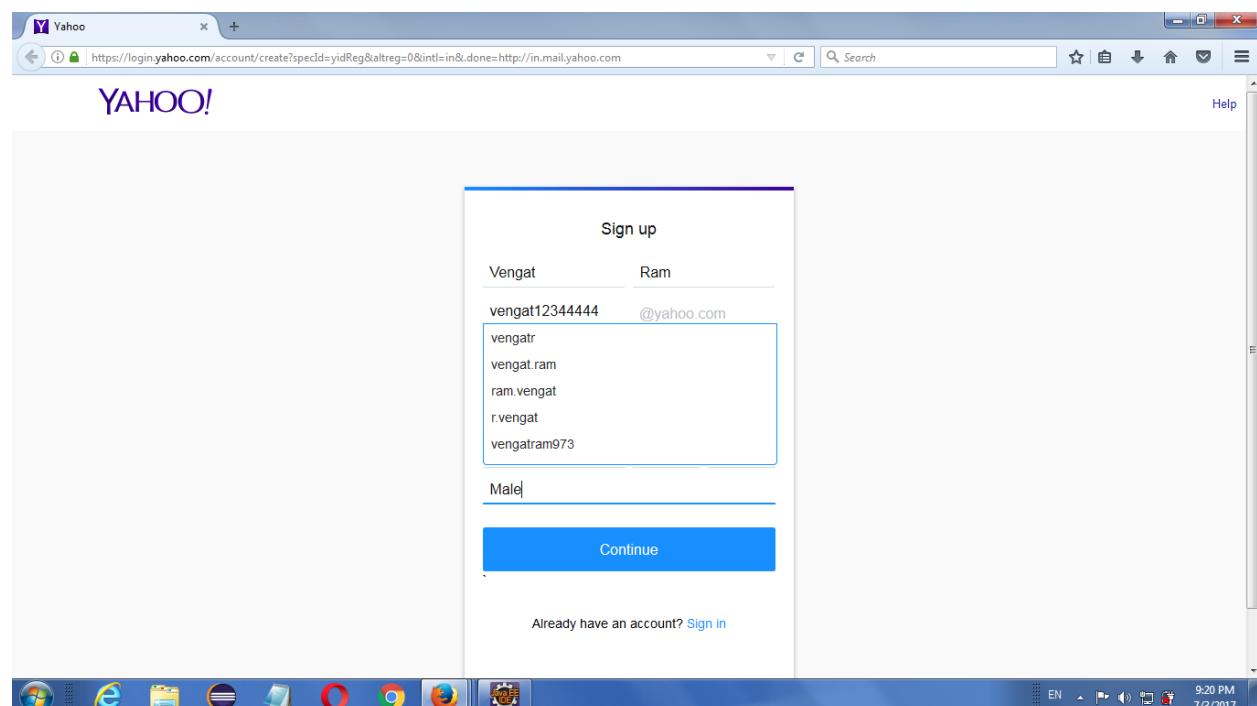
```

```

        driver.get("https://login.yahoo.com/account/create?specId=yidReg&altreg=0&intl=in&.done=http://in.mail.yahoo.com");
        driver.findElement(By.xpath("//input[@id='usernameereg-firstName']")).sendKeys("Vengat");
        driver.findElement(By.xpath("//input[@id='usernameereg-lastName']")).sendKeys("Ram");
        driver.findElement(By.xpath("//input[@id='usernameereg-yid']")).sendKeys("vengat12344444");
        driver.findElement(By.xpath("//input[@id='usernameereg-password']")).sendKeys("venkat12345");
        driver.findElement(By.xpath("//input[@id='usernameereg-phone']")).sendKeys("98765430001");
        WebElement w = driver.findElement(By.xpath("//select[@id='usernameereg-month']"));
        Select s=new Select(w);
        s.selectByValue("11");
        driver.findElement(By.xpath("//input[@id='usernameereg-day']")).sendKeys("16");
        driver.findElement(By.xpath("//input[@id='usernameereg-year']")).sendKeys("1993");
        driver.findElement(By.xpath("//input[@id='usernameereg-freeformGender']")).sendKeys("Male");
        Thread.sleep(3000);
        driver.findElement(By.xpath("//button[@id='reg-submit-button']")).click();
    }
}

```

Output:

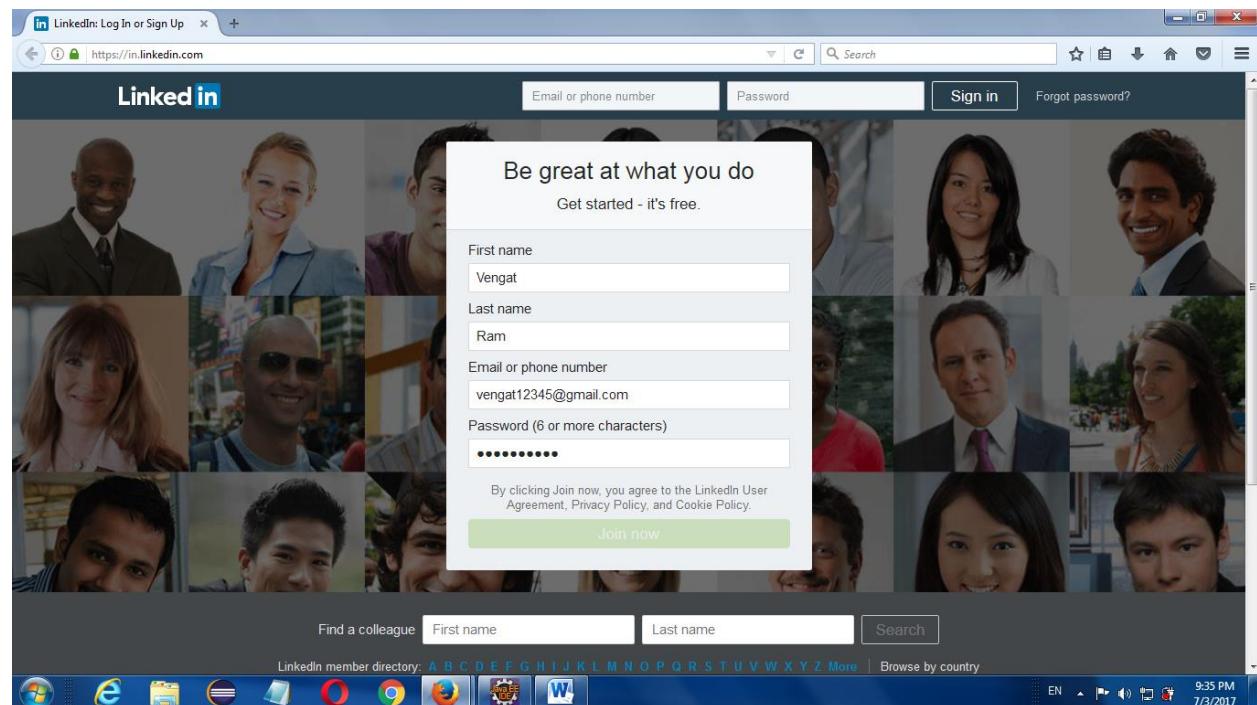


Program 4: Linkedin login

Program:

```
public class Ex6 {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://in.linkedin.com/");  
        driver.findElement(By.xpath("//input[@id='reg-firstname']")).sendKeys(  
                           "Vengat");  
        driver.findElement(By.xpath("//input[@id='reg-lastname']")).sendKeys(  
                           "Ram");  
        driver.findElement(By.xpath("//input[@id='reg-email']")).sendKeys(  
                           "vengat12345@gmail.com");  
        driver.findElement(By.xpath("//input[@id='reg-password']")).sendKeys(  
                           "9876543210");  
        driver.findElement(By.xpath("//input[@id='registration-submit']")).click();  
    }  
}
```

Output:



Program 5: Twitter registration

Program:

```
public class Ex4 {  
    public static void main(String[] args) throws InterruptedException {  
  
        System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/g  
eckodriver.exe");  
    }  
}
```

```

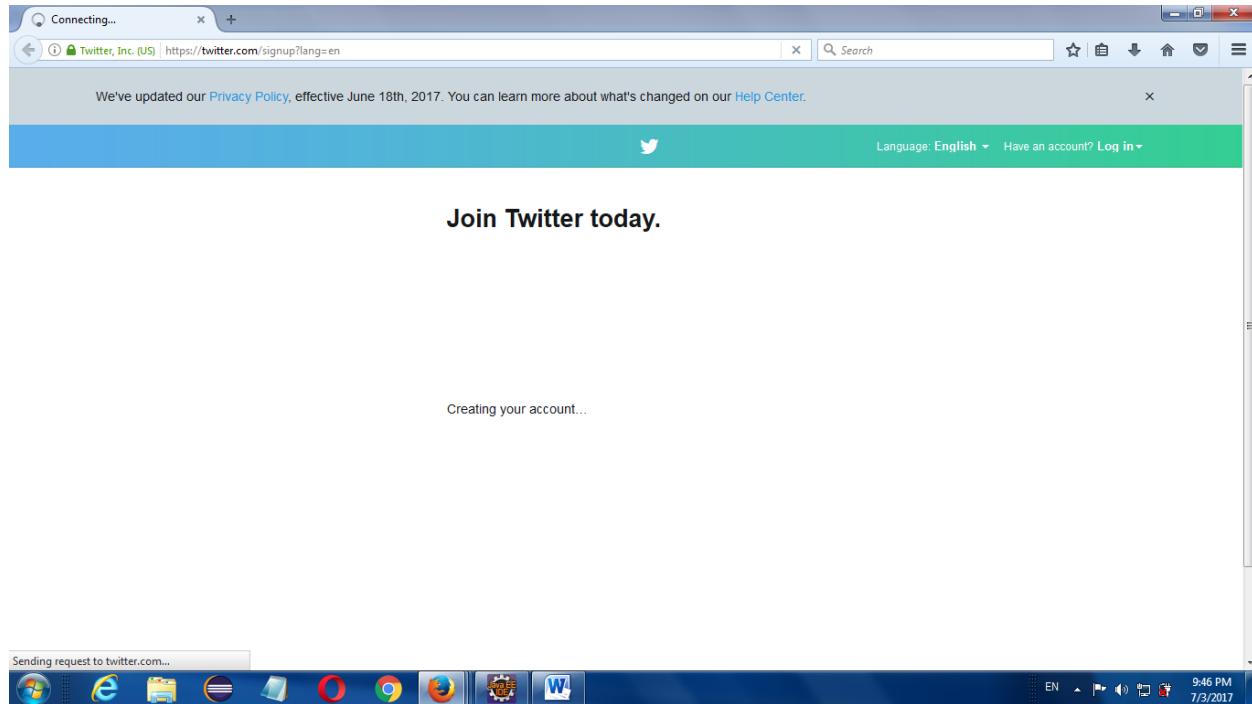
    WebDriver driver=new FirefoxDriver();
    driver.get("https://twitter.com/signup?lang=en");
    driver.findElement(By.xpath("//*[@id='full-name']")).sendKeys("vengat");

    driver.findElement(By.xpath("//*[@id='email']")).sendKeys("venkat1234500@gmail.com"
);
    Thread.sleep(3000);

    driver.findElement(By.xpath("//*[@id='password']")).sendKeys("11111111");
    driver.findElement(By.xpath("//*[@id='submit_button']")).click();
}
}

```

Output:



Program 6: Instagram registration

Program:

```

public class Ex7 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.instagram.com/?hl=en");
        driver.findElement(By.xpath("//input[@name='emailOrPhone']")).sendKeys(
            "Vengat");
        driver.findElement(By.xpath("//input[@name='fullName']")).sendKeys(
            "Ram");
        driver.findElement(By.xpath("//input[@name='username']")).sendKeys(
            "vengat12345@gmail.com");
    }
}

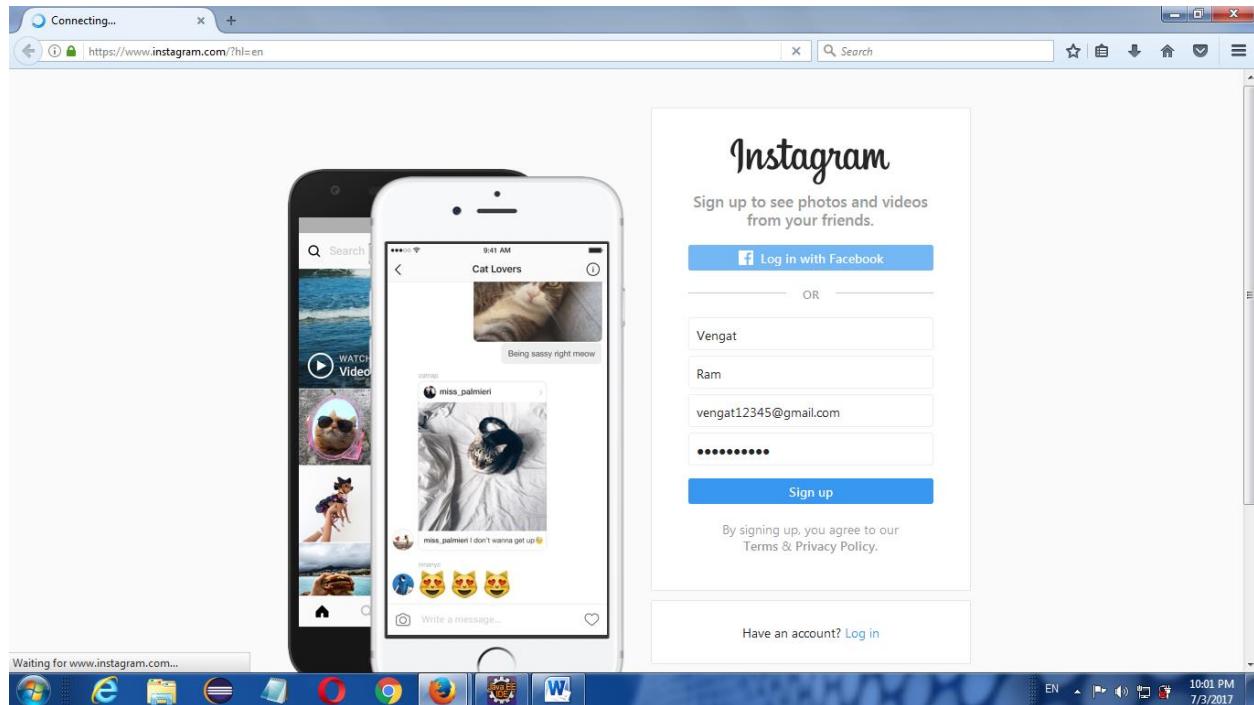
```

```

        driver.findElement(By.xpath("//input[@name='password']")).sendKeys(
                "9876543210");
        driver.findElement(By.xpath("//*[@id='react-
root']/section/main/article/div[2]/div[1]/div/form/div[6]/span/button")).click();
    }
}

```

Output:



Program 7: Skype registration

Program:

```

public class Ex8 {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();

        driver.get("https://signup.live.com/signup?lcid=1033&wa=wsignin1.0&rpsnv=13&ct=1499
100057&rver=6.7.6626.0&wp=MBI_SSL&wreply=https%3a%2f%2flw.skype.com%2flogin%2fo
auth%2fproxy%3fform%3dmicrosoft_registration%26site_name%3dlw.skype.com%26fl%3dphon
e2&lc=1033&id=293290&mkt=en-IN&uaid=41725f7d178ae3acfc20174e1190cd1b&psi=skype&lw=1&cobrandid=90010&client_fli
ht=hsu%2cReservedFlight33%2cReservedFlight67&fl=phone2&lic=1");
        driver.findElement(By.xpath("//input[@id='MemberName']")).sendKeys(
                "9876543221");
        driver.findElement(By.xpath("//input[@id='Password']")).sendKeys(
                "Venkat122333");
        driver.findElement(By.xpath("//input[@id='iSignupAction']")).click();
        Thread.sleep(3000);
        driver.findElement(By.xpath("//input[@id='FirstName']")).sendKeys(

```

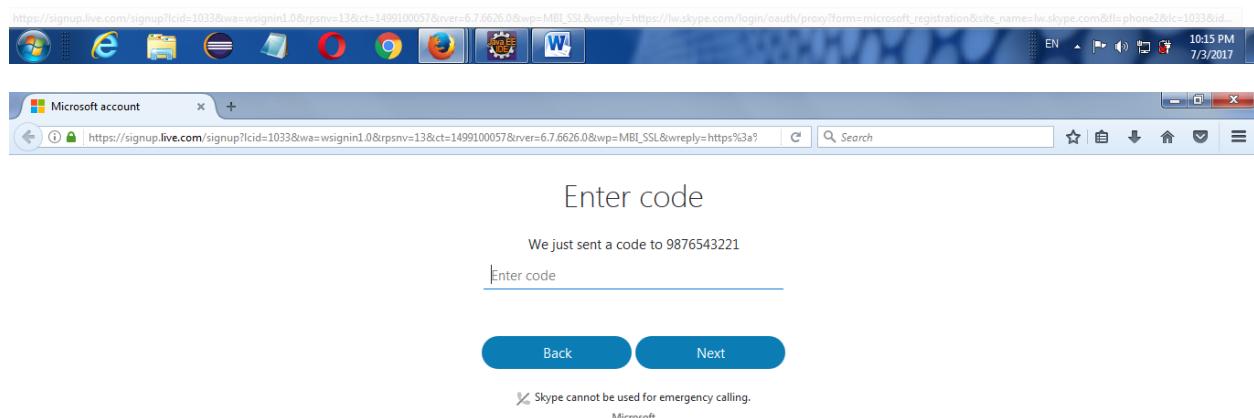
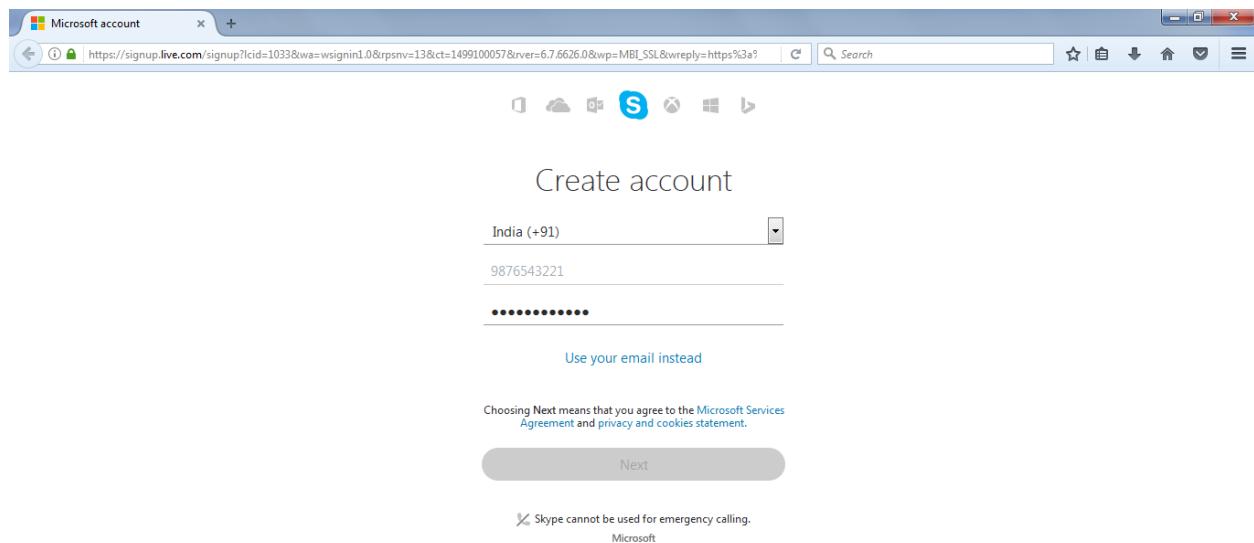
```

        "Venkat");
        driver.findElement(By.xpath("//input[@id='LastName']")).sendKeys(
                "Ram");
        driver.findElement(By.xpath("//input[@id='iSignupAction']")).click();
    }

}

```

Output:

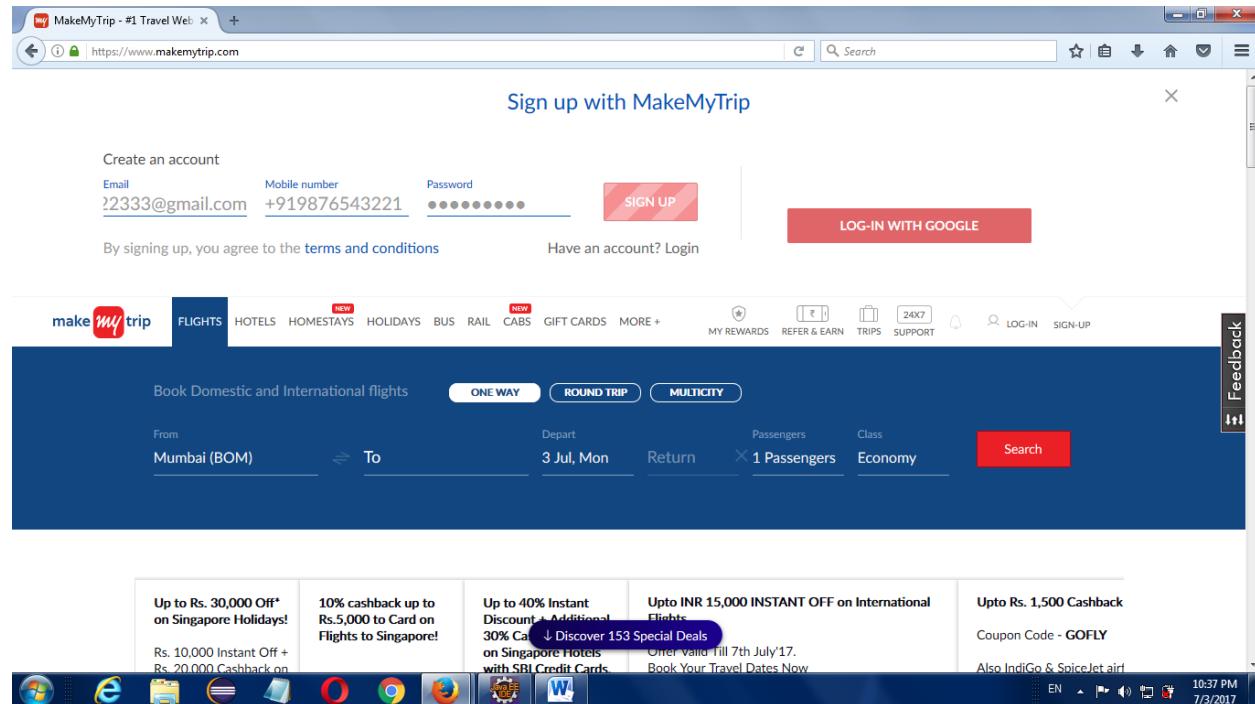


Program 8: Make my trip registration

Program:

```
public class Ex9 {  
  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.makemytrip.com/");  
        driver.findElement(By.xpath("//a[@id='ch_signup_icon']")).click();  
        driver.findElement(By.xpath("//input[@id='ch_signup_email']")).sendKeys(  
                           "Venkat122333@gmail.com");  
  
        driver.findElement(By.xpath("//input[@id='ch_signup_phone']")).sendKeys("9876543221"  
);  
  
        driver.findElement(By.xpath("//input[@id='ch_signup_password']")).sendKeys(  
                           "Venkat123");  
        driver.findElement(By.xpath("//button[@id='ch_signup_btn']")).click();  
        //driver.findElement(By.xpath("//input[@id='iSignupAction']")).click();  
    }  
}
```

Output:



Program 9: Spicinemas registration

Program:

```
public class Ex10 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.spicinemas.in/user/register");  
  
        driver.findElement(By.xpath("//input[@id='email']")).sendKeys("venkat122333@gmail.co  
m");  
        driver.findElement(By.xpath("//input[@id='password']")).sendKeys(  
                           "Venkat54321");  
  
        driver.findElement(By.xpath("//input[@id='passwordVerify']")).sendKeys("Venkat54321")  
;  
  
        driver.findElement(By.xpath("//input[@id='name']")).sendKeys(  
                           "Venkat");  
        driver.findElement(By.xpath("//input[@id='lastName']")).sendKeys(  
                           "Ram");  
        driver.findElement(By.xpath("//input[@id='dob']")).sendKeys("16-11-1993");  
        driver.findElement(By.xpath("//input[@id='genderMale']")).click();  
        driver.findElement(By.xpath("//input[@id='address']")).sendKeys(  
                           "No.38, west saidapet");  
        driver.findElement(By.xpath("//input[@id='pincode']")).sendKeys(  
                           "600015");  
        driver.findElement(By.xpath("//input[@id='city']")).sendKeys("chennai");  
  
        driver.findElement(By.xpath("//input[@id='terms-and-condition']")).click();  
        driver.findElement(By.xpath("//button[@id='subscriptionStatus']")).click();  
        driver.findElement(By.xpath("//input[@id='register']")).click();  
    }  
}
```

Deselect:

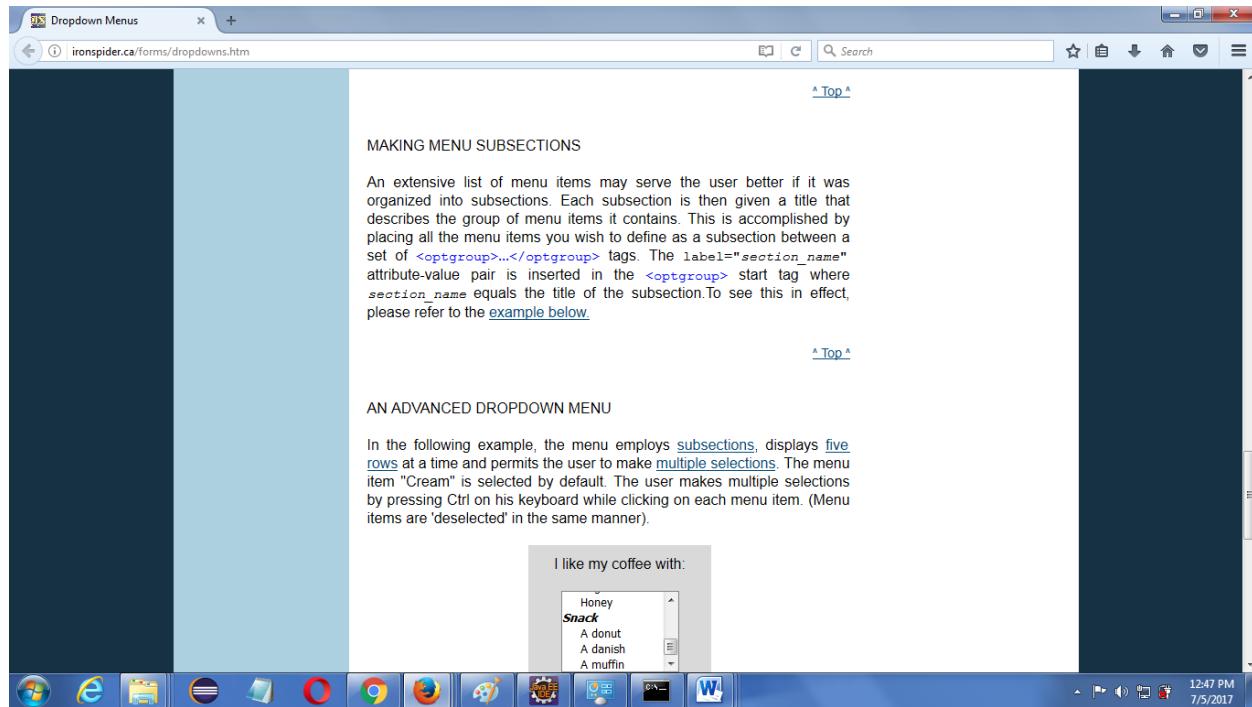
1. deselect by value
2. deselect by index
3. deselect by visible text
4. deselect all

1. deselect by value:

Example program:

```
public class Dummy {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee2"));  
        Select s=new Select(w);  
        List<WebElement> web = s.getOptions();  
        for(int i=0;i<web.size();i++){  
            s.selectByIndex(i);  
            Thread.sleep(3000);  
            s.deselectByIndex(i);  
        }  
    }  
}
```

Output :

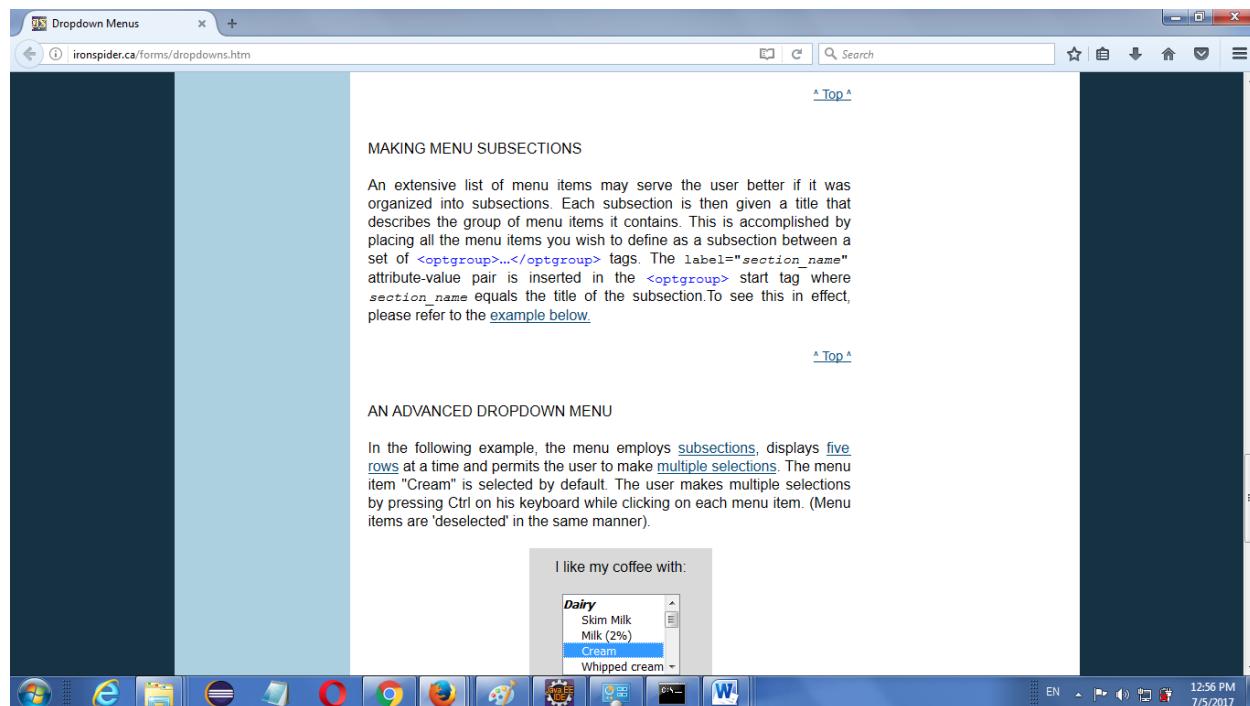


2. Deselect By Value :

Example Program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee2"));  
        Select s=new Select(w);  
        List<WebElement> web = s.getOptions();  
        s.selectByValue("skim");  
        s.selectByValue("whipped");  
        try {  
            Thread.sleep(3000);  
        } catch (InterruptedException e) {  
            // TODO Auto-generated catch block  
            e.printStackTrace();  
        }  
        s.deselectByValue("skim");  
        s.deselectByValue("whipped");  
    }  
}
```

Output:

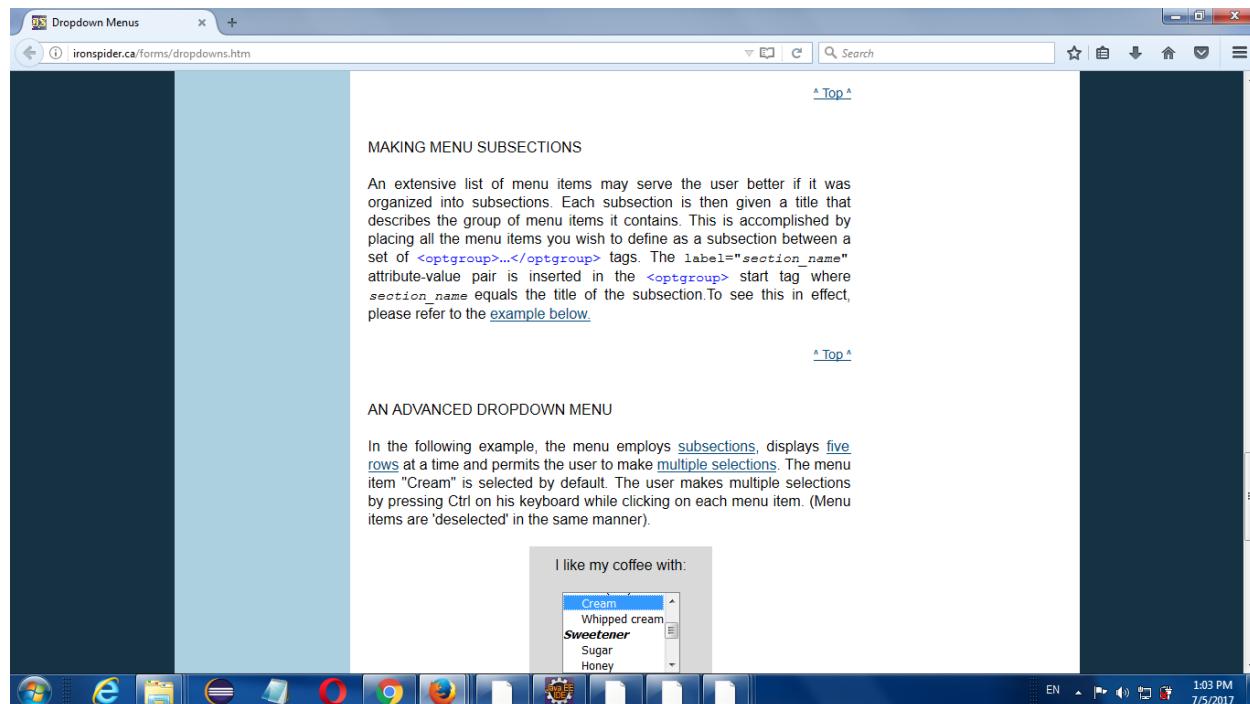


3. Deselect By VisibleText:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://ironspider.ca/forms/dropdowns.htm");  
        WebElement w = driver.findElement(By.name("coffee2"));  
        Select s=new Select(w);  
        List<WebElement> web = s.getOptions();  
        s.selectByVisibleText("Sugar");  
        s.selectByVisibleText("Honey");  
        try {  
            Thread.sleep(3000);  
        } catch (InterruptedException e) {  
            // TODO Auto-generated catch block  
            e.printStackTrace();  
        }  
        s.deselectByVisibleText("Sugar");  
        s.deselectByVisibleText("Honey");  
    }  
}
```

Output :



WEB TABLE:

tr → Table row

th → Table heading

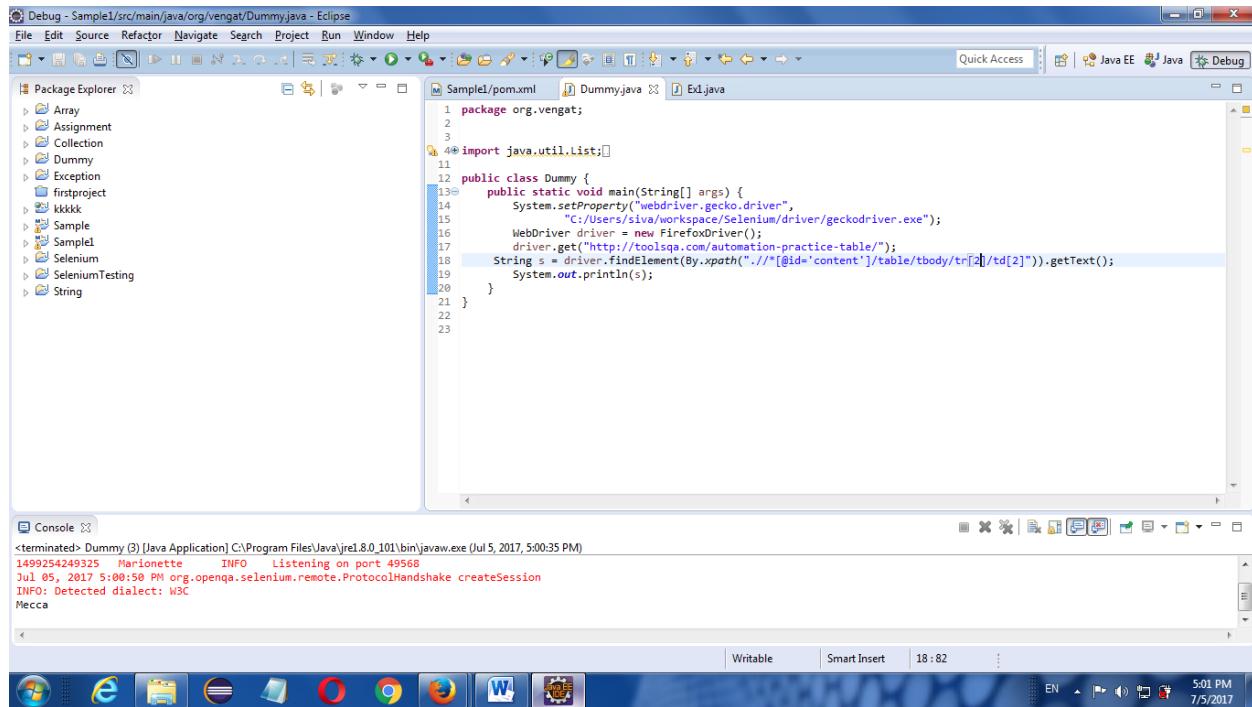
td → Table data

To print particular values(data) in the table:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/automation-practice-table/");  
  
        String s =  
driver.findElement(By.xpath("//*[@id='content']/table/tbody/tr[2]/td[2]")).getText();  
        System.out.println(s);  
    }  
}
```

Output:



The screenshot shows the Eclipse IDE interface with the following details:

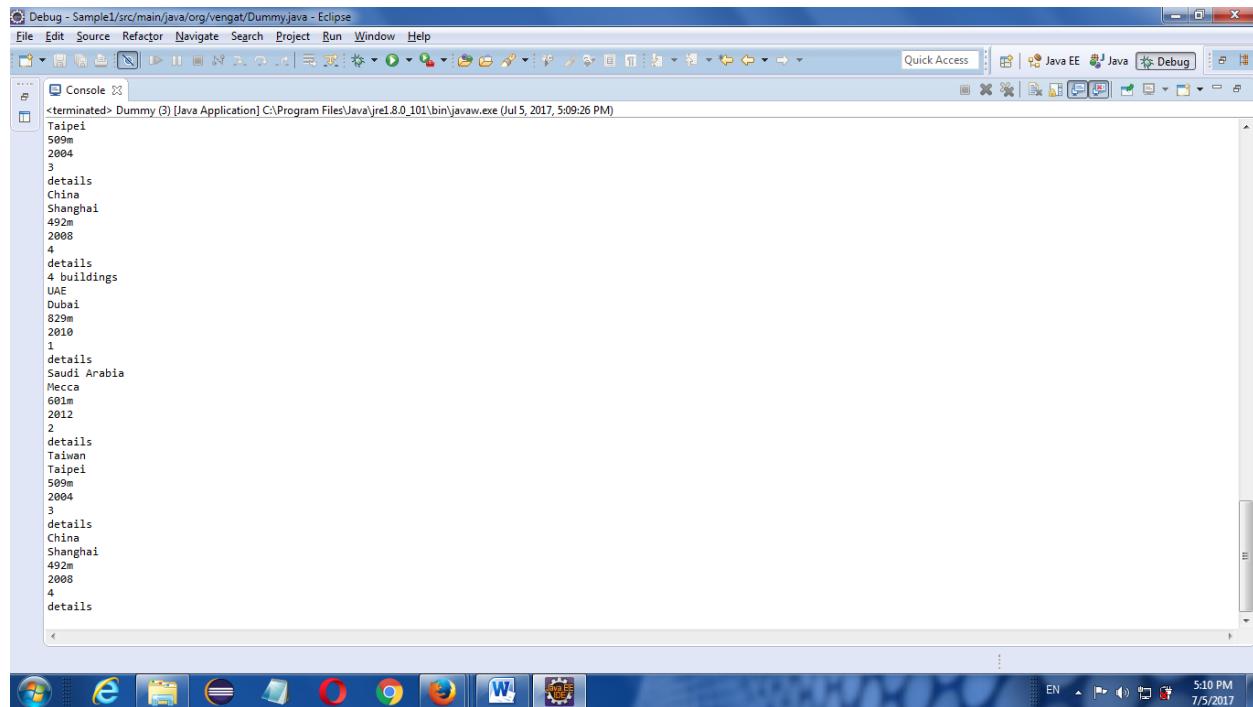
- Project Explorer:** Shows a project named "Sample1" containing classes like Array, Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Sample, Sample1, Selenium, SeleniumTesting, and String.
- Editor:** Displays the Java code for the "Dummy" class. The code imports java.util.List, sets up a gecko driver, creates a Firefox driver, navigates to a table URL, finds the second row and second column, and prints its text content.
- Console:** Shows the command-line output of the Java application. It includes log messages from the Selenium framework, such as "INFO Listening on port 49568", "Jul 05, 2017 5:00:50 PM org.openqa.selenium.remote.ProtocolHandshake createSession", "INFO: Detected dialect: W3C", and "Mecca".
- Bottom Bar:** Shows the Windows taskbar with various application icons and the system clock indicating 5:01 PM on 7/5/2017.

To print all data's in the table:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/automation-practice-table/");  
        List<WebElement> tRows = driver.findElements(By.tagName("tr"));  
        for(WebElement rows:tRows){  
            List<WebElement> tData = driver.findElements(By.tagName("td"));  
            for(WebElement data:tData){  
                System.out.println(data.getText());  
            }  
        }  
    }  
}
```

Output:



```
Debug - Sample1/src/main/java/org/vengat/Dummy.java - Eclipse  
File Edit Source Refactor Navigate Search Project Run Window Help  
Console  
<terminated> Dummy (3) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 5, 2017, 5:09:26 PM)  
Taipei  
509m  
2004  
3  
details  
China  
Shanghai  
492m  
2008  
4  
details  
4 buildings  
UAE  
Dubai  
829m  
2010  
1  
details  
Saudi Arabia  
Mecca  
601m  
2012  
2  
details  
Taiwan  
Taipei  
509m  
2004  
3  
details  
China  
Shanghai  
492m  
2008  
4  
details
```

Using normal for loop:

Example program:

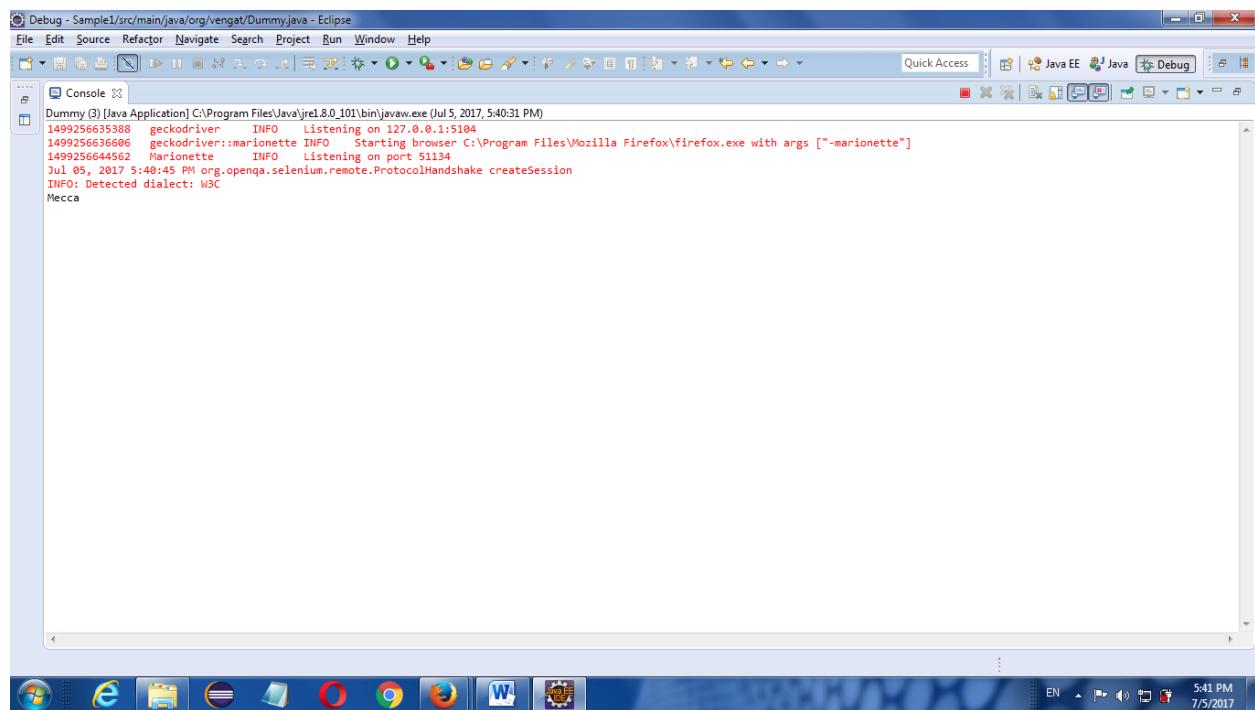
```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/automation-practice-table/");  
        List<WebElement> tRows = driver.findElements(By.tagName("tr"));  
        for(int i=0;i<tRows.size();i++){  
            List<WebElement> tData = driver.findElements(By.tagName("td"));  
            for(int j=0;j<tData.size();j++){  
                System.out.println(tData.get(j).getText());  
            }  
        }  
    }  
}
```

1. To print particular data only:

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/automation-practice-table/");  
        List<WebElement> tRows = driver.findElements(By.tagName("tr"));  
        for(int i=0;i<tRows.size();i++){  
            List<WebElement> tData = driver.findElements(By.tagName("td"));  
            for(int j=0;j<tData.size();j++){  
                if(tData.get(j).getText().equals("Mecca")){  
                    System.out.println(tData.get(j).getText());  
                }  
            }  
        }  
    }  
}
```

Output:



2. To print relevant data(Dynamic table)

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/automation-practice-table/");  
        List<WebElement> tRows = driver.findElements(By.tagName("tr"));  
        for(int i=0;i<tRows.size();i++){  
            List<WebElement> tData = driver.findElements(By.tagName("td"));  
            for(int j=0;j<tData.size();j++){  
                if(tData.get(j).getText().equals("Dubai")){  
                    driver.findElement(By.xpath("//*[@id='content']/table/tbody/tr["+i+"]/td[6]/a"));  
                    System.out.println(tData.get(j).getText());  
                }  
            }  
        }  
    }  
}
```

JAVASCRIPT:

Syntax:

```
JavascriptExecutor js=(JavascriptExecutor) driver;  
js.executeScript("document.getElementById('email').setAttribute('value','Hello')");
```

Another method

```
JavascriptExecutor js=(JavascriptExecutor) driver;  
js.executeScript("arguments[0].setAttribute('value','Hello')",webelement);
```

Example program:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        //java script declaration  
        JavascriptExecutor js=(JavascriptExecutor) driver;  
        js.executeScript("document.getElementById('email').setAttribute('value','Hello')");  
        // to print the value  
        Object s = js.executeScript("return document.getElementById('email').  
getAttribute('value')");  
        System.out.println(s);  
        // to click login  
        js.executeScript("return document.getElementById('u_0_r').click()");  
    }  
}
```

Here,

```
JavascriptExecutor js=(JavascriptExecutor) driver;
```

This is a javascript declaration.

JavascriptExecutor → interface

Driver → class

(i.e) one class(driver) converted into another class/ interface(JavascriptExecutor)

Output:

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Displays the project structure with packages like Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Sample, Sample1, and Selenium. Under Selenium, there is a src folder containing files: selenium.assign1, selenium.assign2, Dummy.java, Ex1.java, Ex10.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, and Ex9.java.
- Code Editor:** The active file is Dummy.java, which contains Java code for Selenium automation. The code sets the gecko driver path, opens a Firefox browser, navigates to Facebook, and performs some JavaScript operations on the page.
- Console:** Shows the terminal output of the Java application. It includes log messages from Marionette and org.openqa.selenium.remote.ProtocolHandshake, and a "Hello" message.
- Bottom Status Bar:** Shows the system tray icons and the date/time (2:03 PM, 7/10/2017).

The screenshot shows a web browser window displaying the Facebook login page at https://www.facebook.com/login.php?login_attempt=1&lwv=110. The page includes fields for email address or phone number and password, a "Log In" button, and links for "Recover Your Account" and "Sign up for Facebook". A red error message box indicates that the entered email or phone number does not match any account. The browser status bar shows the URL, the date (7/10/2017), and the time (2:03 PM).

Another method:

```
public class Dummy {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.facebook.com/");  
        //java script declaration  
        JavascriptExecutor js=(JavascriptExecutor) driver;
```

```

WebElement w=driver.findElement(By.Id('email'));
js.executeScript("arguments[0].setAttribute('value','Hello')",w);
WebElement w1=driver.findElement(By.Id('u_0_r'));
js.executeScript("arguments[0].click()",w1);
}}
```

SCREENSHOT:

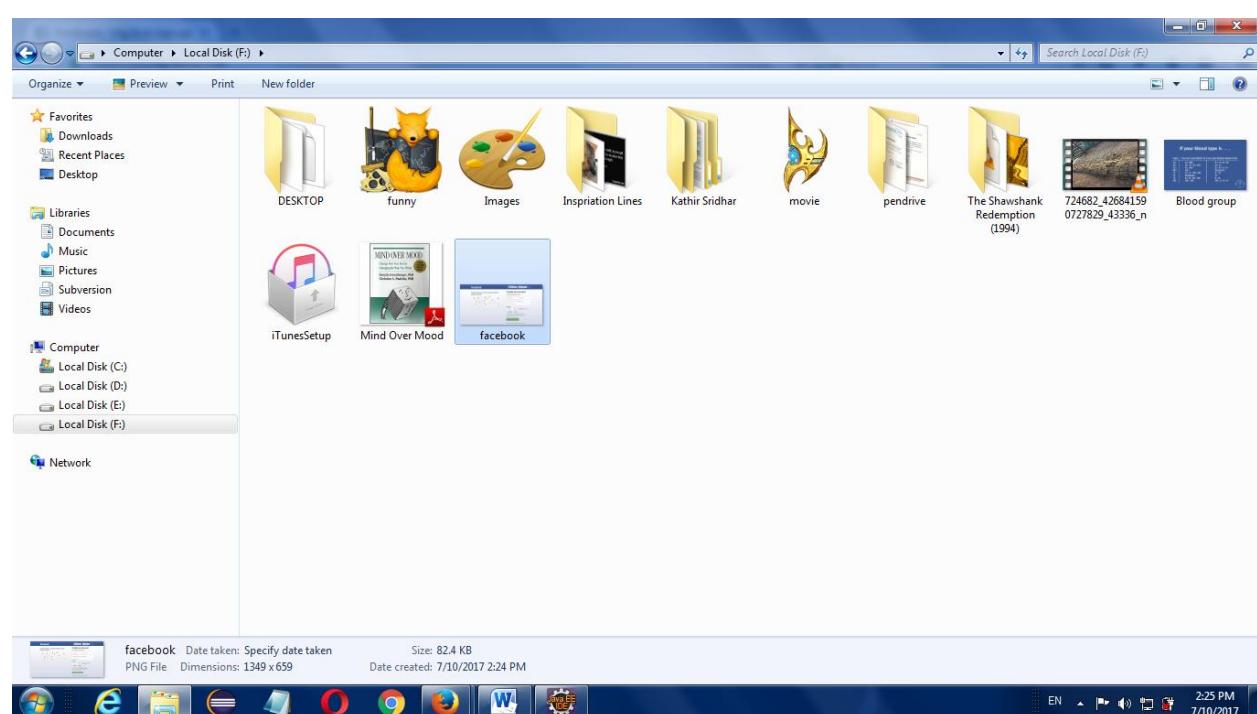
Takescreenshot → interface

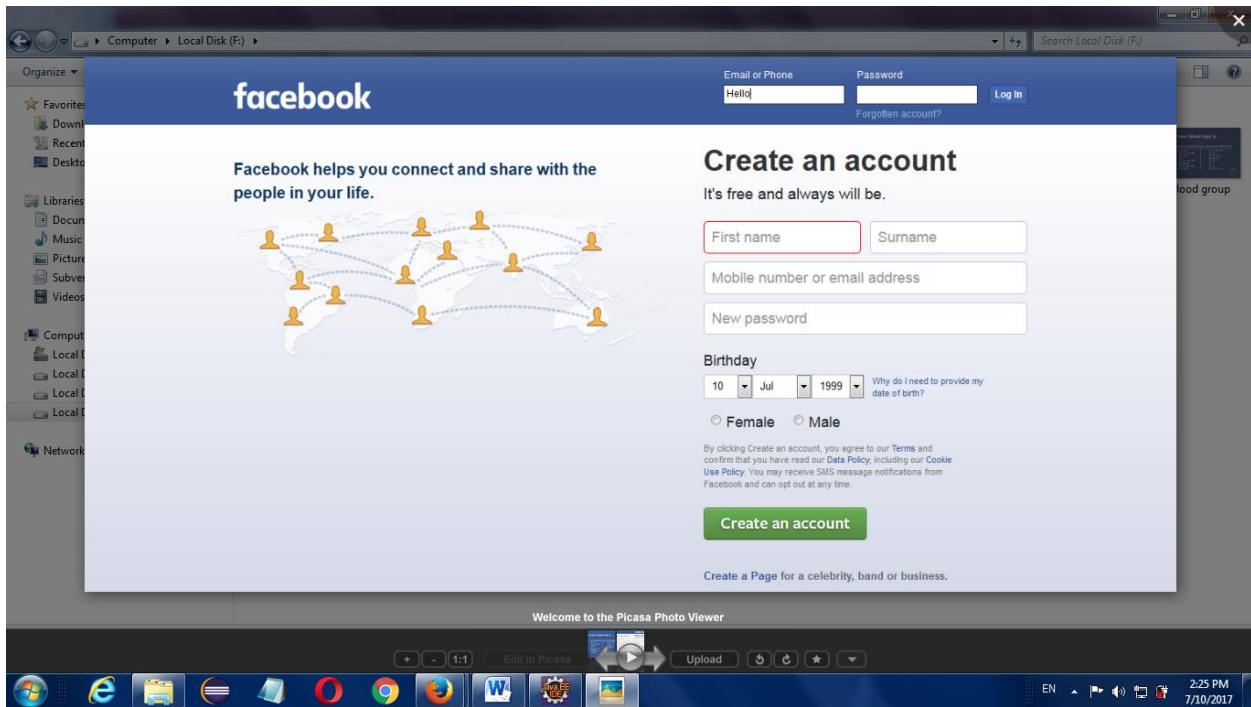
Example program:

```

public class Dummy {
    public static void main(String[] args) throws IOException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.findElement(By.id("email")).sendKeys("Hello");
        //Screenshot declaration
        TakesScreenshot tk=(TakesScreenshot) driver;
        File f = tk.getScreenshotAs(OutputType.FILE);
        File f1=new File("F:/facebook.png");
        FileUtils.copyFile(f,f1 );
    }
}
```

Output:





MOUSE OVER ACTION:

Example program:

```

public class Dummy {
    public static void main(String[] args) throws IOException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://store.demoqa.com/");
        WebElement web = driver.findElement(By.xpath("//*[text()='Product
Category']"));
        //mouse action declaration
        Actions a=new Actions(driver);
        a.moveToElement(web).perform();
        driver.findElement(By.xpath("//*[text()='iPhones']")).click();
    }
}

```

Here,

Actions → class

Action → interface

webElement → class

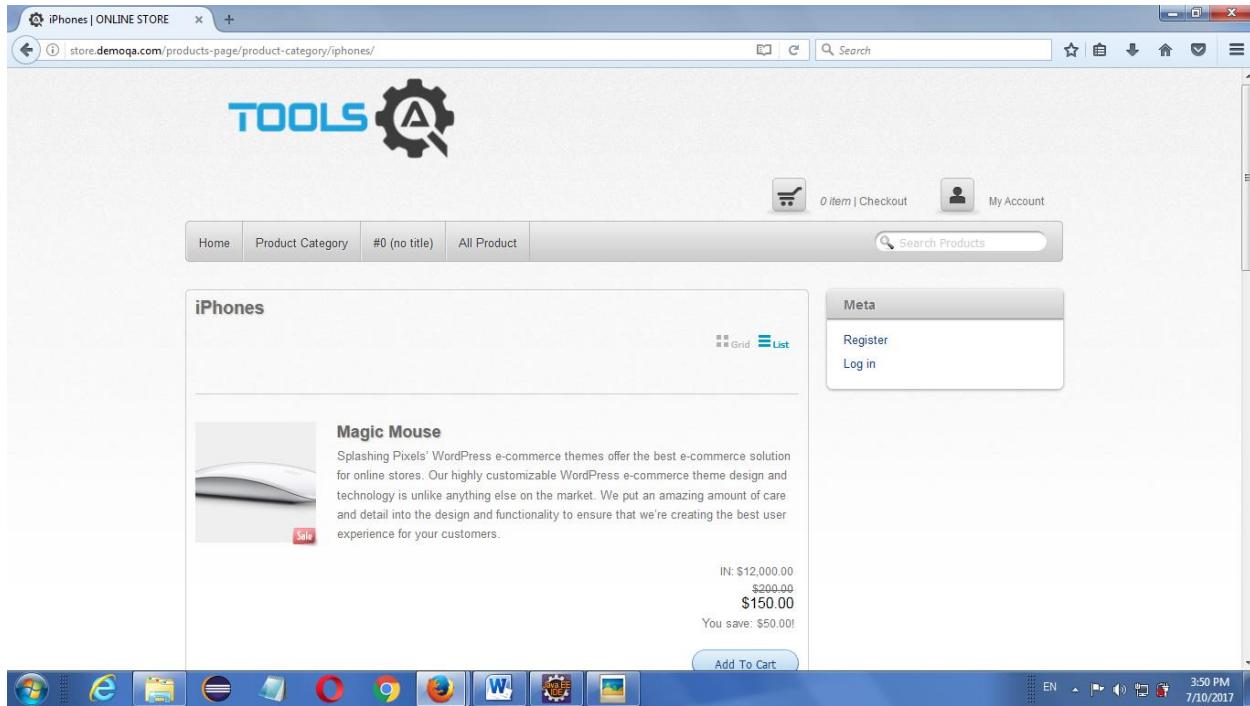
- We can use linktext/partiallinktext instead of xpath,

```

WebElement web = driver.findElement(By.linkText("Product Category"));
WebElement web = driver.findElement(By.partialLinkText("Category"));

```

Output:



EXERCISE:

1.Go to flipkart.com, click mobile case using mouse over action,&check the particular title is correct and take screenshot :

```
public class Ex2 {  
    public static void main(String[] args) throws IOException, InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.flipkart.com/");  
        WebElement web = driver.findElement(By.xpath("//*[text()='Electronics']"));  
        Actions a=new Actions(driver);  
        a.moveToElement(web).perform();  
        Thread.sleep(2000);  
        driver.findElement(By.xpath("//*[text()='Mobile Cases']")).click();  
        String s = driver.getCurrentUrl();  
        if(s.equals("https://www.flipkart.com/mobile-accessories/cases-and-  
covers/pr?sid=tty,4mr,q2u&otracker=nmenu_sub_Electronics_0_Mobile%20Cases")){  
            System.out.println("u r in mobile case page");  
        }else  
        {  
            System.out.println("u r not in mobile case");  
        }  
        Thread.sleep(3000);  
        TakesScreenshot tk=(TakesScreenshot) driver;  
        File f = tk.getScreenshotAs(OutputType.FILE);  
        File f1=new File("F:/flipkart mobile case.png");
```

```

        FileUtils.copyFile(f,f1 );
    }

}

```

Output:

The screenshot shows a Microsoft Internet Explorer browser window displaying the Flipkart mobile cases & covers page. The page lists several phone cases, including the Flipkart SmartBuy Back Cover for Motorola Moto G5 Plus, Flipkart SmartBuy Back Cover for Mi Redmi Note 4, Noise Back Cover for Mi Redmi Note 4, and Flipkart SmartBuy Back Cover for Mi Redmi Note 4. The user has applied filters for 'Cases & Covers' and a price range of '₹500+'. The Eclipse IDE interface is visible below the browser, showing Java code for a Selenium test.

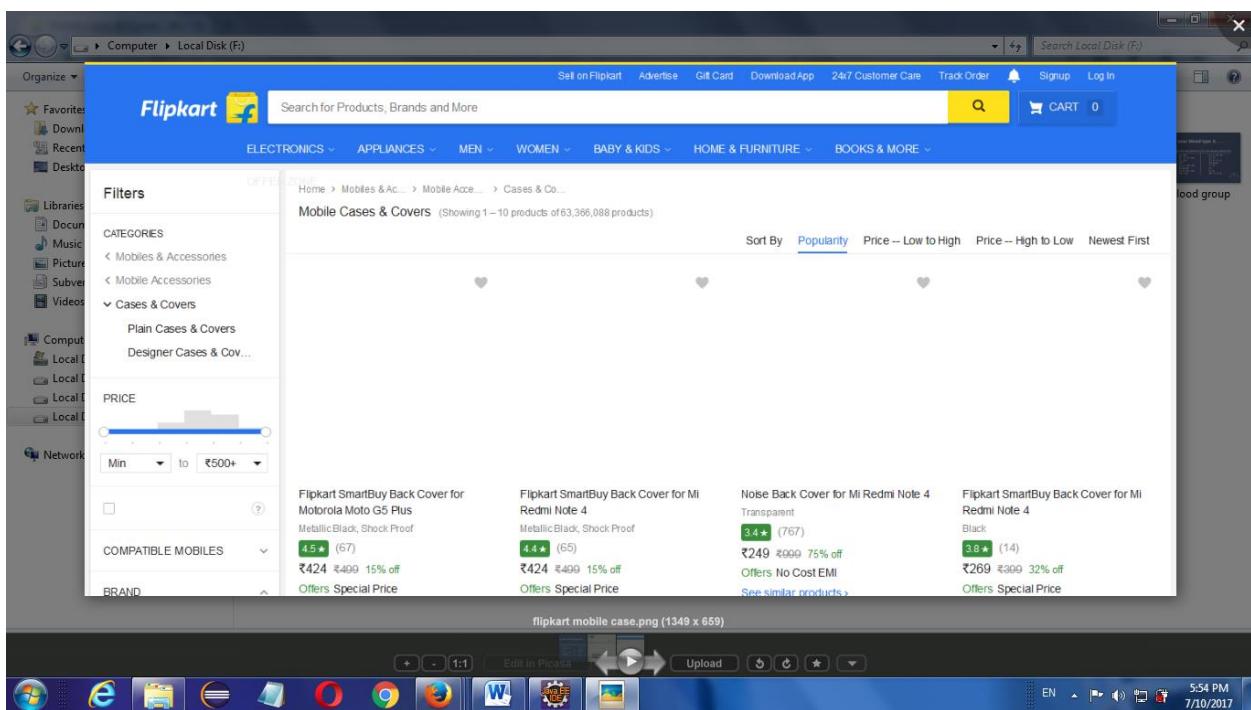
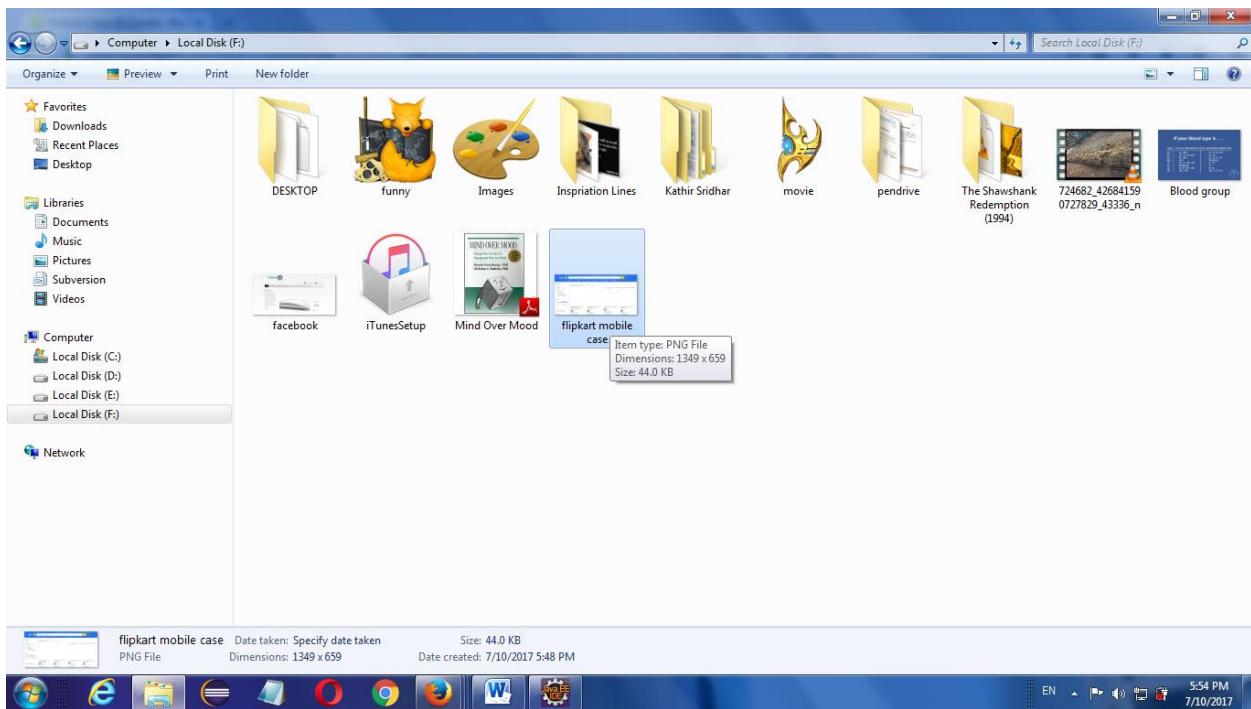
The screenshot shows the Eclipse IDE interface with the Java code for the Selenium test. The code in the Ex2.java file is as follows:

```

15 public class Ex2 {
16     public static void main(String[] args) throws IOException, InterruptedException {
17         System.setProperty("webdriver.gecko.driver",
18             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
19         WebDriver driver = new FirefoxDriver();
20         driver.get("https://www.flipkart.com/");
21         WebElement web = driver.findElement(By.xpath("//*[text()='Electronics']"));
22         Actions a=new Actions(driver);
23         a.moveToElement(web).perform();
24         Thread.sleep(2000);
25         driver.findElement(By.xpath("//*[text()='Mobile Cases']").click();
26         String s = driver.getCurrentUrl();
27         if(s.equals("https://www.flipkart.com/mobile-accessories/cases-and-covers/pr?sid=tyy,4mr,q2u&otracker=nmenu_sub_Electronics_0_Mobile Cases&lid=LSTACCEQRHAA8JBWXMTG1M8");ia
28             System.out.println("u r in mobile case page");
29         else
30             {
31                 System.out.println("u r not in mobile case");
32             }
33         Thread.sleep(3000);
34         TakesScreenshot tk=(TakesScreenshot) driver;
35         File f = tk.getScreenshotAs(OutputType.FILE);
36         File fi=new File("F:/flipkart mobile case.png");
37         FileUtils.copyFile(f,fi );
38     }
39 }
40
41 }
42

```

The console output at the bottom of the Eclipse interface shows the test running and capturing a screenshot of the mobile cases page.



2.Adactin.com registration:

```

public class Ex3 {
    public static void main(String[] args) throws IOException, InterruptedException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://www.adactin.com/HotelApp/index.php");
        driver.findElement(By.id("username")).sendKeys("vengat16");
        driver.findElement(By.id("password")).sendKeys("Karthick");
    }
}

```

```

        driver.findElement(By.id("login")).click();
        driver.findElement(By.id("location")).sendKeys("London");
        driver.findElement(By.id("hotels")).sendKeys("Hotel Sunshine");
        driver.findElement(By.id("room_type")).sendKeys("Super Deluxe");
        driver.findElement(By.id("room_nos")).sendKeys("3 - Three");
        driver.findElement(By.id("datepick_in")).sendKeys("11/07/2017");
        driver.findElement(By.id("datepick_out")).sendKeys("12/07/2017");
        driver.findElement(By.id("adult_room")).sendKeys("2 - Two");
        driver.findElement(By.id("child_room")).sendKeys("2 - Two");
        driver.findElement(By.id("Submit")).click();
        driver.findElement(By.id("radiobutton_0")).click();
        driver.findElement(By.id("continue")).click();
        driver.findElement(By.id("first_name")).sendKeys("Vengat");
        driver.findElement(By.id("last_name")).sendKeys("Ram");
        driver.findElement(By.id("address")).sendKeys("no.20, dubai kurukku santhu,dubai");
        driver.findElement(By.id("cc_num")).sendKeys("1234567890123456");
        driver.findElement(By.id("cc_type")).sendKeys("VISA");
        driver.findElement(By.id("cc_exp_month")).sendKeys("March");
        driver.findElement(By.id("cc_exp_year")).sendKeys("2020");
        driver.findElement(By.id("cc_cvv")).sendKeys("123");
        driver.findElement(By.id("book_now")).click();

    }
}

```

Output:

Welcome to AdactIn Group of Hotels Hello vengat16! | Search Hotel | Booked Itinerary | Change Password | Logout

Booking Confirmation

Hotel Name	Hotel Creek
Location	London
Room Type	Standard
Arrival Date	10/07/2017
Departure Date	11/07/2017
Total Rooms	3 Room(s)
Adults Per Room	2 Adult(s)
Children per Room	2 Children
Price per Night	AUD \$ 425
Total Price	AUD \$ 435
GST	AUD \$ 43.5
Final Billed Price	AUD \$ 478.5
First Name	Vengat
Last Name	

Sample TestCases
DOWNLOAD a complete set of readymade sample TEST CASES for this application. Enjoy automation!

HotelApp Web Services
Access Hotel App SOAP and Rest Services to learn web services testing. Click to know more.

Known Defects
DOWNLOAD list of known defects for this application.

Book on Selenium Webdriver

Test Automation using Selenium WebDriver with Java

Selenium WebDriver Java
Learn on real world Application
Real life experiences
One day step by step

Narenesh Gang

Test Automation using Selenium Webdriver with Java

3.Gmail login using javascript:

```
public class Ex1 {  
  
    public static void main(String[] args) throws IOException, InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/signin/v2/identifier?service=mail&passive=true&r  
m=false&continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&ss=1&scc=1&ltmpl=defaul  
t&ltmplcache=2&emr=1&osid=1&flowName=GlifWebSignIn&flowEntry=ServiceLogin");  
        Thread.sleep(5000);  
        WebElement w = driver.findElement(By.xpath("//*[@id='identifierId']"));  
        JavascriptExecutor js=(JavascriptExecutor) driver;  
        js.executeScript("arguments[0].setAttribute('value','venkat12345')",w);  
        WebElement w1 = driver.findElement(By.xpath("//*[text()='Next']"));  
        js.executeScript("arguments[0].click()",w1);  
        Thread.sleep(6000);  
        WebElement w2 =  
driver.findElement(By.xpath("//*[@name='password']"));  
        js.executeScript("arguments[0].setAttribute('value','venkat12345')",w2);  
        Thread.sleep(6000);  
        WebElement w3 =  
driver.findElement(By.xpath("//*[@id='passwordNext']/div[2]"));  
        js.executeScript("arguments[0].click()",w3);  
  
    }  
}
```

Scroll up & Scroll down:

- Scroll up/Scroll down method using javascript,
- In this method, we first assign up to which path locator/web element we want to down/up and perform

Example Program:

```
public class dummy {  
  
    public static void main(String[] args) throws InterruptedException {  
        // TODO Auto-generated method stub  
        System.setProperty("webdriver.gecko.driver",
```

```

"C:/Users/siva/workspace/Selenium/driver/geckodriver.exe"); WebDriver
driver=new FirefoxDriver();
driver.get("https://dhtmlx.com/docs/products/dhtmlxTree/");
JavascriptExecutor j=(JavascriptExecutor) driver;

// assign up to which path we want to down

WebElement w = driver.findElement(By.xpath("//*[text()='Live Demo']"));

//scroll down up to particular path

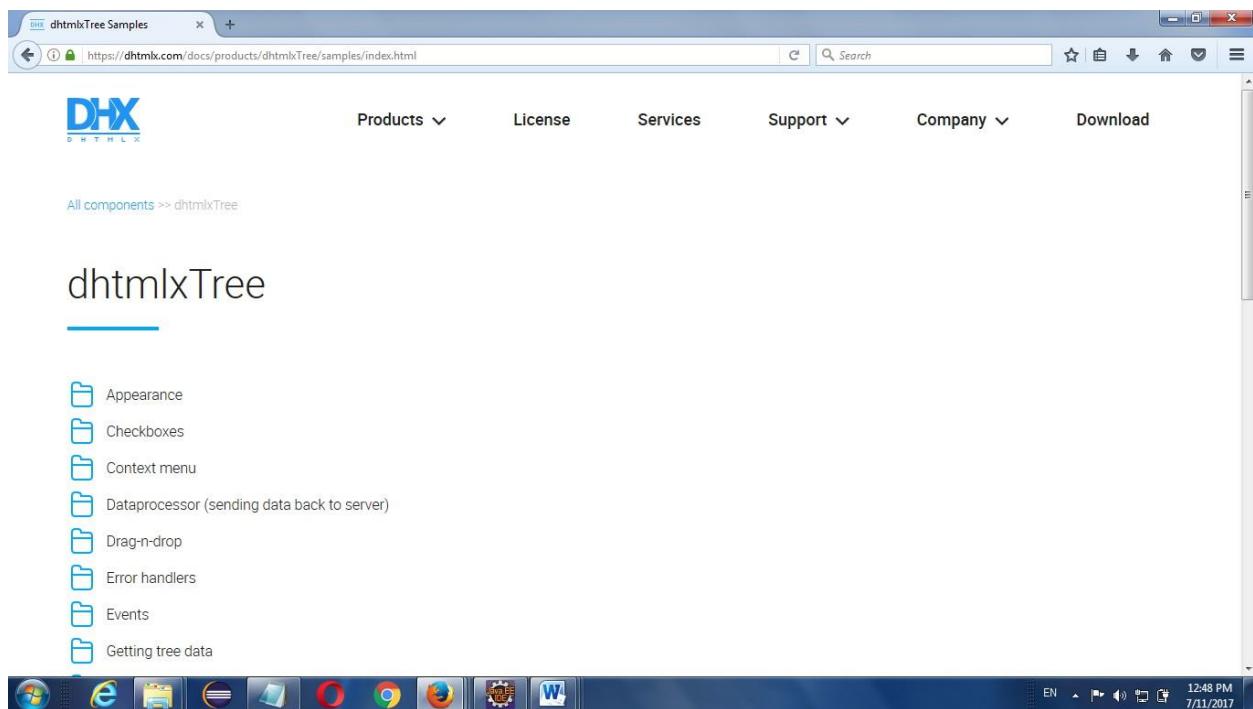
j.executeScript("arguments[0].scrollIntoView(true)", w);
Thread.sleep(2000);

driver.findElement(By.xpath("//*[text()='View more demos']")).click();

}
}

```

Output:



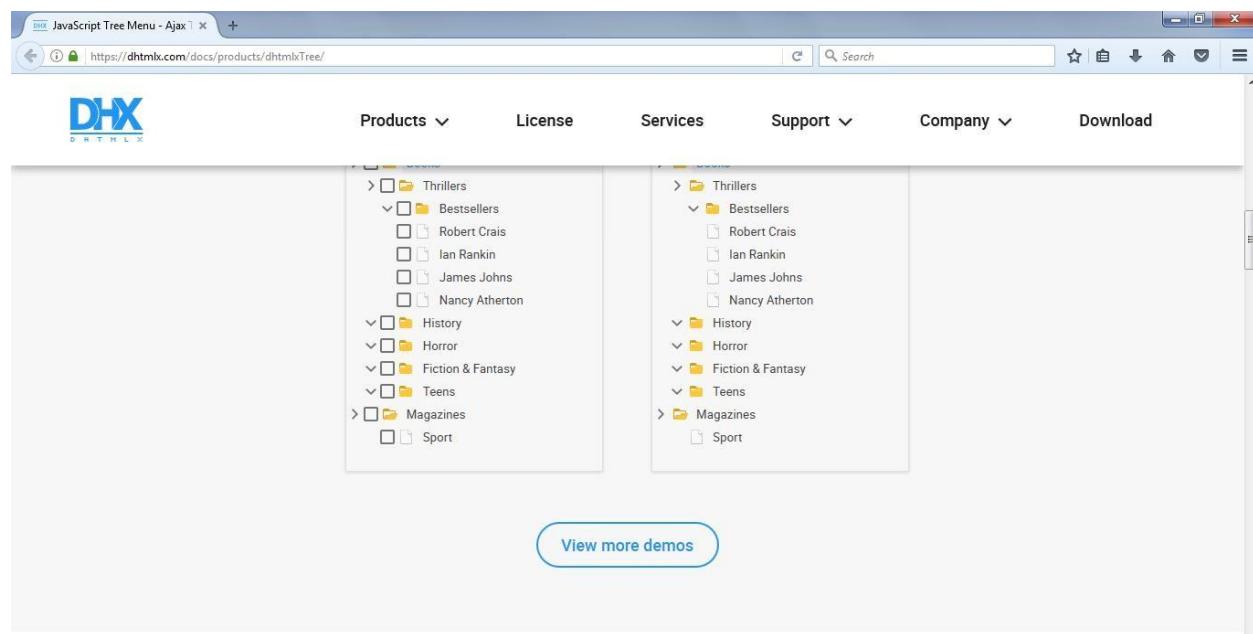
Using Page down:

- In this method, we can scroll down one single page from the first page

Example Program:

```
public class dummy1 {  
  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
"C:/Users/siva/workspace/Selenium/driver/geckodriver.exe"); WebDriver  
        driver=new FirefoxDriver();  
        driver.get("https://dhtmlx.com/docs/products/dhtmlxTree/");  
        JavascriptExecutor j=(JavascriptExecutor) driver;  
  
        WebElement w = driver.findElement(By.xpath("//*[text()='Live Demo']"));  
  
        w.sendKeys(Keys.PAGE_DOWN);  
    }  
}
```

Output:



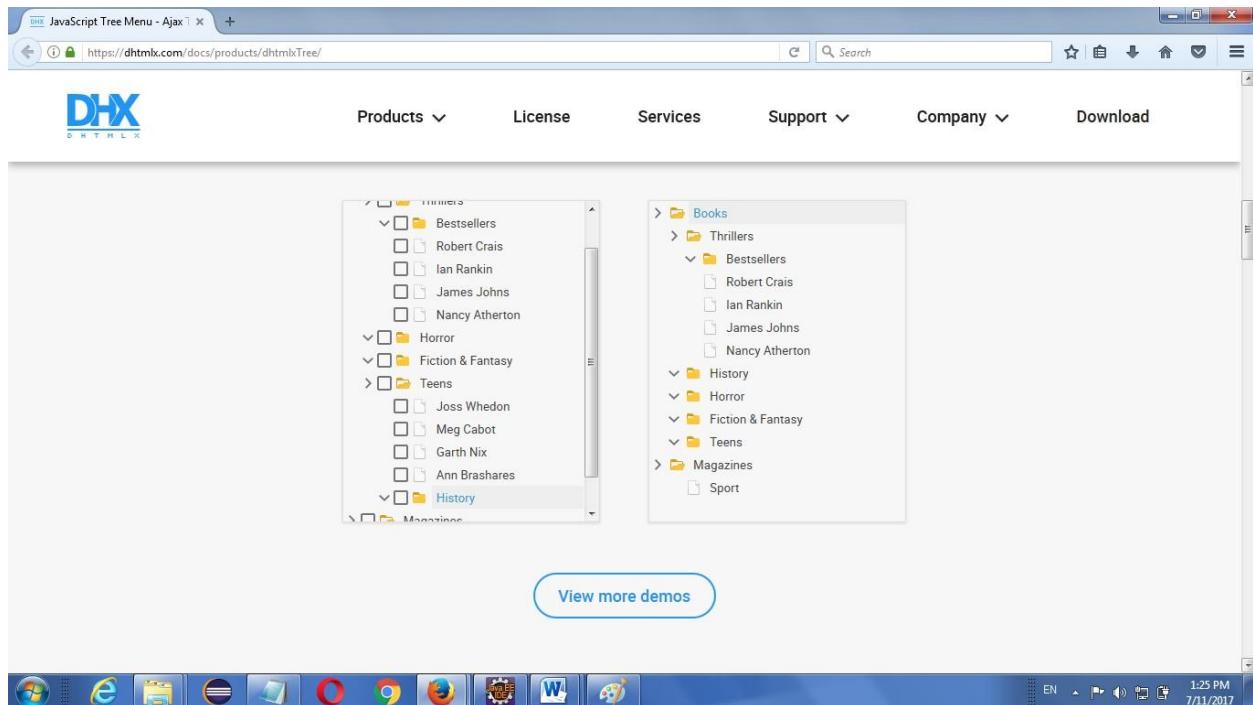
Drag and Drop:

- Drag and drop which is used to move web element from one place to another place

Example program:

```
public class dummy3 {  
  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
"C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
  
        WebDriver driver=new FirefoxDriver();  
        driver.get("https://dhtmlx.com/docs/products/dhtmlxTree/");  
        JavascriptExecutor j=(JavascriptExecutor) driver;  
  
        WebElement w = driver.findElement(By.xpath("//*[text()='Live Demo']"));  
        j.executeScript("arguments[0].scrollIntoView(true)", w);  
        Thread.sleep(2000);  
  
        //here select which element we want to move  
  
        WebElement from = driver.findElement(By.xpath("//*[text()='History']"));  
        //here select the destination we want to drop  
  
        WebElement to = driver.findElement(By.xpath("//*[text()='Teens']"));  
        Actions act=new Actions(driver);  
  
        //drag and drop perform  
        act.clickAndHold(from).moveToElement(to).release(to).build().perform();  
  
    }  
  
}
```

Output:



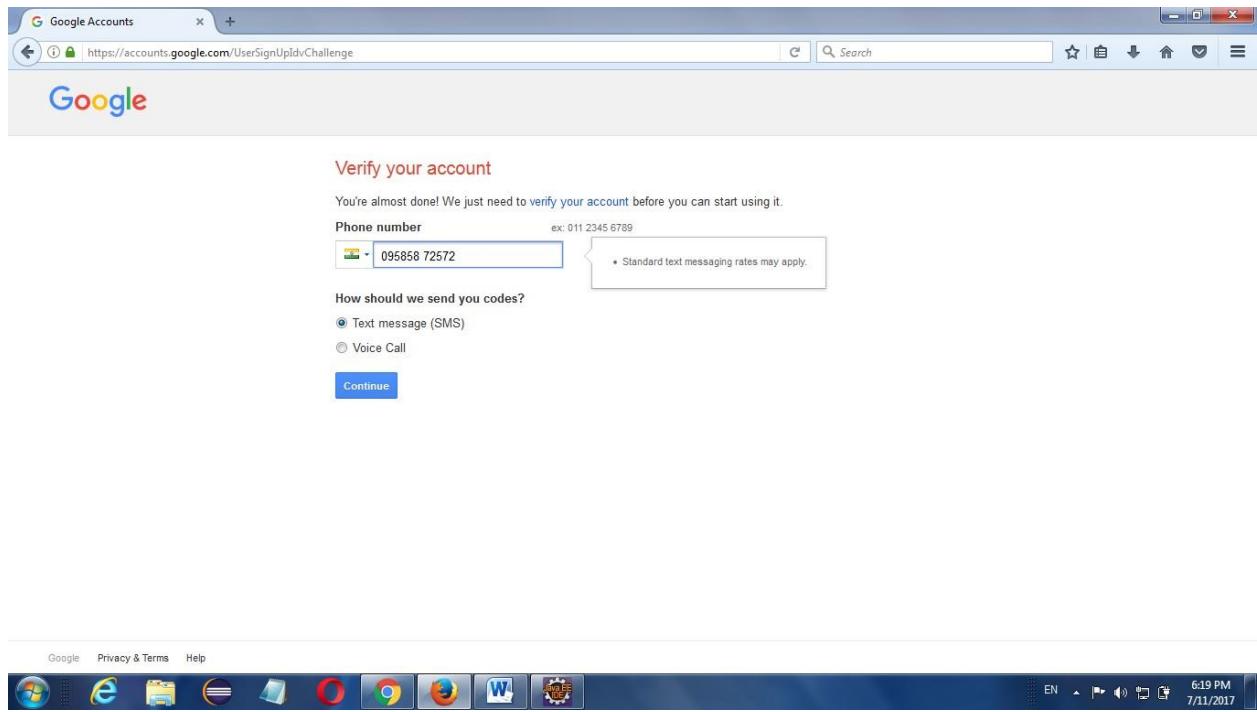
EXERCISE:

1.Gmail registration using scroll down:

Program:

```
public class Ex2 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/SignUp?service=mail&continue=https%3A%2F%2Fma  
il.google.com%2Fmail%2F&ltmpl=default");  
        driver.findElement(By.id("FirstName")).sendKeys("venkat");  
        driver.findElement(By.id("LastName")).sendKeys("ram");  
        driver.findElement(By.id("GmailAddress")).sendKeys("venkat543212345");  
        driver.findElement(By.id("Passwd")).sendKeys("venkat12333");  
        driver.findElement(By.id("PasswdAgain")).sendKeys("venkat12333");  
        driver.findElement(By.xpath("./*[@id='BirthMonth']/div[1]")).click();  
        driver.findElement(By.xpath("./*[text()='November']")).click();  
        driver.findElement(By.id("BirthDay")).sendKeys("16");  
        driver.findElement(By.id("BirthYear")).sendKeys("1993");  
        driver.findElement(By.xpath("./*[@id='Gender']/div[1]")).click();  
        driver.findElement(By.xpath("./*[text()='Male']")).click();  
        driver.findElement(By.id("RecoveryPhoneNumber")).sendKeys("9585872572");  
        driver.findElement(By.id("RecoveryEmailAddress")).sendKeys("venkatram123@gmail.com");  
        Thread.sleep(2000);  
  
        driver.findElement(By.id("submitbutton")).click();  
        Thread.sleep(3000);  
  
        JavascriptExecutor j=(JavascriptExecutor) driver;  
        WebElement w = driver.findElement(By.xpath("//*[text()='Combining data']"));  
        j.executeScript("arguments[0].scrollIntoView(true)", w);  
        Thread.sleep(2000);  
  
        driver.findElement(By.xpath("./*[@id='iagreebutton']")).click();  
    }  
}
```

Output:



WINDOW HANDLING:

- It is used to move one window to another window

Example program:

```
public class Dummy9 {  
  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
"  
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.hdfcbank.com/");  
        driver.findElement(By.xpath("//*[@id='cee_closeBtn']/img")).click();  
        String parentWindowId = driver.getWindowHandle();  
        System.out.println("Parent Window ID:" + parentWindowId);  
        driver.findElement(By.id("loginsubmit")).click();  
        Set<String> allWindowId = driver.getWindowHandles();  
        for (String x : allWindowId) {
```

```

if (!parentWindowId.equals(x)) {
    System.out.println("Child Window ID:" + x);
    driver.switchTo().window(x);
    Thread.sleep(3000);

    driver.findElement(By.xpath("html/body/div[4]/div[2]/div[1]/a"))
        .click();
    driver.manage().window().maximize();
    Thread.sleep(2000);
    driver.switchTo().defaultContent();
}
}

Thread.sleep(3000);
driver.quit();

}
}

```

Here,

- Home page(window) → parent window
- Next window → Child window
- getWindowHandle() → It is a method used to get parent window id
- getWindowHandles() → It is a method used to get all windows id
- So, we have A(parent window id) and C(A,B) but we don't have B.
- C → all windows id
- We have to find B using Iterator or enhancement for
- defaultContent() → it is a method used to move previous window

Output:

Java - Selenium/src/selenium/assign5/Dummy.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access Java EE Java Debug

Package Explorer Ex3.java dummy.java Ex1.java dummy1.java dummy3.java Ex2.java Ex1.java Dummy.java

```

13 WebDriver driver=new FirefoxDriver();
14 driver.get("https://www.hdfcbank.com/");
15 driver.findElement(By.xpath(".///*[@id='cee_closeBtn']/img")).click();
16 String parentWindowId = driver.getWindowHandle();
17 System.out.println("Parent Window ID:"+parentWindowId);
18 driver.findElement(By.id("loginsubmit")).click();
19 Set<String> allwindowId = driver.getWindowHandles();
20 Iterator<String> a = allwindowId.iterator();
21 while(a.hasNext()){
22     String s = a.next();
23     System.out.println("All Windows ID:"+s);
24     if(!parentWindowId.endsWith(s)){
25         System.out.println("Child Window ID:"+s);
26         driver.switchTo().window(s);
27         Thread.sleep(3000);
28         driver.findElement(By.xpath("html/body/div[4]/div[2]/div[1]/a")).click();
29     }
30 }
31
32
33
34 Thread.sleep(3000);
35 // driver.quit();
36
37

```

Console

```

terminated> Dummy (5) Java Application C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 5:49:26 PM)
1499861978617 Marionette INFO Listening on port 51330
Jul 12, 2017 5:49:39 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Parent Window ID:13
All Windows ID:13
All Windows ID:31
Child Window ID:31

```

Writable Smart Insert 27:19

EN 5:50 PM 7/12/2017

Welcome to HDFC Bank NetBanking - Mozilla Firefox

Hdfc Bank Limited. [IN] https://netbanking.hdfcbank.com/netbanking/?_ga=2.62463144.525688549.1499862092-791699333.1499862092

NetBanking Login

User ID / Customer ID

Continue

[Forgot Customer ID?](#)

New to NetBanking? [View Demo](#)

Credit Card Holders Click here
(if you do not hold HDFC Bank account)

Retail Loan Customers Click here
for online loan account access
(if you do not hold HDFC Bank account)

Norton SECURED powered by Symantec

ABOUT SSL CERTIFICATES

#ForgetCash...Go Digital!

Use NetBanking for all your day-to-day needs

Transfer Money
Pay your maid's, driver's salary, society maintenance or transfer money to your friends & family through NEFT, RTGS or IMPS.
[Know More](#)

Pay Bills
Pay your electricity, mobile, gas, water & DTH bills. Recharge your pre-paid mobile number.
[Know More](#)

Shop Online
Shop online for fashion, food, travel & entertainment.
[Know More](#)



ALERTS:

It has 3 types,

1. Simple Alert
2. Confirm pop-up
3. Prompt pop-up

1. Simple:

- In this method, we just click single ok button in the alert.

Example program:

```
public class Dummy2 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://mail.rediff.com/cgi-bin/login.cgi");  
        driver.findElement(By.xpath("//input[@type='submit']")).click();  
        Alert a = driver.switchTo().alert();  
        System.out.println(a.getText());  
        a.accept();  
        driver.switchTo().defaultContent();  
        driver.findElement(By.id("login1")).sendKeys("venkat123");  
        driver.quit();  
    }  
}
```

Here,
alert → class

Output:

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Displays the project structure under "selenium.assign5".
- Code Editor:** Shows the Java code for "dummy2.java". The code uses Selenium to interact with a Rediffmail login page.
- Console:** Displays the terminal output of the Java application. It shows the application starting, connecting to a Marionette browser, and attempting to log in with the user "venkat123".
- Taskbar:** Shows various application icons including Rediffmail, Internet Explorer, and Firefox.
- Browser Preview:** Shows the Rediffmail login page with the user "venkat123" entered in the username field.
- System Tray:** Shows the taskbar with system icons and the date/time (7/12/2017, 6:26 PM).

```
1 package selenium.assign5;
2
3 import org.openqa.selenium.Alert;
4 import org.openqa.selenium.By;
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.firefox.FirefoxDriver;
7
8 public class Dummy2 {
9     public static void main(String[] args) throws InterruptedException {
10         System.setProperty("webdriver.gecko.driver",
11                             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
12         WebDriver driver = new FirefoxDriver();
13         driver.get("https://mail.rediff.com/cgi-bin/login.cgi");
14         driver.findElement(By.xpath("//input[@type='submit']")).click();
15         Alert a = driver.switchTo().alert();
16         System.out.println(a.getText());
17         a.accept();
18         driver.switchTo().defaultContent();
19         driver.findElement(By.id("login1")).sendKeys("venkat123");
20     }
21 }
22
23 }
```

```
<terminated> Dummy2 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 6:26:19 PM)
1499864182014 [terminated] Dummy2 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 6:26:19 PM)
1499864182841 geckodriver:marionette INFO Starting browser C:\Program Files\Java\jre1.8.0_101\bin\firefox.exe with args [-m marionette]
1499864189505 Marionette INFO Listening on port 52842
Jul 12, 2017 6:26:30 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Please enter a valid user name
```

rediffmail

rediff.com

rediff SHOPPING

Set Of 2 Ac Fleece Blankets MRP Rs. 999 Rs. 249 More in Blankets & Comforters

Soap/Shampoo Dispenser MRP Rs. 999 Rs. 399 More in Bathroom Accessories

Buy 1 Get 1 Free Rechargeable Light MRP Rs. 1,499 Rs. 449 More in Home Medical Supplies

Lunch Box With Insulated Bag MRP Rs. 750 Rs. 199 More in Tiffins & Lunch Box

Fridge Storage Rack Sliding Drawer MRP Rs. 999 Rs. 249 More in Other Kitchen Utilities

Handheld Portable Sewing Machine MRP Rs. 999 Rs. 179 More in Sewing Machines

rediffmail

Username: venkat123

Password: [Forgot Password?](#)

Keep me signed in (Uncheck if on a shared computer)

[Go](#) Secured Login

Don't have a Rediffmail ID? [Create a new account](#)

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Own a personalised email ID e.g. Raj Shah owns raj@shahtrading.in [Get yours today](#)

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2. Confirm:

- In this method, we have to click OK or Cancel, if we click OK/Cancel, then it will confirm

Example program:

```
public class Dummy3 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/handling-alerts-using-selenium-webdriver/");  
        driver.findElement(By.xpath("//button[text()='Confirm Pop up']")).click();  
        Alert a = driver.switchTo().alert();  
        System.out.println(a.getText());  
        a.dismiss();  
        driver.quit();  
  
    }  
}
```

Output:

The screenshot shows the Eclipse IDE interface. The left pane displays the Package Explorer with a project structure including packages like selenium.assign1, selenium.assign2, selenium.assign3, selenium.assign4, and selenium.assign5, along with various Java files such as Dummy.java, Dummy2.java, Dummy3.java, and Ex1.java. The right pane shows the code editor with the following Java code:

```
1 package selenium.assign5;
2
3 import org.openqa.selenium.Alert;
4 import org.openqa.selenium.By;
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.firefox.FirefoxDriver;
7
8 public class Dummy3 {
9     public static void main(String[] args) throws InterruptedException {
10         System.setProperty("webdriver.gecko.driver",
11             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
12         WebDriver driver = new FirefoxDriver();
13         driver.get("http://toolsqa.com/handling-alerts-using-selenium-webdriver/");
14         driver.findElement(By.xpath("//button[text()='Confirm Pop up']")).click();
15         Alert a = driver.switchTo().alert();
16         System.out.println(a.getText());
17         a.dismiss();
18     }
19 }
20
21 }
```

Below the code editor is the Console view, which displays the terminal output of the application's execution:

```
<terminated> Dummy3 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 6:44:29 PM)
1499865271865 geckodriver INFO Listening on 127.0.0.1:32596
1499865272680 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499865280164 marionette:session INFO Listening on port 53221
Jul 12, 2017 6:44:40 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO Detected dialect: W3C
Confirm pop up with OK and Cancel button
1499865298168 Marionette INFO New connections will no longer be accepted
```

The bottom of the screen shows the Windows taskbar with icons for various applications.

The screenshot shows a web browser window displaying a test page from toolsqa.com. The URL in the address bar is <http://toolsqa.com/handling-alerts-using-selenium-webdriver/>. The page content includes:

- A header with the TOOLSQA logo and navigation links: HOME, TUTORIAL, TOOLS, TRAININGS, FORUM, VIDEOS, BLOGS, DEMO SITES, ABOUT, and SEARCH.
- A section titled "Simple Alert Pop up" with a code example:

```
1 document.alert("This is a simple alert");
2 //or
3
4 alert("This is a simple alert");
```

- A section titled "Confirm Alert box" with a code example:

```
1 var popupResult = confirm("Confirm pop up with OK and Cancel button");
```

- A section titled "Prompt Alert box" with a code example:

```
1 prompt("Prompt Pop up");
```

- Two sidebar advertisements for Lenovo laptops and Puma vouchers.
- A footer with the SELENIUM TRAINING logo and the date 7/12/2017.

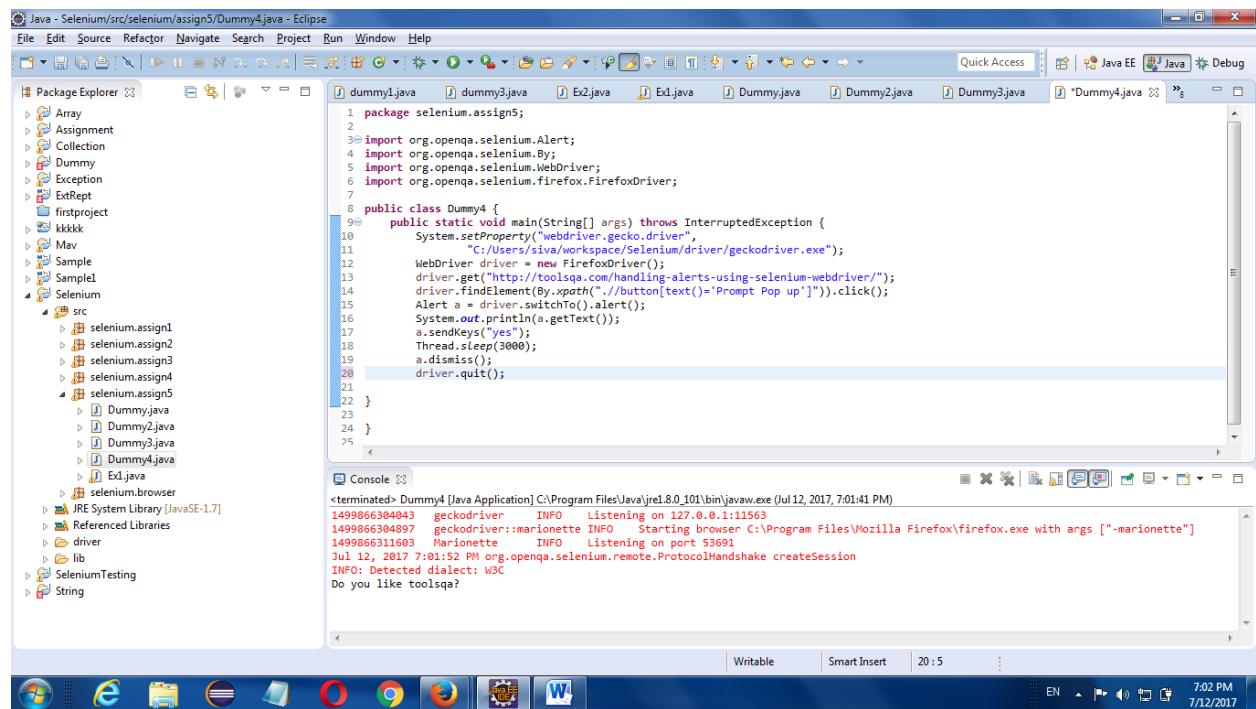
3. Prompt:

- In this method, first we have insert Yes/No and then we will click OK/Cancel

Example program:

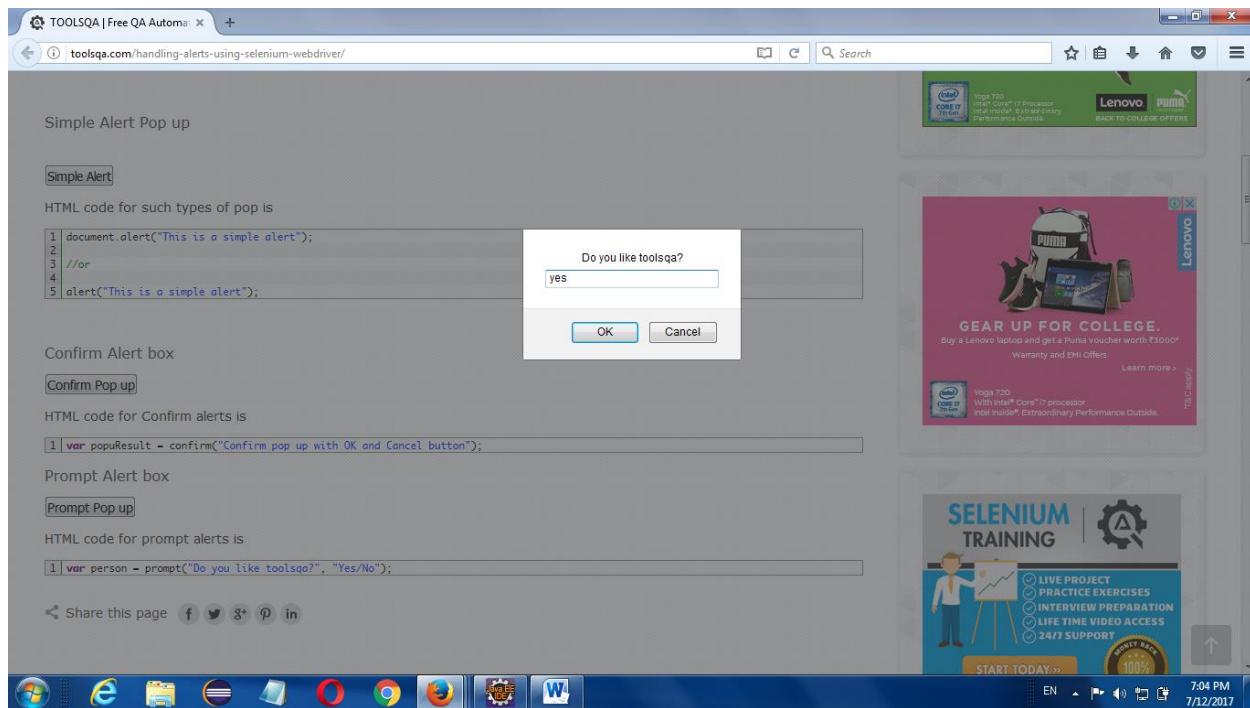
```
public class Dummy4 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.com/handling-alerts-using-selenium-webdriver/");  
        driver.findElement(By.xpath("//button[text()='Prompt Pop up']")).click();  
        Alert a = driver.switchTo().alert();  
        System.out.println(a.getText());  
        a.sendKeys("yes");  
        Thread.sleep(3000);  
        a.dismiss();  
        driver.quit();  
  
    }  
  
}
```

Output:



The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows a Java project named "selenium.assign5" containing several source files: dummy1.java, dummy2.java, Ex.java, Ex2.java, Dummy.java, Dummy2.java, Dummy3.java, Dummy4.java, and Dummy5.java.
- Code Editor:** Displays the content of Dummy4.java, which contains Java code for interacting with a browser alert.
- Console:** Shows the output of the Java application. It includes log messages from the geckodriver and Marionette processes, indicating the browser was started with the "-marionette" argument. It also shows the user input "yes" and the resulting dismissal of the alert.
- Bottom Status Bar:** Shows the current date and time (Jul 12, 2017, 7:01:41 PM), the Java version (JavaSE-1.7), and the file path (C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe).



EXERCISE:

1.naukri.com registration:

```

public class Ex1 {
    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.naukri.com/");
        driver.findElement(By.xpath("//input[@value='Register with us']"))
            .click();
        driver.findElement(By.xpath("//button[text()='I am a Professional']"))
            .click();
        Thread.sleep(3000);
        driver.findElement(By.id("fname")).sendKeys("venkatram");
        driver.findElement(By.id("email")).sendKeys("venkat10062060@gmail.com");
        driver.findElement(By.xpath("//input[@name='password']")).sendKeys(
            "venkat123450");
        Thread.sleep(2000);
        driver.findElement(By.xpath("//input[@name='number']")).sendKeys(
            "9444859025");
        Thread.sleep(2000);
        driver.findElement(By.xpath("//input[@name='expYear']")).click();
        Thread.sleep(2000);
    }
}

```

```

driver.findElement(By.xpath("//*[text()='3']")).click();
driver.findElement(By.xpath("//input[@name='expMonth']"))
    .sendKeys("6");
driver.findElement(By.xpath("//button[text()='Register Now']"))
    .click();
Thread.sleep(4000);
driver.findElement(By.xpath("//*[@id='designation_0']")).sendKeys(
    "Automation Tester");
driver.findElement(By.id("company_0")).sendKeys("kekron macron");
driver.findElement(By.xpath("//input[@name='salaryLac_0']")).click();
driver.findElement(
    By.xpath("//*[@id='employmentDetailForm']/div[1]/div[1]/resman-
salary/div/div[1]/div/div[2]/div[2]/ul/li[5]/div/div/span"))
    .click();
driver.findElement(By.xpath("//input[@name='salaryThou_0']")).click();
driver.findElement(By.xpath("//*[text()='20']")).click();
driver.findElement(By.xpath("//input[@name='startYear_0']")).click();
driver.findElement(
    By.xpath("//*[@id='employmentDetailForm']/div[1]/div[1]/resman-
duration/div/div[1]/div/div[1]/div[1]/div[2]/ul/li[5]/div/div"))
    .click();
driver.findElement(By.xpath("//input[@name='startMonth_0']")).click();
driver.findElement(
    By.xpath("//*[@id='employmentDetailForm']/div[1]/div[1]/resman-
duration/div/div[1]/div/div[1]/div[1]/div[2]/ul/li[5]/div/div"))
    .click();
driver.findElement(By.xpath("//input[@name='city']")).sendKeys(
    "Gangtok");
driver.findElement(By.xpath("//input[@name='noticePeriod']")).click();
driver.findElement(
    By.xpath("//*[@id='employmentDetailForm']/div[1]/div[2]/div/div[1]/div/div[2]/ul/
li[3]/div/div"))
    .click();
driver.findElement(By.xpath("//input[@name='keyskills']")).sendKeys(
    "Automation Testing");
Thread.sleep(2000);
driver.findElement(
    By.xpath("//*[@id='employmentDetailForm']/div[3]/div/div/button"))
    .click();

driver.findElement(

```

```

By.xpath("//*[@id='employmentDetailForm']/div[3]/div/div/button"))
.click();
Thread.sleep(3000);
driver.findElement(By.xpath("//input[@name='qualification_0']"))
.click();
driver.findElement(By.xpath("//*[text()='Undergraduate']")).click();
driver.findElement(By.xpath("//input[@name='course_0']")).click();
driver.findElement(By.xpath("//*[text()='B.Tech/B.E.']")).click();
driver.findElement(By.xpath("//input[@name='spec_0']")).click();
driver.findElement(
    By.xpath("//*[text()='Electronics/Telecommunication']"))
.click();
driver.findElement(By.xpath("//*[@id='institute_0']")).sendKeys(
    "Anna Univrsty");
driver.findElement(By.xpath("//label[@data-content='Full Time']"))
.click();
// driver.findElement(By.xpath("//label[@data-content='Full Time']")).click();
driver.findElement(By.xpath("//input[@name='passingYear_0']")).click();
driver.findElement(By.xpath("//*[text()='2013']")).click();
driver.findElement(By.xpath("//button[text()='Continue']")).click();
Thread.sleep(3000);
driver.findElement(By.xpath("//*[@id='title']"))
.sendKeys(
    "Automation Engineer with B.Tech/B.E. in
Electronics/Telecommunication currently living in Chennai");
driver.findElement(
    By.xpath("//input[@placeholder='Select Industry that you work
for']"))
.click();
driver.findElement(
    By.xpath("//*[text()='IT-Software/Software Services']"))
.click();
driver.findElement(
    By.xpath("//input[@placeholder='Select the department that you
work in']"))
.click();
driver.findElement(By.xpath("//*[text()='IT Software - QA & Testing']"))
.click();
driver.findElement(
    By.xpath("//input[@placeholder='Select the role that you work
in']"))
.click();
driver.findElement(By.xpath("//*[text()='Testing Engnr']")).click();
driver.findElement(
    By.xpath("//input[@placeholder='Select upto 3 locations']"))

```

```

.click();
driver.findElement(By.xpath("//*[text()='Chennai']")).click();
driver.findElement(By.xpath("//label[@data-content='Permanent']"))
.click();
driver.findElement(By.xpath("//label[@data-content='Full Time']"))
.click();
driver.findElement(By.xpath("//input[@name='skill0']")).sendKeys(
"Eclipse");
driver.findElement(By.xpath("//input[@name='version0']")).sendKeys(
"Luna");
driver.findElement(By.xpath("//input[@placeholder='Year']")).click();
driver.findElement(By.xpath("//*[text()='2017']")).click();
driver.findElement(By.xpath("//input[@name='expYear0']")).click();
driver.findElement(
By.xpath("//*[@id='profileCompleteForm']/div[4]/div/div[2]/resman-
itskill/div/div[2]/div[2]/ul/li[5]/div/div/span"))
.click();
driver.findElement(By.xpath("//input[@name='dobYear']")).click();
driver.findElement(
By.xpath("//*[@id='profileCompleteForm']/resman-
dob/div/div/div/div[1]/div[2]/ul/li[7]/div/div/span"))
.click();

driver.findElement(By.xpath("//input[@name='dobMonth']")).click();
driver.findElement(By.xpath("//*[text()='Nov']")).click();
driver.findElement(By.xpath("//input[@name='dobDay']")).click();
driver.findElement(
By.xpath("//*[@id='profileCompleteForm']/resman-
dob/div/div/div/div[3]/div[2]/ul/li[16]/div/div/span"))
.click();
driver.findElement(By.xpath("//label[@data-content='Male']")).click();
driver.findElement(By.xpath("//input[@name='maritalStatus']")).click();
driver.findElement(By.xpath("//*[text()='Single/unmarried']")).click();
driver.findElement(By.xpath("//textarea[@name='address']")).sendKeys(
"No.20, vivekanandhar st, dubai");
driver.findElement(By.xpath("//input[@name='city']")).sendKeys(
"Chennai");
driver.findElement(By.xpath("//*[@id='pincode']")).sendKeys("600015");

driver.findElement(
By.xpath("//*[@id='profileCompleteForm']/div[8]/div[1]/div/button"))
.click();
}
}

```

FRAMEWORK:

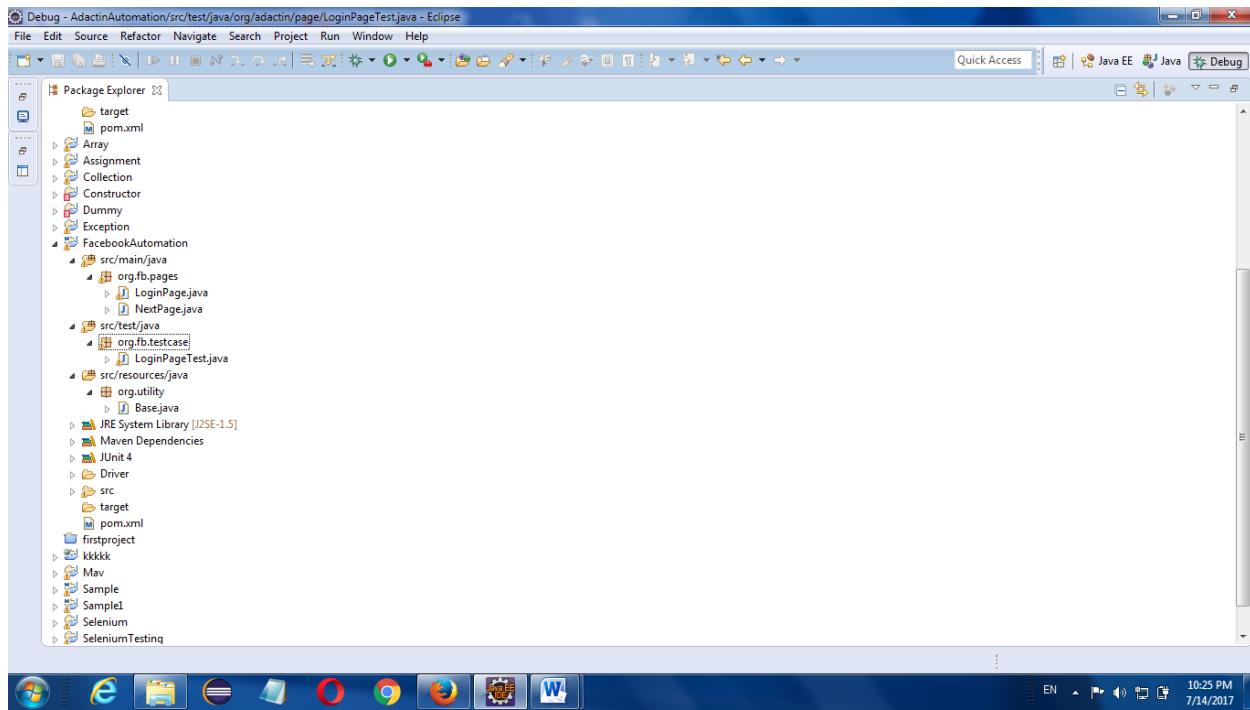
- A framework is a set of concept and practices, that provide support for automation testing.
- Different frameworks are available like,
 - POM(Page Object Model)
 - Junit
 - Cucumber
 - Data driven

POM:

- Page Object Model
- POM is an object repository design pattern in selenium webdriver
- POM creates our testing code maintainable and reusable
- Page factory is an optimized way to create object repository

POM Steps & Rules:

- Create a maven project/java project
- We have to create 3 source folders(packages)
 1. Src/main/java
 - It contains POM information
 2. Src/test/java (Junit,TestNG)
 - It contains login, asserts & registration
 3. src/resources/java
 - It contains reusable methods/codes. Ex, browser coding, radio button, scroll down and etc.



- In the main package /POM package, we have to create different class for different web pages,
- For example, in Facebook login page, we have to input user name, password and click login. This is one class and if we click login then will go to new home page that is another class. For that different pages we have to create different class
- Then all the annotations should be in private and use getters & setters
- Create a default constructor and contains one page factory
- This is a gateway to initialize the value
- In the test package(Junit), all the methods/annotations should be in public(access specifier)
- This package get the variables from main pom package and initialize(input) the value
- In the base package contains browser configuration, scroll down codes, check box code and etc.
- we can use this browser configuration/whatever in our Junit package

Example:

Facebook login using POM framework:

1.Base package: (resource)

```
public class Base {
    static WebDriver driver;
```

```

public static WebDriver getDriver(String browser) {
    if(browser.equals("chrome")){
        System.setProperty("webdriver.chrome.driver",
                           "C:/Users/siva/workspace/Pom/Driver/chromedriver.exe");
        driver = new ChromeDriver();

    }else if(browser.equals("firefox")){
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Pom/Driver/geckodriver.exe");
        driver = new FirefoxDriver();

    }else if(browser.equals("ie")){
        System.setProperty("webdriver.ie.driver",
                           "C:/Users/siva/workspace/Pom/Driver/IEDriverServer.exe");
        driver = new InternetExplorerDriver();

    }else if(browser.equals("opera")){
        System.setProperty("webdriver.opera.driver",
                           "C:/Users/siva/workspace/Pom/Driver/operadriver.exe");
        driver = new OperaDriver();

    }
    driver.manage().window().maximize();
    driver.get("https://www.facebook.com/");
    return driver;
}
}

```

- Here we can configure all browser setup's
- In the Junit package we can use which browser we want

2. POM Package: (Main)

Class 1:

```

public class LoginPage {
    static WebDriver driver;
    @FindBy(name="email")
    private WebElement txtUserName;
    @FindBy(id="pass")
    private WebElement txtUserPassword;
    @FindBy(id="loginbutton")
    private WebElement btnLoginButton;
    @FindBy(xpath=".//*[@@class='fb_logo img sp_sh983SE11WH sx_84be92']")
}

```

```

private WebElement imgFbLogo;

public LoginPage(WebDriver ldriver) {
    this.driver=ldriver;
    PageFactory.initElements(driver, this);
}

public WebElement getImgFbLogo() {
    return imgFbLogo;
}
public void setImgFbLogo(WebElement imgFbLogo) {
    this.imgFbLogo = imgFbLogo;
}
public String getTxtUserName() {
    return txtUserName.getAttribute("value");
}
public void setTxtUserName(String txtUserName) {
    this.txtUserName.sendKeys(txtUserName);
}
public String getTxtUserPassword() {
    return txtUserPassword.getAttribute("value");
}
public void setTxtUserPassword(String txtUserPassword) {
    this.txtUserPassword.sendKeys(txtUserPassword);
}
public WebElement getBtnLoginButton() {
    return btnLoginButton;
}
public void setBtnLoginButton(WebElement btnLoginButton) {
    this.btnLoginButton = btnLoginButton;
}

}

Here,

```

- We first declare all the annotations like username, password , login and etc.
- Then create one default constructor with page factory which is used to initialize the value from the Junit.

```

public LoginPage(WebDriver ldriver) {
    this.driver=ldriver;
    PageFactory.initElements(driver, this);
}

```

- Then click generate getters and setters
- If we click login button, it will move to next page
- If we check or insert something in next page, we have to create one more base class
(i.e.) NextPage (another class –see in below)

Class 2:

```
public class NextPage {  
    WebDriver driver;  
    @FindBy(xpath="//*[text()='Recover Your Account']")  
    private WebElement txtRecover;  
  
    public WebElement getTxtRecover() {  
        return txtRecover;  
    }  
  
    public void setTxtRecover(WebElement txtRecover) {  
        this.txtRecover = txtRecover;  
    }  
  
    public NextPage(WebDriver ldriver) {  
        this.driver=ldriver;  
        PageFactory.initElements(driver, this);  
    }  
}
```

3.Test package (Junit):

```
public class LoginPageTest {  
    static WebDriver driver;  
    LoginPage login;  
    static Base base;  
    NextPage next;  
    @Before  
    public void launchBrowser() {  
        base=new Base();  
        driver=base.getDriver("firefox");  
    }  
    @Test  
    public void verifyLogin() {  
        login=new LoginPage(driver);  
        next=new NextPage(driver);  
        // verify the fb logo is available  
        Assert.assertTrue(login.getImgFbLogo().isDisplayed());  
        // set the user name
```

```

login.setTxtUserName("venkat91675@gmail.com");
//check the user name you entered
Assert.assertEquals("venkat91675@gmail.com", login.getTxtUserName());
// set the password
login.setTxtUserPassword("venkat12345");
//check the user name you entered
Assert.assertEquals("venkat12345", login.getTxtUserPassword());
//click login
login.getBtnLoginButton().click();
//verify next page recover option is available
Assert.assertTrue(next.getTxtRecover().isDisplayed());

}

@After
public void closeBrowser() {
    driver.quit();

}

}

```

- We can perform all test action here
- First launch the browser which one we want
- Then Verify the login details
- Assert→ class
- assertTrue()→ is a method used to check the particular value is available or not.
- If its not available, it will fail the test case
- As well as assertEquals() is also one of the method to check
- Then close the browser

Output:

Screenshot of Eclipse IDE showing the execution results of a Java test case.

The code in `LoginPageTest.java` is as follows:

```
13 static WebDriver driver;
14 LoginPage login;
15 static Base base;
16 NextPage next;
17 @Before
18 public void launchBrowser() {
19     base=new Base();
20     driver=base.getDriver("firefox");
21 }
22 }
23 @Test
24 public void verifyLogin() {
25     login=new LoginPage(driver);
26     next=new NextPage(driver);
27     // verify the fb logo is available
28     Assert.assertTrue(login.getImgfbLogo().isDisplayed());
29     // set the user name
30     login.setTxtUserName("venkat91675@gmail.com");
31     //check the user name you entered
32     Assert.assertEquals("venkat91675@gmail.com", login.getTxtUserName());
33     // set the password
34     login.setTxtUserPassword("venkat12345");
35     //check the user name you entered
36     Assert.assertEquals("venkat12345", login.getTxtUserPassword());
37     //click login
38 }
```

The test was completed successfully after 28.734 seconds.

Execution results summary:

- Runs: 1/1
- Errors: 0
- Failures: 0

Failure Trace:

The screenshot also shows a browser window displaying the Facebook login page at https://www.facebook.com/login.php?login_attempt=1&lww=110. The error message "The email address that you've entered doesn't match any account. Sign up for an account." is visible.

EXERCISE : POM

1. Adactin.com automation using POM framework

Base class:

```
public class Base {  
    static WebDriver driver;  
    public static WebDriver getDriver(String browser) {  
        if(browser.equals("chrome")){  
            System.setProperty("webdriver.chrome.driver",  
                "C:/Users/siva/workspace/Pom/Driver/chromedriver.exe");  
            driver = new ChromeDriver();  
  
        }else if(browser.equals("firefox")){  
            System.setProperty("webdriver.gecko.driver",  
                "C:/Users/siva/workspace/Pom/Driver/geckodriver.exe");  
            driver = new FirefoxDriver();  
  
        }else if(browser.equals("ie")){  
            System.setProperty("webdriver.ie.driver",  
                "C:/Users/siva/workspace/Pom/Driver/IEDriverServer.exe");  
            driver = new InternetExplorerDriver();  
  
        }else if(browser.equals("opera")){  
            System.setProperty("webdriver.opera.driver",  
                "C:/Users/siva/workspace/Pom/Driver/operadriver.exe");  
            driver = new OperaDriver();  
  
        }  
        driver.manage().window().maximize();  
        driver.get("http://www.adactin.com/HotelApp/");  
        return driver;  
    }  
}
```

Main class: 1

```
public class LoginPage1 {  
    static WebDriver driver;  
    @FindBy(xpath=".//*[@id='username'])")
```

```
private WebElement txtUserName;
@FindBy(id="password")
private WebElement txtUserPassword;
@FindBy(id="login")
private WebElement btnLoginButton;
@FindBy(xpath="//*[ @alt='AdactIn Group']")
private WebElement imgAdactinLogo;
@FindBy(xpath="//*[ @class='header_title']")
private WebElement imgHeader;
@FindBy(xpath="//*[text()='Welcome to AdactIn Group of Hotels']")
private WebElement imgWelcome;
@FindBy(xpath="//*[ @alt='Hotel Image 1']")
private WebElement imgHotel1;
@FindBy(xpath="//*[ @alt='Hotel Image 2']")
private WebElement imgHotel2;
@FindBy(xpath="//*[ @alt='Hotel Image 3']")
private WebElement imgHotel3;
@FindBy(xpath="//*[ @alt='Hotel Image 4']")
private WebElement imgHotel4;
@FindBy(xpath="//*[text()='Existing User Login - Build 1']")
private WebElement txtExUser;
@FindBy(xpath="//*[text()='Forgot Password?']")
private WebElement txtForPass;
@FindBy(xpath="//*[text()='New User Register Here']")
private WebElement txtNewUser;
@FindBy(xpath="//*[text()='Important Note:']")
private WebElement txtImpNote;

public WebElement getImgAdactinLogo() {
    return imgAdactinLogo;
}
public void setImgAdactinLogo(WebElement imgAdactinLogo) {
    this.imgAdactinLogo = imgAdactinLogo;
}
public WebElement getImgHeader() {
    return imgHeader;
}
public void setImgHeader(WebElement imgHeader) {
    this.imgHeader = imgHeader;
}
public WebElement getImgWelcome() {
    return imgWelcome;
}
public void setImgWelcome(WebElement imgWelcome) {
    this.imgWelcome = imgWelcome;
}
```

```
public WebElement getImgHotel1() {
    return imgHotel1;
}
public void setImgHotel1(WebElement imgHotel1) {
    this.imgHotel1 = imgHotel1;
}
public WebElement getImgHotel2() {
    return imgHotel2;
}
public void setImgHotel2(WebElement imgHotel2) {
    this.imgHotel2 = imgHotel2;
}
public WebElement getImgHotel3() {
    return imgHotel3;
}
public void setImgHotel3(WebElement imgHotel3) {
    this.imgHotel3 = imgHotel3;
}
public WebElement getImgHotel4() {
    return imgHotel4;
}
public void setImgHotel4(WebElement imgHotel4) {
    this.imgHotel4 = imgHotel4;
}
public WebElement getTxtExUser() {
    return txtExUser;
}
public void setTxtExUser(WebElement txtExUser) {
    this.txtExUser = txtExUser;
}
public WebElement getTxtForPass() {
    return txtForPass;
}
public void setTxtForPass(WebElement txtForPass) {
    this.txtForPass = txtForPass;
}
public WebElement getTxtNewUser() {
    return txtNewUser;
}
public void setTxtNewUser(WebElement txtNewUser) {
    this.txtNewUser = txtNewUser;
}
public WebElement getTxtImpNote() {
    return txtImpNote;
}
public void setTxtImpNote(WebElement txtImpNote) {
```

```

        this.txtImpNote = txtImpNote;
    }
    public LoginPage1(WebDriver ldriver) {
        this.driver=ldriver;
        PageFactory.initElements(driver, this);

    }
    public WebElement getimgAdactinLogo() {
        return imgAdactinLogo;
    }
    public void setimgAdactinLogo(WebElement imgAdactinLogo) {
        this.imgAdactinLogo = imgAdactinLogo;
    }
    public String getTxtUserName() {
        return txtUserName.getAttribute("value");
    }
    public void setTxtUserName(String txtUserName) {
        this.txtUserName.sendKeys(txtUserName);
    }
    public String getTxtUserPassword() {
        return txtUserPassword.getAttribute("value");
    }
    public void setTxtUserPassword(String txtUserPassword) {
        this.txtUserPassword.sendKeys(txtUserPassword);
    }
    public WebElement getBtnLoginButton() {
        return btnLoginButton;
    }
    public void setBtnLoginButton(WebElement btnLoginButton) {
        this.btnLoginButton = btnLoginButton;
    }
}

```

Main class: 2

```

public class NextPage1 {
    WebDriver driver;
    @FindBy(xpath="//*[text()='Logout']")
    private WebElement txtLogout;

```

```

    public WebElement getTxtLogout() {

```

```

        return txtLogout;
    }

public void setTxtLogout(WebElement txtLogout) {
    this.txtLogout = txtLogout;
}

```

```

public NextPage1(WebDriver ldriver) {
    this.driver=ldriver;
    PageFactory.initElements(driver, this);

}
}

```

Junit class:

```

public class LoginPageTest1 {
    static WebDriver driver;
    LoginPage1 login1;
    static Base b;
    NextPage1 next1;
    @Before
    public void launchBrowser() {
        driver=b.getDriver("firefox");
    }
    @Test
    public void verifyLogin() {
        login1=new LoginPage1(driver);
        next1=new NextPage1(driver);
        Assert.assertTrue(login1.getImgAdactinLogo().isDisplayed());
        Assert.assertTrue(login1.getImgHeader().isDisplayed());
        Assert.assertTrue(login1.getImgWelcome().isDisplayed());
        Assert.assertTrue(login1.getImgHotel1().isDisplayed());
        Assert.assertTrue(login1.getImgHotel2().isDisplayed());
        Assert.assertTrue(login1.getImgHotel3().isDisplayed());
        Assert.assertTrue(login1.getImgHotel4().isDisplayed());
        Assert.assertTrue(login1.getTxtExUser().isDisplayed());
        Assert.assertTrue(login1.getTxtForPass().isDisplayed());
    }
}

```

```
        Assert.assertTrue(login1.getTxtNewUser().isDisplayed());
        Assert.assertTrue(login1.getTxtImpNote().isDisplayed());
        login1.setTxtUserName("vengat16");
        Assert.assertEquals("vengat16", login1.getTxtUserName());
        login1.setTxtUserPassword("Karthick");
        Assert.assertEquals("Karthick", login1.getTxtUserPassword());
        login1.getBtnLoginButton().click();
        Assert.assertTrue(next1.getTxtLogout().isDisplayed());

    }
    @After
    public void closeBrowser() {
        driver.quit();
    }

}
```

Output:

Adactin.com - Search Hotel

www.adactin.com/HotelApp/SearchHotel.php

Welcome to AdactIn Group of Hotels

Hello vengat16! [Search Hotel](#) | [Booked Itinerary](#) | [Change Password](#) | [Logout](#)

Search Hotel (Fields marked with Red asterix (*) are mandatory)

Location* - Select Location -
Hotels - Select Hotel -
Room Type - Select Room Type -
Number of Rooms* 1 - One
Check In Date* 14/07/2017 (dd/mm/yyyy)
Check Out Date* 15/07/2017 (dd/mm/yyyy)
Adults per Room* 1 - One
Children per Room - Select Children per Room -

Sample TestCases
[DOWNLOAD](#) a complete set of readymade sample TEST CASES for this application. Enjoy automation!

HotelApp Web Services
Access Hotel App SOAP and Rest Services to learn web services testing.
[Click](#) to know more.

Known Defects
[DOWNLOAD](#) list of known defects for this application.

Transferring data from www.google-analytics.com...

EN 6:55 PM 7/14/2017

Debug - Pom/src/test/java/org/adactin/testcase/LoginPageTest1.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Console JUnit 3
Finished after 38.069 seconds

Runs: 1/1 Errors: 0 Failures: 0

org.adactin.testcase.LoginPageTest1 [Runner: JUnit 4] (37.926 s) Failure Trace

```
43     Assert.assertTrue(next1.getLoginButton().isDisplayed());
44     login1.getLoginButton().click();
45     Assert.assertTrue(next1.getTxtLogout().isDisplayed());
46 }
47 }
48 @After
49 public void closeBrowser() {
50     driver.quit();
51 }
52 }
53 }
54 }
55 }
56 }
```

EN 6:55 PM 7/14/2017

WAITS:

- If we trying to find the elements due to application late response , it throws exception.
- Using waits we can resolve this exception
- There are two types of waits is there,
 1. Implicit wait
 2. Explicit wait

Implicit wait:

- It applicable for all elements
- The implicit wait will tell to the web driver to wait for certain amount of time before it throws a "No Such Element Exception".
- Once we set the time, web driver will wait for that time before throwing an exception.

Syntax:

```
driver.manage().timeouts().implicitlyWait(time, TimeUnit.SECONDS);
```

Ex:

```
driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS);
```

Explicit wait:

- The explicit wait is used to tell the Web Driver to wait for particular element to certain conditions (**Expected Conditions**) or the maximum time exceeded before throwing an exception.
- The explicit wait is an intelligent kind of wait, but it can be applied only for specified elements.
- Explicit wait gives better options than an implicit.
- Once we declare explicit wait we have to use "**ExpectedConditions**" or we can configure how frequently we want to check the condition using **Fluent Wait**.

Syntax:

```
WebDriverWait wait = new WebDriverWait(driver,time);
```

Ex:

```
wait = new WebDriverWait(driver, time);
```

```
wait.until(ExpectedConditions.visibilityOf(element));
```

- The following are the Expected Conditions that can be used in Explicit Wait

1. alertIsPresent()
2. elementSelectionStateToBe()
3. elementToBeClickable()
4. elementToBeSelected()
5. frameToBeAvailableAndSwitchToIt()
6. invisibilityOfTheElementLocated()
7. invisibilityOfElementWithText()
8. presenceOfAllElementsLocatedBy()
9. presenceOfElementLocated()
10. textToBePresentInElement()
11. textToBePresentInElementLocated()
12. textToBePresentInElementValue()
13. titleIs()
14. titleContains()
15. visibilityOf()
16. visibilityOfAllElements()
17. visibilityOfAllElementsLocatedBy()
18. visibilityOfElementLocated()

REUSABLE METHODS:

- We can create some reusable methods in base class like sendkeys, getvalue, isDisplayed and etc

1.isDisplayed:

Base class:

```
public boolean elementFound(WebDriver driver, int time, WebElement element) {
    boolean res = false;
    driver.manage().timeouts().implicitlyWait(time,
TimeUnit.SECONDS);
    try{
        res = element.isDisplayed();
    }catch(Exception e){
        e.printStackTrace();
    }
    return res;
}
```

Junit class:

```
public void verifyLogin() {  
    login=new LoginPage(driver);  
    next=new NextPage(driver);  
    Assert.assertTrue(base.elementFound(driver,10,login.getImgFbLogo()));  
}
```

2.sendkeys:

Base class:

```
public void setText(WebElement element, String name) {  
    if (name != null) {  
        element.clear();  
        element.sendKeys(name);  
    }  
}
```

Junit class:

```
public void verifyLogin() {  
    login=new LoginPage(driver);  
    next=new NextPage(driver);  
    base.setText(login.getTxtUserName(),"venkat91675@gmail.com");  
    base.setText(login.getTxtUserPassword(),"venkat12345");  
}}
```

3.getvalue:

Base value:

```
public String getText(WebElement element) {  
  
    String name = element.getAttribute("value");  
    return name;  
}
```

Junit class:

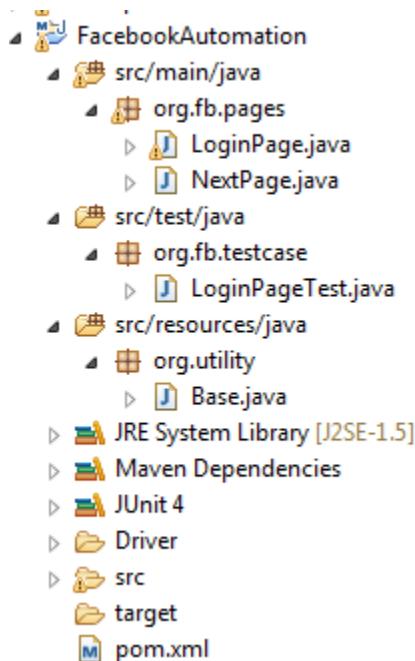
```
public void verifyLogin() {
    login=new LoginPage(driver);
    next=new NextPage(driver);
    Assert.assertTrue(base.elementFound(driver,10,login.getImgFbLogo()));
    base.setText(login.getTxtUserName(),"venkat91675@gmail.com");
    Assert.assertEquals("venkat91675@gmail.com",
    base.getText(login.getTxtUserName()));
    base.setText(login.getTxtUserPassword(),"venkat12345");
    Assert.assertEquals("venkat12345", base.getText(login.getTxtUserPassword()));
    login.getBtnLoginButton().click();
    Assert.assertTrue(base.elementFound(driver, 10, next.getTxtRecover()));
}

}
```

Example program:

1. Facebook automation using POM & JUnit framework

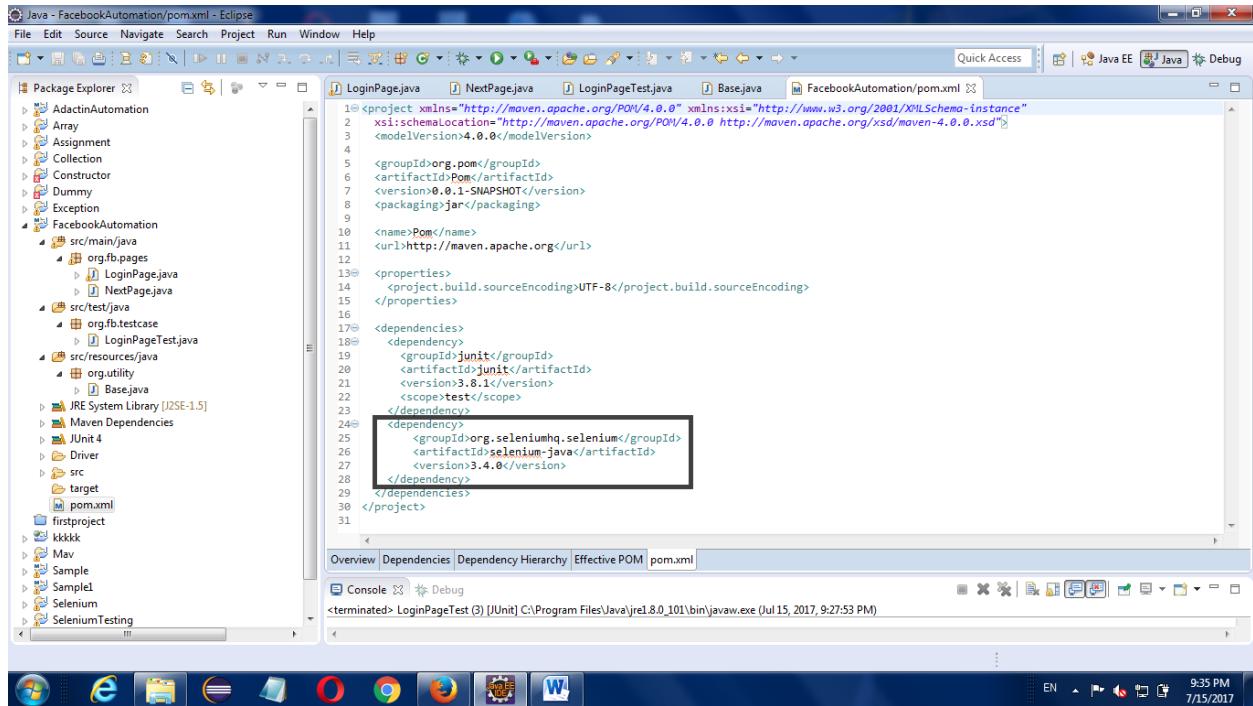
1. Project Structure:



2. Maven dependencies:

- If we want to add some jar file in maven dependency, click pom.xml
- Go to pom.xml and add particular dependency code and save
- Then it will added to maven dependencies

- For ex, if we want to add selenium jar, just copy code from internet and add in pom.xml



3. Base class:

```

public class Base {
    static WebDriver driver;
    WebDriverWait wait;

    public WebDriver getDriver(String browser) {
        if (browser.equals("chrome")) {
            System.setProperty("webdriver.chrome.driver",
                "C:/Users/siva/workspace/Pom/Driver/chromedriver.exe");
            driver = new ChromeDriver();

        } else if (browser.equals("firefox")) {
            System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Pom/Driver/geckodriver.exe");
            driver = new FirefoxDriver();

        } else if (browser.equals("ie")) {
            System.setProperty("webdriver.ie.driver",
                "C:/Users/siva/workspace/Pom/Driver/IEDriverServer.exe");
    }
}

```

```

        driver = new InternetExplorerDriver();

    } else if (browser.equals("opera")) {
        System.setProperty("webdriver.opera.driver",
                           "C:/Users/siva/workspace/Pom/Driver/operadriver.exe");
        driver = new OperaDriver();

    }
    driver.manage().window().maximize();
    driver.get("https://www.facebook.com/");
    return driver;
}

public boolean elementToBeVisible(WebDriver driver, int time,
                                  WebElement element) {
    boolean flag = false;
    try {
        wait = new WebDriverWait(driver, time);
        wait.until(ExpectedConditions.visibilityOf(element));
        flag = true;
    } catch (Exception e) {
        e.printStackTrace();
    }
    return flag;
}

public boolean elementFound(WebDriver driver, int time, WebElement
element) {
    boolean res = false;
    driver.manage().timeouts().implicitlyWait(time,
TimeUnit.SECONDS);
    try {
        res = element.isDisplayed();
    } catch (Exception e) {
        e.printStackTrace();
    }
    return res;
}

public boolean elementFound(WebElement element) {
    boolean b = false;
    try {
        b = element.isDisplayed();
    } catch (Exception e) {

```

```

        e.printStackTrace();

    }

    return b;

}

public void setText(WebElement element, String name) {
    if (name != null && elementFound(element)) {
        element.clear();
        element.sendKeys(name);
    }
}

public String getText(WebElement element) {
    String name = null;
    if (elementFound(element)) {
        name = element.getAttribute("value");
    }
    return name;
}

public void clickBtn(WebElement element) {
    if (elementFound(element)) {
        element.click();
    }
}
}

```

4. Junit/Test class:

```

public class LoginPageTest {
    static WebDriver driver;
    LoginPage login;
    static Base base;
    NextPage next;
    @Before
    public void launchBrowser() {
        base = new Base();
        driver=base.getDriver("firefox");

    }
    @Test
}

```

```

public void verifyLogin() {
    login=new LoginPage(driver);
    next=new NextPage(driver);

    Assert.assertTrue(base.elementFound(driver,10,login.getImgFbLogo()));
    base.setText(login.getTextUserName(),"venkat91675@gmail.com");
    Assert.assertEquals("venkat91675@gmail.com",
        base.getText(login.getTextUserName()));
    base.setText(login.getTextUserPassword(),"venkat12345");
    Assert.assertEquals("venkat12345",
        base.getText(login.getTextUserPassword()));
    login.getBtnLoginButton().click();
    Assert.assertTrue(base.elementFound(driver, 10,
next.getTextRecover()));

}

@After
public void closeBrowser() {
    driver.quit();
}

}

```

5. Main class:

Class 1:

```

public class LoginPage {
    static WebDriver driver;
    @FindBy(id="email")
    private WebElement txtUserName;
    @FindBy(id="pass")
    private WebElement txtUserPassword;
    @FindBy(id="u_0_r")
    private WebElement btnLoginButton;
    @FindBy(xpath="//*[@class='fb_logo img sp_sh983SE11WH sx_84be92']")
    private WebElement imgFbLogo;

    public LoginPage(WebDriver ldriver) {
        this.driver=ldriver;
        PageFactory.initElements(driver, this);
    }

    public WebElement getImgFbLogo() {
        return imgFbLogo;
    }
}

```

```

public void setImgFbLogo(WebElement imgFbLogo) {
    this.imgFbLogo = imgFbLogo;
}
public WebElement getTxtUserName() {
    return txtUserName;
}
public void setTxtUserName(WebElement txtUserName) {
    this.txtUserName=txtUserName;
}
public WebElement getTxtUserPassword() {
    return txtUserPassword;
}
public void setTxtUserPassword(WebElement txtUserPassword) {
    this.txtUserPassword=txtUserPassword;
}
public WebElement getBtnLoginButton() {
    return btnLoginButton;
}
public void setBtnLoginButton(WebElement btnLoginButton) {
    this.btnLoginButton = btnLoginButton;
}

}

```

Class 2:

```

public class NextPage {
    WebDriver driver;
    @FindBy(xpath="//*[text()='Recover Your Account']")
    private WebElement txtRecover;

    public WebElement getTxtRecover() {
        return txtRecover;
    }

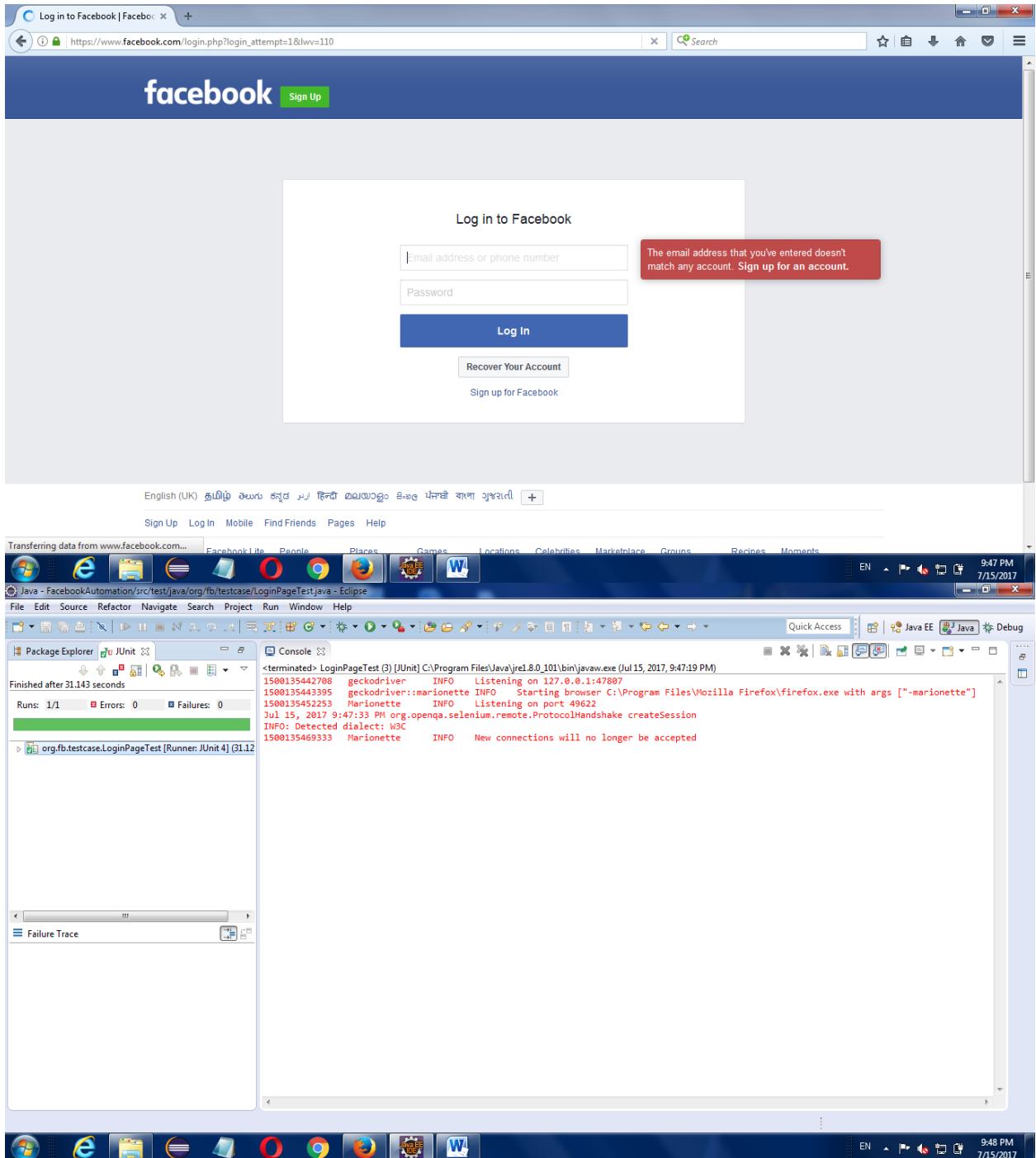
    public void setTxtRecover(WebElement txtRecover) {
        this.txtRecover = txtRecover;
    }

    public NextPage(WebDriver ldriver) {
        this.driver=ldriver;
        PageFactory.initElements(driver, this);
    }

}

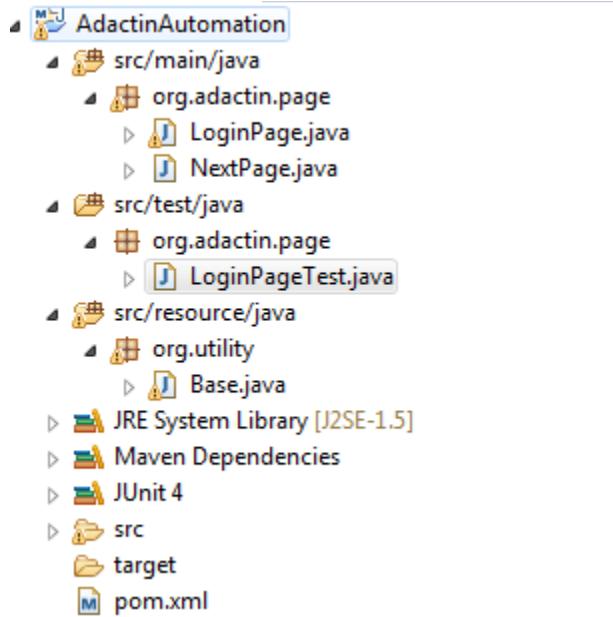
```

Output:



2. Adactin Hotel automation using POM & JUnit Framework(Updated reusable methods)- verify login functionality

1. Project structure:



2. Base class:

```
public class Base {  
    static WebDriver driver;  
    WebDriverWait wait;  
  
    public static WebDriver getDriver(String browser) {  
        if (browser.equals("chrome")) {  
            System.setProperty("webdriver.chrome.driver",  
"C:/Users/siva/workspace/Pom/Driver/chromedriver.exe");  
            driver = new ChromeDriver();  
  
        } else if (browser.equals("firefox")) {  
            System.setProperty("webdriver.gecko.driver",  
"C:/Users/siva/workspace/Pom/Driver/geckodriver.exe");  
            driver = new FirefoxDriver();  
  
        } else if (browser.equals("ie")) {  
            System.setProperty("webdriver.ie.driver",  
"C:/Users/siva/workspace/Pom/Driver/IEDriverServer.exe");  
            driver = new InternetExplorerDriver();  
    }  
}
```

```

} else if (browser.equals("opera")) {
    System.setProperty("webdriver.opera.driver",
        "C:/Users/siva/workspace/Pom/Driver/operadriver.exe");
    driver = new OperaDriver();

}

driver.manage().window().maximize();
driver.get("http://www.adactin.com/HotelApp/");
return driver;
}

public boolean elementToBeVisible(WebDriver driver, int time,
    WebElement element) {
    boolean flag = false;
    try {
        wait = new WebDriverWait(driver, time);
        wait.until(ExpectedConditions.visibilityOf(element));
        flag = true;
    } catch (Exception e) {
        e.printStackTrace();
    }
    return flag;
}

public boolean elementFound(WebDriver driver, int time, WebElement element)
{
    boolean res = false;
    driver.manage().timeouts().implicitlyWait(time, TimeUnit.SECONDS);
    try {
        res = element.isDisplayed();
    } catch (Exception e) {
        e.printStackTrace();
    }
    return res;
}

public boolean elementFound(WebElement element) {
    boolean b = false;
    try {
        b = element.isDisplayed();
    } catch (Exception e) {
        e.printStackTrace();
    }
}

```

```

        return b;

    }

public void setText(WebElement element, String name) {
    if (name != null && elementFound(element)) {
        element.clear();
        element.sendKeys(name);
    }
}

public String getText(WebElement element) {
    String name = null;
    if (elementFound(element)) {
        name = element.getAttribute("value");
    }
    return name;
}

public void clickBtn(WebElement element) {
    if (elementFound(element)) {
        element.click();
    }
}
}

```

3. JUnit class:

```

public class LoginPageTest {
    static WebDriver driver;
    LoginPage login;
    static Base base;
    NextPage next;

    @Before
    public void launchBrowser() {
        base = new Base();
        driver = Base.getDriver("firefox");

    }

    @Test
    public void verifyLogin() {

```

```

        login = new LoginPage(driver);
        next = new NextPage(driver);
        Assert.assertTrue(base.elementFound(driver, 1,
                login.getImgAdactinLogo()));
        Assert.assertTrue(base.elementFound(login.getImgHeader()));
        Assert.assertTrue(base.elementFound(login.getImgWelcome()));
        Assert.assertTrue(base.elementFound(login.getImgHotel1()));
        Assert.assertTrue(base.elementFound(login.getImgHotel2()));
        Assert.assertTrue(base.elementFound(login.getImgHotel3()));
        Assert.assertTrue(base.elementFound(login.getImgHotel4()));
        Assert.assertTrue(base.elementFound(login.getTxtExUser()));
        Assert.assertTrue(base.elementFound(login.getTxtForPass()));
        Assert.assertTrue(base.elementFound(login.getTxtNewUser()));
        Assert.assertTrue(base.elementFound(login.getTxtImpNote()));
        base.setText(login.getTxtUserName(), "vengat16");
        Assert.assertEquals("vengat16",
                base.getText(login.getTxtUserName()));
        base.setText(login.getTxtUserPassword(), "Karthick");
        Assert.assertEquals("Karthick",
                base.getText(login.getTxtUserPassword()));
        login.getTxtUserPassword().sendKeys(Keys.ENTER);
        base.elementToBeVisible(driver, 20, login.getBtnLoginButton());
        base.clickBtn(login.getBtnLoginButton());
        base.elementToBeVisible(driver, 20, next.getTxtLogout());
        Assert.assertTrue(base.elementFound(driver, 20,
                next.getTxtLogout())));
    }

    @After
    public void closeBrowser() {
        driver.quit();
    }
}

```

4. Main class:

Class 1:

```

public class LoginPage {
    static WebDriver driver;
    @FindBy(xpath=".//*[@id='username']")
    private WebElement txtUserName;
    @FindBy(id="password")
    private WebElement txtUserPassword;

```

```

@FindBy(id="login")
private WebElement btnLoginButton;
@FindBy(xpath="//*[@alt='AdactIn Group']")
private WebElement imgAdactinLogo;
@FindBy(xpath="//*[@class='header_title']")
private WebElement imgHeader;
@FindBy(xpath="//*[text()='Welcome to AdactIn Group of Hotels']")
private WebElement imgWelcome;
@FindBy(xpath="//*[@alt='Hotel Image 1']")
private WebElement imgHotel1;
@FindBy(xpath="//*[@alt='Hotel Image 2']")
private WebElement imgHotel2;
@FindBy(xpath="//*[@alt='Hotel Image 3']")
private WebElement imgHotel3;
@FindBy(xpath="//*[@alt='Hotel Image 4']")
private WebElement imgHotel4;
@FindBy(xpath="//*[text()='Existing User Login - Build 1']")
private WebElement txtExUser;
@FindBy(xpath="//*[text()='Forgot Password?']")
private WebElement txtForPass;
@FindBy(xpath="//*[text()='New User Register Here']")
private WebElement txtNewUser;
@FindBy(xpath="//*[text()='Important Note:']")
private WebElement txtImpNote;

public WebElement getImgAdactinLogo() {
    return imgAdactinLogo;
}
public void setImgAdactinLogo(WebElement imgAdactinLogo) {
    this.imgAdactinLogo = imgAdactinLogo;
}
public WebElement getImgHeader() {
    return imgHeader;
}
public void setImgHeader(WebElement imgHeader) {
    this.imgHeader = imgHeader;
}
public WebElement getImgWelcome() {
    return imgWelcome;
}
public void setImgWelcome(WebElement imgWelcome) {
    this.imgWelcome = imgWelcome;
}
public WebElement getImgHotel1() {
    return imgHotel1;
}

```

```
public void setImgHotel1(WebElement imgHotel1) {
    this.imgHotel1 = imgHotel1;
}
public WebElement getImgHotel2() {
    return imgHotel2;
}
public void setImgHotel2(WebElement imgHotel2) {
    this.imgHotel2 = imgHotel2;
}
public WebElement getImgHotel3() {
    return imgHotel3;
}
public void setImgHotel3(WebElement imgHotel3) {
    this.imgHotel3 = imgHotel3;
}
public WebElement getImgHotel4() {
    return imgHotel4;
}
public void setImgHotel4(WebElement imgHotel4) {
    this.imgHotel4 = imgHotel4;
}
public WebElement getTxtExUser() {
    return txtExUser;
}
public void setTxtExUser(WebElement txtExUser) {
    this.txtExUser = txtExUser;
}
public WebElement getTxtForPass() {
    return txtForPass;
}
public void setTxtForPass(WebElement txtForPass) {
    this.txtForPass = txtForPass;
}
public WebElement getTxtNewUser() {
    return txtNewUser;
}
public void setTxtNewUser(WebElement txtNewUser) {
    this.txtNewUser = txtNewUser;
}
public WebElement getTxtImpNote() {
    return txtImpNote;
}
public void setTxtImpNote(WebElement txtImpNote) {
    this.txtImpNote = txtImpNote;
}
public LoginPage(WebDriver ldriver) {
```

```

        this.driver=ldriver;
        PageFactory.initElements(driver, this);

    }

    public WebElement getimgAdactinLogo() {
        return imgAdactinLogo;
    }

    public void setimgAdactinLogo(WebElement imgAdactinLogo) {
        this.imgAdactinLogo = imgAdactinLogo;
    }

    public WebElement getTxtUserName() {
        return txtUserName;
    }

    public void setTxtUserName(WebElement txtUserName) {
        this.txtUserName=txtUserName;
    }

    public WebElement getTxtUserPassword() {
        return txtUserPassword;
    }

    public void setTxtUserPassword(WebElement txtUserPassword) {
        this.txtUserPassword=txtUserPassword;
    }

    public WebElement getBtnLoginButton() {
        return btnLoginButton;
    }

    public void setBtnLoginButton(WebElement btnLoginButton) {
        this.btnLoginButton = btnLoginButton;
    }

}

}

```

Class 2:

```

public class NextPage {
    WebDriver driver;
    @FindBy(xpath="//*[text()='Logout']")
    private WebElement txtLogout;

    public WebElement getTxtLogout() {
        return txtLogout;
    }
}

```

```
public void setTxtLogout(WebElement txtLogout) {
```

```

        this.txtLogout = txtLogout;
    }
}

```

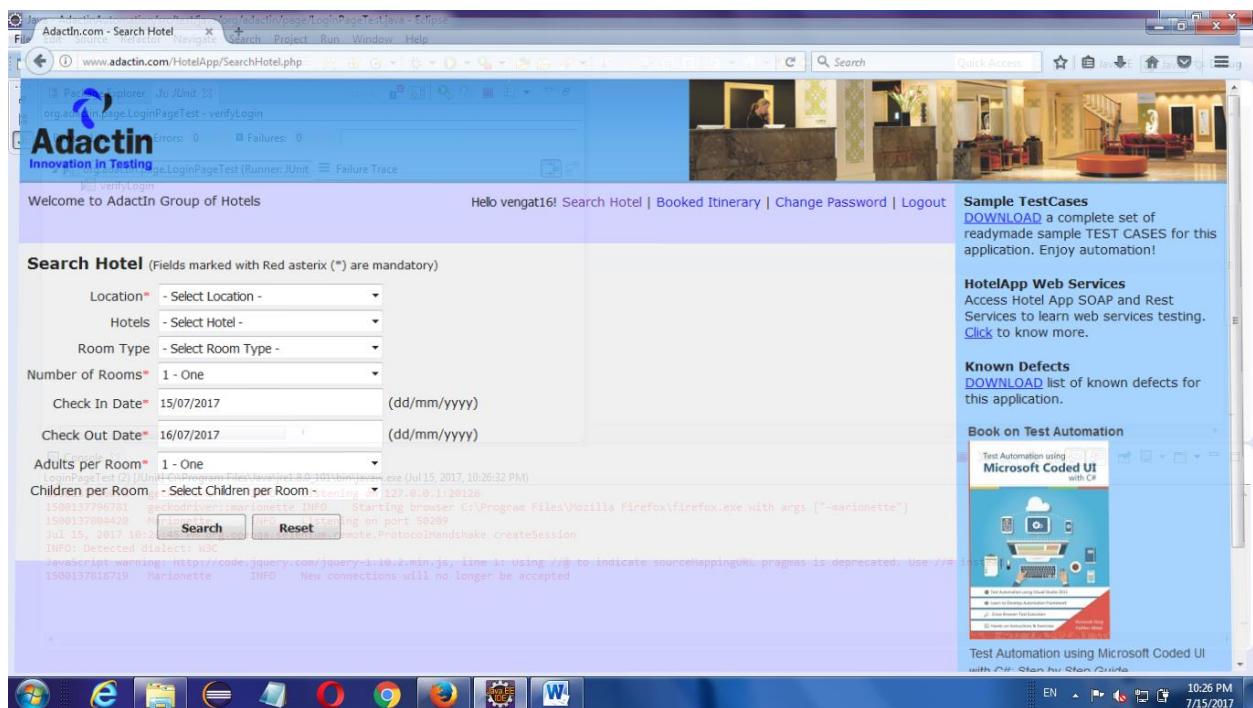
```

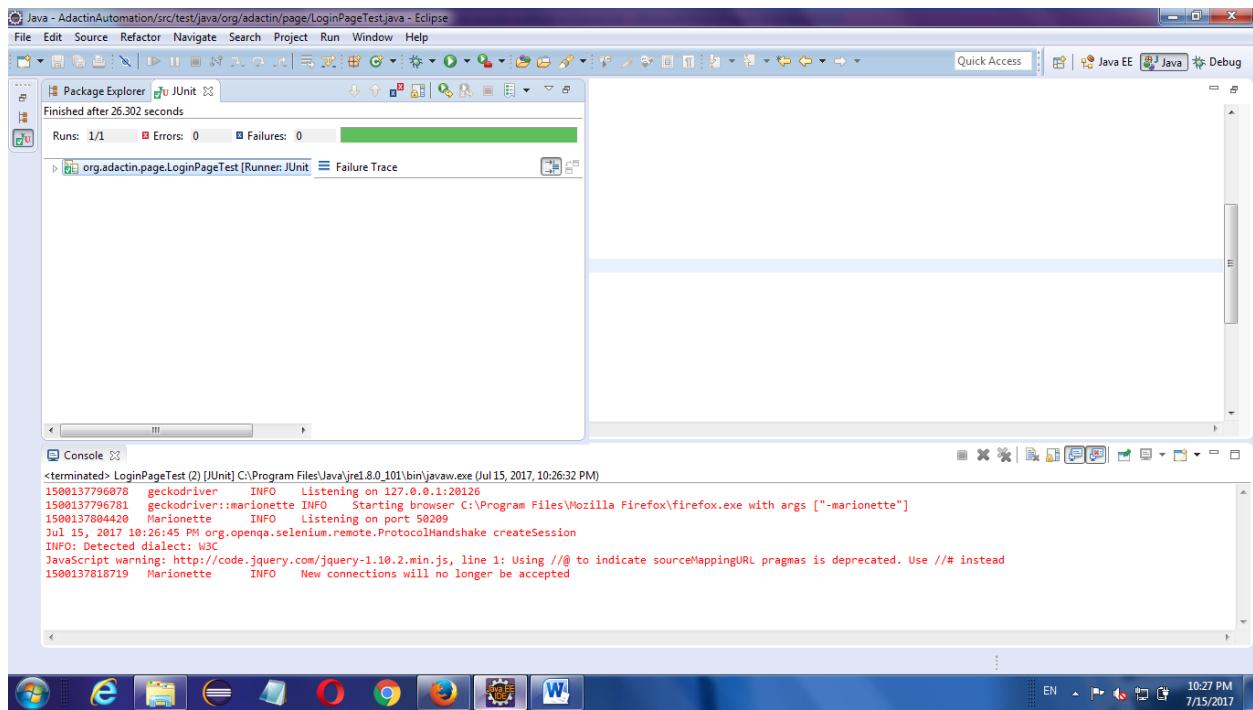
public NextPage(WebDriver ldriver) {
    this.driver=ldriver;
    PageFactory.initElements(driver, this);

}
}

```

Output:





SCREENSHOT REUSABLE METHOD

- We can add screenshot in reusable methods

```
public void getScreenShot(String screenShotFileName) {
    File screenShotLocation = new File("./screenshot/" +
screenShotFileName
                    + ".png");
    TakesScreenshot screenshot = (TakesScreenshot) driver;
    File file = screenshot.getScreenshotAs(OutputType.FILE);
    try {
        FileUtils.copyFile(file, screenShotLocation);
    } catch (IOException e) {
        e.printStackTrace();
    }
}
```

- We can use this screenshot method wherever we want in our test class

JSON METHOD

- JSON is **Java Script Object Notation**, an open standard format that uses human readable text to transmit data objects consisting of attribute-value pairs.
Ex, { "someKey": "someValue", "anotherKey": "value" } or

STEPS:

1. Right click your project → create one folder in the name of JSON.

2. In that folder, right click → create one file
3. In that file , we can create some attribute-value pairs whatever we want like below format

```
{"url":"https://www.facebook.com/","browser":"chrome"}
```

4. Add JSON jar in maven dependencies

- Here we just add JSON dependency code in the pom.xml
- Then click ctrl+S
- Then right click → Run as → maven install
- Then right click → maven →update project →select project → click ok

```

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>org.test.cts</groupId>
  <artifactId>GmailAutomation</artifactId>
  <version>0.1-SNAPSHOT</version>
  <packaging>jar</packaging>
  <name>GmailAutomation</name>
  <url>http://maven.apache.org</url>
  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  </properties>
  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.11</version>
    </dependency>
    <dependency>
      <groupId>org.seleniumhq.selenium</groupId>
      <artifactId>selenium-java</artifactId>
      <version>3.4.0</version>
    </dependency>
    <dependency>
      <groupId>com.googlecode.json-simple</groupId>
      <artifactId>json-simple</artifactId>
      <version>1.1.1</version>
    </dependency>
  </dependencies>
</project>

```

BROWSER CONFIGURATION USING JSON CODE :

```

public class Base {
    static WebDriver driver;
    WebDriverWait wait;
    static File f1 = new File("./JSON/Configuration.json");

    public static WebDriver getDriver() {
        JSONObject jsonObject = JSONReadFromFile();
        String browser = (String) jsonObject.get("browser");

        File f = new File("./driver");
        if (browser.equals("chrome")) {
            System.setProperty("webdriver.chrome.driver",
f.getAbsolutePath())
        }
    }
}

```

```

                + "/chromedriver.exe");
        driver = new ChromeDriver();

    } else if (browser.equals("firefox")) {
        System.setProperty("webdriver.gecko.driver",
f.getAbsolutePath()
                + "/geckodriver.exe");
        driver = new FirefoxDriver();

    } else if (browser.equals("ie")) {
        System.setProperty("webdriver.ie.driver",
f.getAbsolutePath()
                + "/IEDriverServer.exe");
        driver = new InternetExplorerDriver();

    }

    driver.manage().window().maximize();
    driver.get((String) jsonObject.get("url"));
    return driver;
}

public static JSONObject JSONReadFromFile() {
    JSONParser parser = new JSONParser();
    JSONObject jsonObject = null;
    try {

        Object obj = parser.parse(new
FileReader(f1.getAbsolutePath()));

        jsonObject = (JSONObject) obj;

    } catch (Exception e) {
        e.printStackTrace();
    }
    return jsonObject;
}

}

```

Configuration file:

```
{"url":"https://www.facebook.com/","browser":"chrome"}
```

Example program:

1. Facebook automation using JSON concept and screenshot method:

1. Base class:

```
public class Base {  
    static WebDriver driver;  
    WebDriverWait wait;  
    static File f1 = new File("./JSON/Configuration.json");  
  
    public static WebDriver getDriver() {  
        JSONObject jsonObject = JSONReadFromFile();  
        String browser = (String) jsonObject.get("browser");  
  
        File f = new File("./driver");  
        if (browser.equals("chrome")) {  
            System.setProperty("webdriver.chrome.driver", f.getAbsolutePath()  
                + "/chromedriver.exe");  
            driver = new ChromeDriver();  
  
        } else if (browser.equals("firefox")) {  
            System.setProperty("webdriver.gecko.driver", f.getAbsolutePath()  
                + "/geckodriver.exe");  
            driver = new FirefoxDriver();  
  
        } else if (browser.equals("ie")) {  
            System.setProperty("webdriver.ie.driver", f.getAbsolutePath()  
                + "/IEDriverServer.exe");  
            driver = new InternetExplorerDriver();  
  
        }  
  
        driver.manage().window().maximize();  
        driver.get((String) jsonObject.get("url"));  
        return driver;  
    }  
  
    public boolean elementToBeVisible(WebDriver driver, int time,  
        WebElement element) {  
        boolean flag = false;  
        try {  
            wait = new WebDriverWait(driver, time);  
            wait.until(ExpectedConditions.visibilityOf(element));  
            flag = true;  
        } catch (Exception e) {
```

```

e.printStackTrace();
}
return flag;
}

public boolean alertIsPresent(WebDriver driver, int time) {
boolean flag = false;
try {
wait = new WebDriverWait(driver, time);
wait.until(ExpectedConditions.alertIsPresent());
flag = true;
} catch (Exception e) {
e.printStackTrace();
}
return flag;
}

public boolean elementToBeClickable(WebDriver driver, int time,
WebElement element) {
boolean flag = false;
try {
wait = new WebDriverWait(driver, time);
wait.until(ExpectedConditions.elementToBeClickable(element));
flag = true;
} catch (Exception e) {
e.printStackTrace();
}
return flag;
}

public boolean elementFound(WebDriver driver, int time, WebElement element)
{
boolean res = false;
driver.manage().timeouts().implicitlyWait(time, TimeUnit.SECONDS);
try {

res = element.isDisplayed();
} catch (Exception e) {
e.printStackTrace();
}

return res;
}

public boolean elementFound(WebElement element) {

```

```
boolean res = false;
try {
    res = element.isDisplayed();
} catch (Exception e) {
    e.printStackTrace();
}

return res;
}

public void setText(WebElement element, String name) {
if (name != null && elementFound(element)) {
    element.clear();
    element.sendKeys(name);
}
}

public String getText(WebElement element) {
String name = null;
if (elementFound(element)) {
    name = element.getAttribute("value");
}
return name;
}

public void clickBtn(WebElement element) {
if (elementFound(element)) {
    element.click();
}
}

public static JSONObject JSONReadFromFile() {
JSONParser parser = new JSONParser();
JSONObject jsonObject = null;
try {

Object obj = parser.parse(new FileReader(f1.getAbsolutePath()));

jsonObject = (JSONObject) obj;

} catch (Exception e) {
e.printStackTrace();
}
return jsonObject;
}
```

```

}

public void getScreenShot(String screenShotFileName) {
    File screenShotLocation = new File("./screenshot/" + screenShotFileName
        + ".png");
    TakesScreenshot screenshot = (TakesScreenshot) driver;
    File file = screenshot.getScreenshotAs(OutputType.FILE);
    try {
        FileUtil.copyFile(file, screenShotLocation);
    } catch (IOException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}
}
}

```

- Here we using JSON concept for getting browser and url

JUnit class:

```

public class LoginPageTest {
    static WebDriver driver;
    LoginPage loginPage;
    HomePage homePage;
    Base base = new Base();

    @BeforeClass
    public static void launchBrowser() {
        driver = Base.getDriver();
    }

    @Test
    public void verifyLoginDetails() {

        loginPage = new LoginPage(driver);
        homePage = new HomePage(driver);
        Assert.assertTrue(base.elementFound(driver, 10,
            loginPage.getImgFbLogo()));
        base.getScreenShot("facebookPage");

        base.setText(loginPage.getTxtUserName(),
        "ramesh@gmail.com");
        base.getScreenShot("username");
        Assert.assertEquals("ramesh@gmail.com",

```

```

        base.getText(loginPage.getTxtUserName()));
        base.getScreenShot("password");
        loginPage.setTxtPassword("12345");
        base.setText(loginPage.getTxtPassword(), "12345");
        base.getScreenShot("login");
        Assert.assertEquals("12345",
    base.getText(loginPage.getTxtPassword()));
        base.clickBtn(loginPage.getBtnLogin());
        base.getScreenShot("after login");

    }

@AfterClass
public static void closeBrowser() {
    driver.quit();

}

}

```

- In this test class, we have using screenshot method for homepage , username, password and after login
- In this all screenshot will be stored in screenshot folder inside the project

Main class:

Class 1

```

public class LoginPage extends Base {
    WebDriver driver;

    @FindBy(id = "email")
    private WebElement txtUserName;

    @FindBy(id = "pass")
    private WebElement txtPassword;

    @FindBy(xpath = "//*[text()='Log In']")
    private WebElement btnLogin;

    @FindBy(xpath = "//a[@title='Go to Facebook home']")
    private WebElement imgFbLogo;

    public WebElement getImgFbLogo() {
        return imgFbLogo;
    }
}

```

```

public void setImgFbLogo(WebElement imgFbLogo) {
    this.imgFbLogo = imgFbLogo;
}

public void setTxtUserName(WebElement txtUserName) {
    this.txtUserName = txtUserName;
}

public void setTxtPassword(WebElement txtPassword) {
    this.txtPassword = txtPassword;
}

public LoginPage(WebDriver ldriver) {
    this.driver = ldriver;
    PageFactory.initElements(driver, this);
}

public WebElement getTxtUserName() {
    return txtUserName;
}

public WebElement getTxtPassword() {
    return txtPassword;
}

public void setTxtPassword(String txtPassword) {
    this.txtPassword.sendKeys(txtPassword);
}

public WebElement getBtnLogin() {
    return btnLogin;
}

public void setBtnLogin(WebElement btnLogin) {
    this.btnLogin = btnLogin;
}
}

```

Class 2

```

public class HomePage {
    WebDriver driver;
    @FindBy(xpath = "//*[text()='Home']")
    private WebElement imgHomePageLogo;
}

```

```

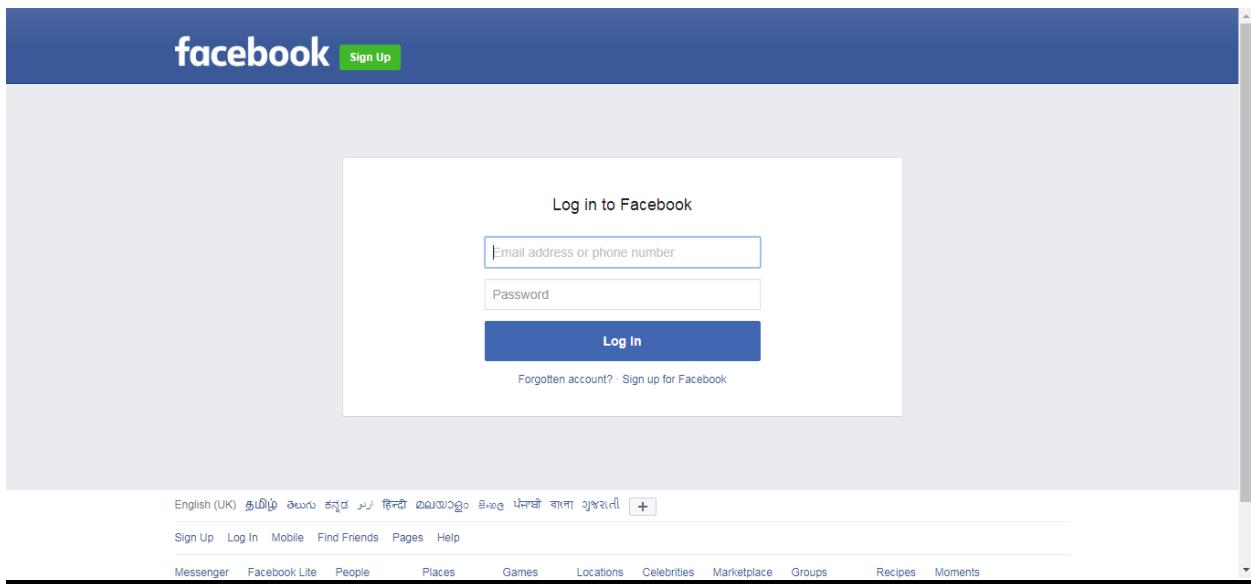
public HomePage(WebDriver driver) {
    this.driver = driver;
    PageFactory.initElements(driver, this);
}

public WebElement getImgHomePageLogo() {
    return imgHomePageLogo;
}

public void setImgHomePageLogo(WebElement imgHomePageLogo) {
    this.imgHomePageLogo = imgHomePageLogo;
}

```

Screenshots:



facebook

Email or Phone Password Log In
Forgotten account?

Create an account

Facebook helps you connect and share with the people in your life.



It's free and always will be.

First name Surname
Mobile number or email address
New password

Birthday Why do I need to provide my date of birth?
 Female Male

By clicking Create an account, you agree to our [Terms and Conditions](#) and confirm that you have read our [Data Policy](#), including our [Cookie Use Policy](#). You may receive SMS message notifications from Facebook and can opt out at any time.

Create an account

facebook

Email or Phone ramesh@gmail.com Password Log In
Forgotten account?

Create an account

Facebook helps you connect and share with the people in your life.



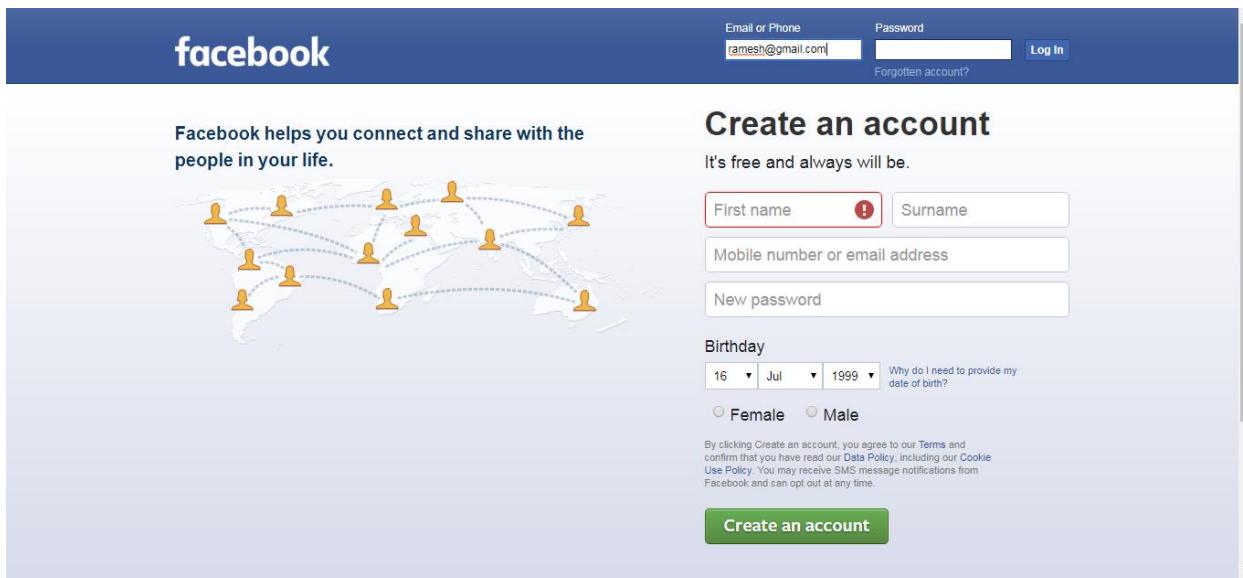
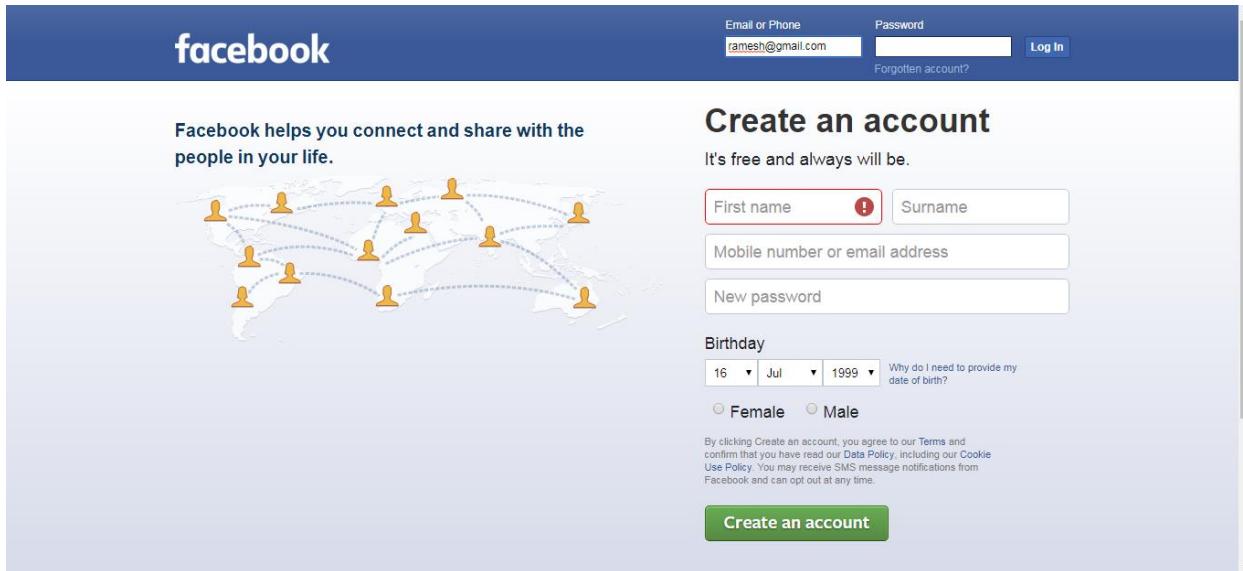
It's free and always will be.

First name Surname
Mobile number or email address
New password

Birthday Why do I need to provide my date of birth?
 Female Male

By clicking Create an account, you agree to our [Terms and Conditions](#) and confirm that you have read our [Data Policy](#), including our [Cookie Use Policy](#). You may receive SMS message notifications from Facebook and can opt out at any time.

Create an account



FILE UPLOAD METHOD:

- We can't upload a file using selenium.
- So we have one class is there for uploading file (i.e.) **Robot class**

```
public static void uploadFiles(File path) {
    try {
        Robot robot = new Robot();
        robot.setAutoDelay(3000);
        StringSelection selection = new StringSelection(
            path.getAbsolutePath());
        Toolkit.getDefaultToolkit().getSystemClipboard()
```

```

        .setContents(selection, null);
// press ctrl+v
robot.keyPress(KeyEvent.VK_CONTROL);
robot.keyPress(KeyEvent.VK_V);
robot.setAutoDelay(3000);
// release ctrl+v
robot.keyRelease(KeyEvent.VK_CONTROL);
robot.keyRelease(KeyEvent.VK_V);
// press enter
robot.setAutoDelay(3000);
robot.keyPress(KeyEvent.VK_ENTER);
robot.keyRelease(KeyEvent.VK_ENTER);

} catch (AWTException e) {

    e.printStackTrace();
}

}

```

Here ,

- Robot → class
- StringSelection → class
- Using this method we can upload any file.

EXERCISE:

1. Demo site registration with file upload:

Base class:

```

public class Base {
    static WebDriver driver;
    WebDriverWait wait;
    static File f1 = new File("./JSON/Configuration.json");

    public static WebDriver getDriver() {
        JSONObject jsonObject = JSONReadFromFile();
        String browser = (String) jsonObject.get("browser");

        File f = new File("./driver");
        if (browser.equals("chrome")) {
            System.setProperty("webdriver.chrome.driver", f.getAbsolutePath()
                + "/chromedriver.exe");
        }
    }
}

```

```

driver = new ChromeDriver();

} else if (browser.equals("firefox")) {
    System.setProperty("webdriver.gecko.driver", f.getAbsolutePath()
        + "/geckodriver.exe");
    driver = new FirefoxDriver();

} else if (browser.equals("ie")) {
    System.setProperty("webdriver.ie.driver", f.getAbsolutePath()
        + "/IEDriverServer.exe");
    driver = new InternetExplorerDriver();
}

driver.manage().window().maximize();
driver.get((String) jsonObject.get("url"));
return driver;
}

public boolean elementToBeVisible(WebDriver driver, int time,
    WebElement element) {
    boolean flag = false;
    try {
        wait = new WebDriverWait(driver, time);
        wait.until(ExpectedConditions.visibilityOf(element));
        flag = true;
    } catch (Exception e) {
        e.printStackTrace();
    }
    return flag;
}

public boolean elementFound(WebDriver driver, int time, WebElement element) {
    boolean res = false;
    driver.manage().timeouts().implicitlyWait(time, TimeUnit.SECONDS);
    try {
        res = element.isDisplayed();
    } catch (Exception e) {
        e.printStackTrace();
    }
    return res;
}

public boolean elementFound(WebElement element) {
    boolean b = false;
    try {
        b = element.isDisplayed();
    }
}

```

```

        } catch (Exception e) {
            e.printStackTrace();
        }
        return b;
    }

public void setText(WebElement element, String name) {
    if (name != null && elementFound(element)) {
        element.clear();
        element.sendKeys(name);
    }
}

public String getText(WebElement element) {
    String name = null;
    if (elementFound(element)) {
        name = element.getAttribute("value");
    }
    return name;
}

public void clickBtn(WebElement element) {
    if (elementFound(element)) {
        element.click();
    }
}

public void dropDownSelect(WebElement element, String name) {
    Select s=new Select(element);
    try{
        s.selectByValue(name);}
    catch(Exception e){
        e.printStackTrace();
    }
}

public void dropDownSelectVText(WebElement element, String name) {
    Select s=new Select(element);
    s.selectByVisibleText(name);
}

public static JSONObject JSONReadFromFile() {
    JSONParser parser = new JSONParser();
    JSONObject jsonObject = null;
    try {

        Object obj = parser.parse(new FileReader(f1.getAbsoluteFile()));
    }
}

```

```

        jsonObject = (JSONObject) obj;

    } catch (Exception e) {
        e.printStackTrace();
    }
    return jsonObject;
}
public static void uploadFiles(File path) {
    try {
        Robot robot = new Robot();
        robot.setAutoDelay(3000);
        StringSelection selection = new StringSelection(
            path.getAbsolutePath());
        Toolkit.getDefaultToolkit().getSystemClipboard()
            .setContents(selection, null);
        // press control+v
        robot.keyPress(KeyEvent.VK_CONTROL);
        robot.keyPress(KeyEvent.VK_V);
        robot.setAutoDelay(3000);
        // release control+v
        robot.keyRelease(KeyEvent.VK_CONTROL);
        robot.keyRelease(KeyEvent.VK_V);
        // press enter
        robot.setAutoDelay(3000);
        robot.keyPress(KeyEvent.VK_ENTER);
        robot.keyRelease(KeyEvent.VK_ENTER);

    } catch (AWTException e) {
        e.printStackTrace();
    }
}

```

Junit class:

```

public class RegisterTest extends Base {
    static WebDriver driver;
    RegisterPage page;

    @BeforeClass
    public static void launchBrowser() {
        driver = Base.getDriver();
    }
}

```

```

@Test
public void registerDetails() {
    page = new RegisterPage();
    setText(page.getTxtFirstName(), "venkat");
    setText(page.getTxtLastName(), "ram");
    setText(page.getTxtAddress(), "xyzcolony,xyz street,xyz");
    setText(page.getTxtEmailAdress(), "venkat6@gmail.com");
    setText(page.getTxtPhoneNumber(), "9996599965");
    clickBtn(page.getBtnGender());
    clickBtn(page.getBtnCricket());
    clickBtn(page.getBtnHockey());
    clickBtn(page.getBtnMovies());
    clickBtn(page.getTxtlanguage());
    dropDownSelectVText (page.getDrpDwnSkills(), "Analytics");
    dropDownSelectVText (page.getDrpDwnCountries(), "Afghanistan");
    clickBtn(page.getDrpdwnSelectCountry());
    clickBtn(page.getDrpdwnSelectCountryDen());
    dropDownSelectVText (page.getDrpdwnYear(), "1993");
    dropDownSelectVText (page.getDrpdwnMonth(), "11");
    dropDownSelectVText (page.getDrpdwnDay(), "16");
    setText(page.getTxtPassword(), "Karthick123");
    setText(page.getTxtConfirmPassword(), "Karthick123");
    clickBtn(page.getBtnBrowse());
    uploadFiles(new File("./Files/Core java material.pdf"));
    Assert.assertTrue(elementFound(page.getImgbrowse()));
    clickBtn(page.getBtnSubmit());
}

@AfterClass
public static void closeBrowser() {
    driver.quit();
}

```

Main class:

```

public class RegisterPage extends Base {
    @FindBy(xpath="//*[@ ng-model='FirstName']")
}

```

```
private WebElement txtFirstName;  
@FindBy(xpath="//*[ @ ng-model='LastName']")  
private WebElement txtLastName;  
@FindBy(xpath="//*[ @ ng-model='Adress']")  
private WebElement txtAddress;  
@FindBy(xpath="//*[ @ ng-model='EmailAdress']")  
private WebElement txtEmailAdress;  
@FindBy(xpath="//*[ @ ng-model='Phone']")  
private WebElement txtPhoneNumber;  
@FindBy(xpath="//*[ @ value='Male']")  
private WebElement btnGender;  
@FindBy(id = "checkbox1")  
private WebElement btnCricket;  
@FindBy(id = "checkbox2")  
private WebElement btnMovies;  
@FindBy(id = "checkbox3")  
private WebElement btnHockey;  
@FindBy(id = "msdd")  
private WebElement txtlanguage;  
@FindBy(id="Skills")  
private WebElement drpdwnskills;  
@FindBy(id="countries")  
private WebElement drpdwnCountries;  
@FindBy(xpath="//*[ @role='combobox']")  
private WebElement drpdwnSelectCountry;  
@FindBy(xpath=".//*[ @id='select2-country-results']/li[4]")  
private WebElement drpdwnSelectCountryDen;  
@FindBy(id="imagesrc")  
private WebElement imgbrowse;  
@FindBy(id="yearbox")  
private WebElement drpdwnYear;  
@FindBy(xpath="//*[ @placeholder='Month']")  
private WebElement drpdwnMonth;  
@FindBy(id="daybox")  
private WebElement drpdwnDay;  
@FindBy(id="firstpassword")  
private WebElement txtPassword;  
@FindBy(id="secondpassword")  
private WebElement txtConfirmPassword ;  
@FindBy(id="submitbtn")  
private WebElement btnSubmit ;  
@FindBy(xpath="//*[ @id='section']/div/h2")  
private WebElement imgRegister ;  
@FindBy(id = "imagesrc")  
private WebElement btnBrowse;
```

```
public WebElement getImgbrowse() {
    return imgbrowse;
}

public WebElement getDrpdwnSelectCountryDen() {
    return drpdwnSelectCountryDen;
}

public WebElement getTxtFirstName() {
    return txtFirstName;
}

public WebElement getTxtLastName() {
    return txtLastName;
}

public WebElement getTxtAddress() {
    return txtAddress;
}

public WebElement getTxtEmailAdress() {
    return txtEmailAdress;
}

public WebElement getTxtPhoneNumber() {
    return txtPhoneNumber;
}

public WebElement getBtnGender() {
    return btnGender;
}

public WebElement getBtnCricket() {
    return btnCricket;
}

public WebElement getBtnMovies() {
    return btnMovies;
}

public WebElement getBtnHockey() {
    return btnHockey;
}

public WebElement getTxtlanguage() {
    return txtlanguage;
}
```

```
}

public WebElement getDrpDwnSkills() {
    return drpdwnskills;
}

public WebElement getDrpDwnCountries() {
    return drpdwnCountries;
}

public WebElement getDrpdwnSelectCountry() {
    return drpdwnSelectCountry;
}

public WebElement getDrpdwnYear() {
    return drpdwnYear;
}

public WebElement getDrpdwnMonth() {
    return drpdwnMonth;
}

public WebElement getDrpdwnDay() {
    return drpdwnDay;
}

public WebElement getTxtPassword() {
    return txtPassword;
}

public WebElement getTxtConfirmPassword() {
    return txtConfirmPassword;
}

public WebElement getBtnSubmit() {
    return btnSubmit;
}

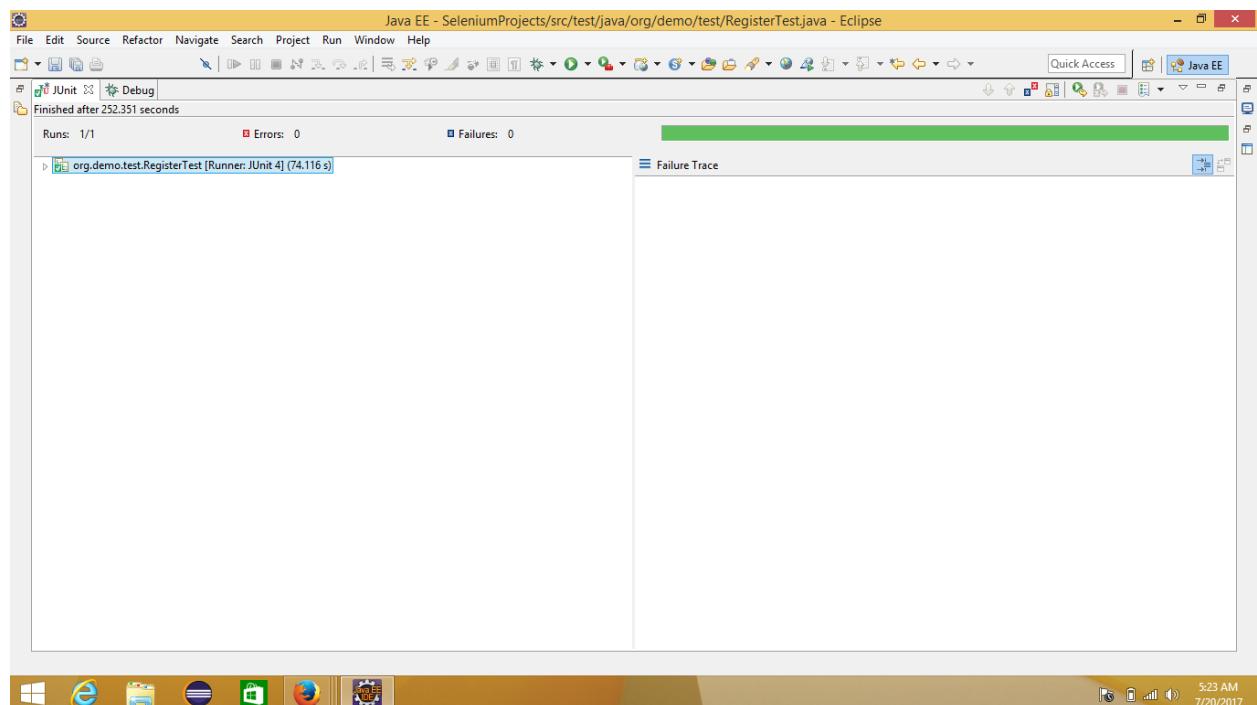
public WebElement getImgRegister() {
    return imgRegister;
}

public WebElement getBtnBrowse() {
    return btnBrowse;
}
```

```
public RegisterPage() {
    PageFactory.initElements(Base.driver, this);
}

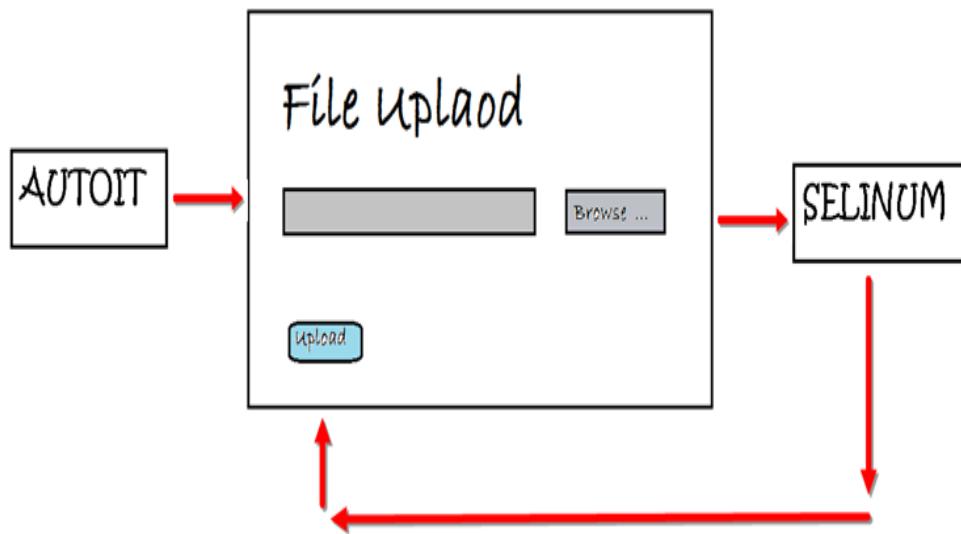
}
```

Output:



File uploading using Autoit

Selenium is an open source tool that is designed to automate web-based applications on different browsers but to handle window GUI and non HTML popups in application. AutoIT is required as these window based activity are not handled by Selenium.



AutoIt v3 is also freeware. It uses a combination of mouse movement, keystrokes and window control manipulation to automate a task which is not possible by selenium webdriver.

Moving ahead we will learn how to upload a file in selenium web driver using autoIT. Here we need three tools in order to this.

- Selenium Webdriver
- AutoIT editor and element identifier
- The window that you want to automate

In this tutorial, you will learn-

- How to AutoIT download and install
- Finding element through element Identifier and writing script on AutoIT editor.
- AutoIT Upload file in Selenium Webdriver

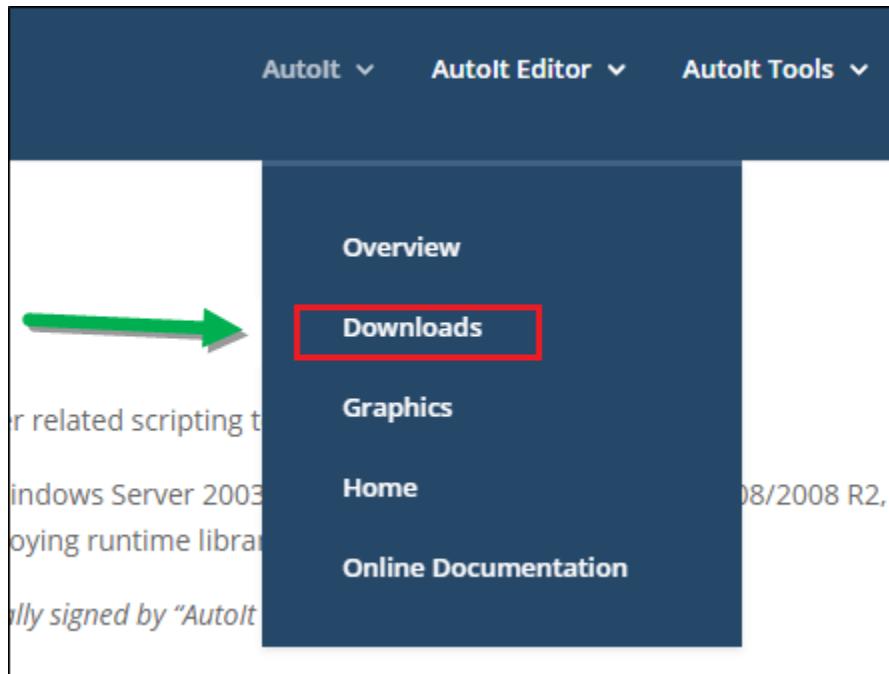
How to download and install AutoIT

Step 1): Go to this link.

Step 2): Hover on 'Autoit' and 'Autoit Editor' dropdown.



Step 3) Click on 'AutoIT' Downloads option.



Step 4): Download "Autoit" by clicking on 'Download Autoit' button .

Current Versions

✓ **Latest version:** v3.3.14.2

Updated: 18 September, 2015

History: [View changelog](#)

Software

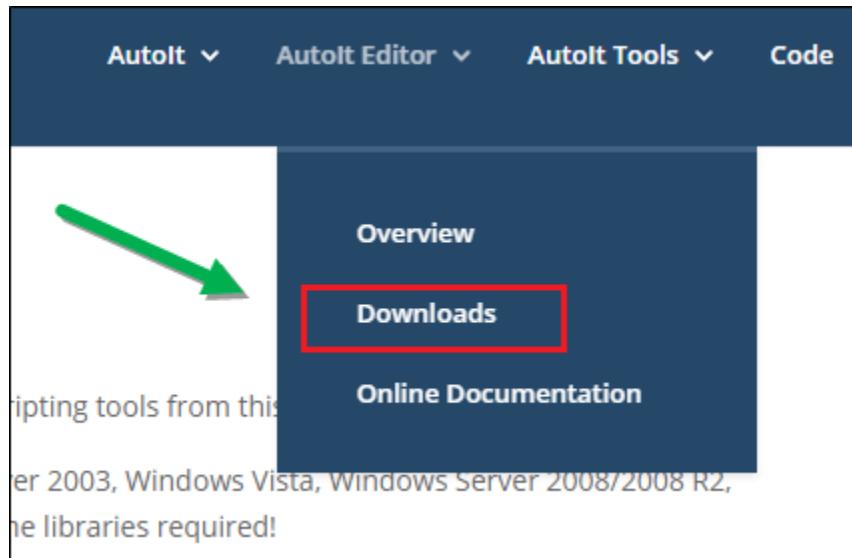
Download

AutoIt Full Installation. Includes x86 and x64 components, and:

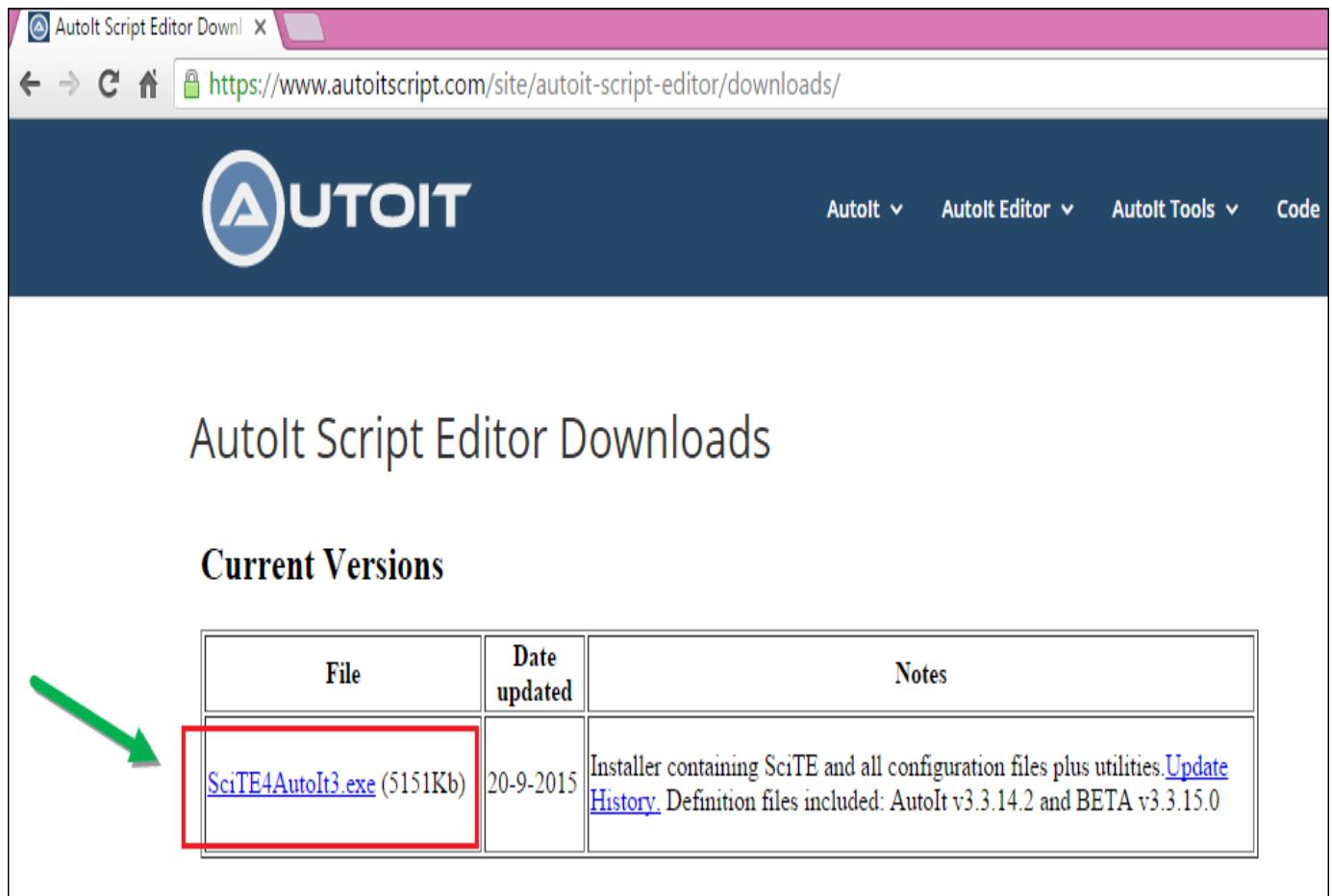
- **AutoIt** program files, documentation and examples.
- **Aut2Exe** - Script to executable converter. Convert your scripts into standalone .exe files!
- **AutoItX** - DLL/COM control. Add AutoIt features to your favorite programming and scripting languages! Also features a C# assembly and PowerShell CmdLets.
- **Editor** - A cut down version of the SciTE script editor package to get started. Download the package below for the full version!



Step 5): Now download "Autoit editor" by clicking on 'Downloads' button .



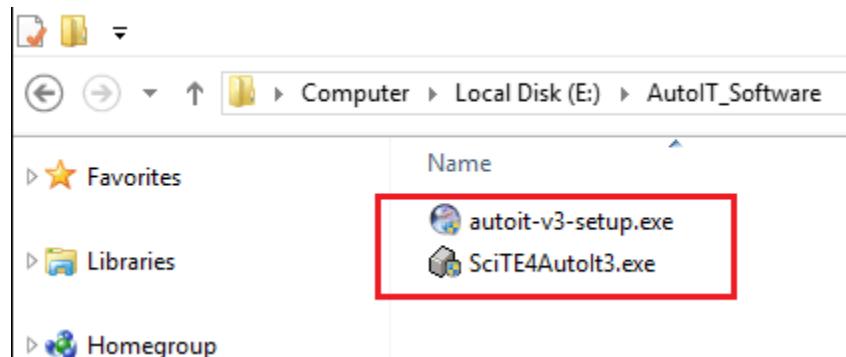
Step 6): Click on the link as shown below.



The screenshot shows a web browser window with the URL <https://www.autoitscript.com/site/autoit-script-editor/downloads/>. The page title is "AutoIt Script Editor Downloads". The header features the AutoIt logo and navigation links for AutoIt, AutoIt Editor, AutoIt Tools, and Code. Below the header, there is a section titled "Current Versions" with a table. The table has three columns: "File", "Date updated", and "Notes". The first row contains a link to "SciTE4AutoIt3.exe" (5151Kb) which is highlighted with a red box and a green arrow pointing to it. The date updated is 20-9-2015, and the notes mention an installer containing SciTE and configuration files plus utilities, with links to "Update History".

File	Date updated	Notes
SciTE4AutoIt3.exe (5151Kb)	20-9-2015	Installer containing SciTE and all configuration files plus utilities. Update History . Definition files included: AutoIt v3.3.14.2 and BETA v3.3.15.0

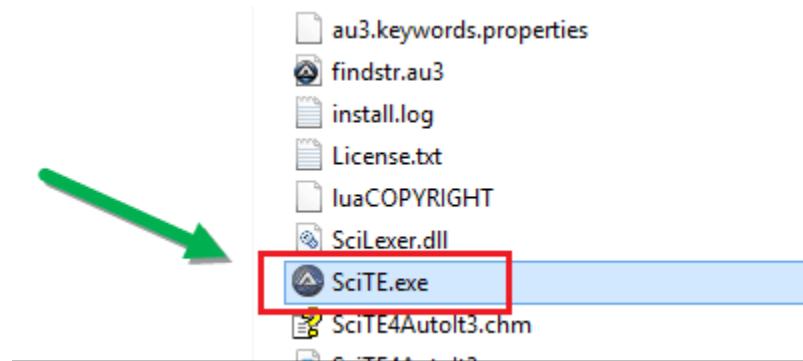
After download you will get two setup file as shown in below screen, first is **AutoIt version 3** setup and second is **Scitautoit3** .



Step 6): For Installing AutoIT-Click on both AutoIT setup one by one .

Step 7) After successfully installation - open up AutoIT Editor.

Go to 'C:\Program Files (x86)\AutoIt3\SciTE'

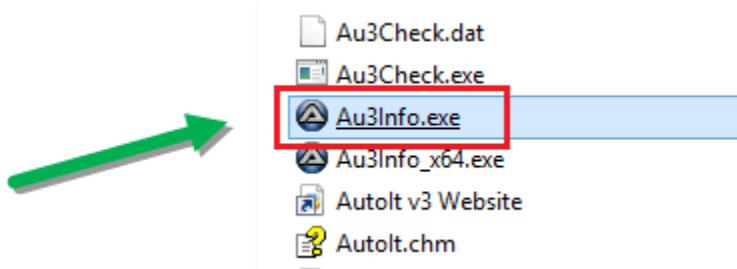


and click on 'SciTE.exe' file, the AutoIT editor opens as shown in below screen.

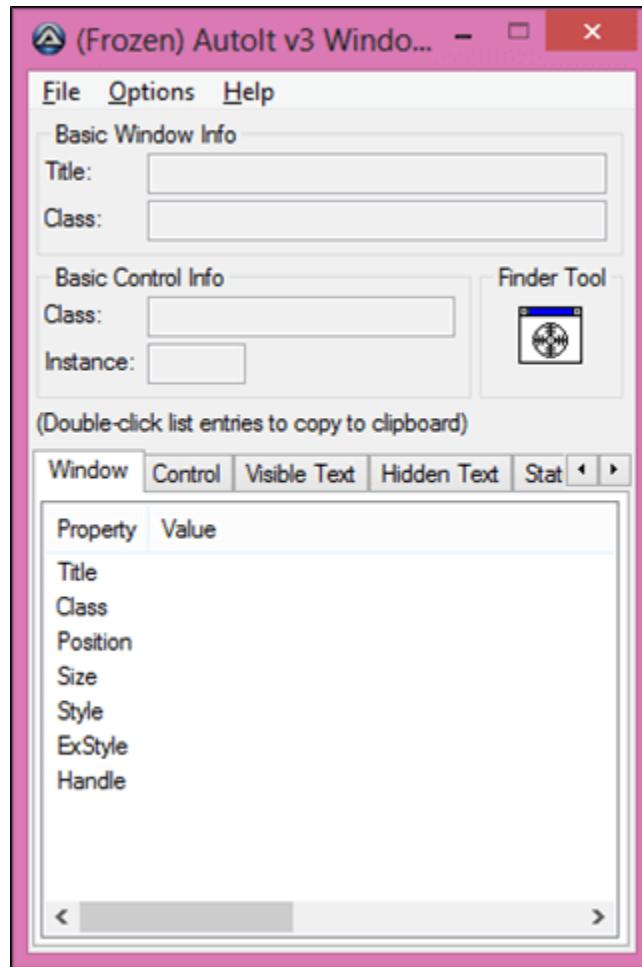


Step 8) Now opens element Identifier .

Go to 'C:\Program Files (x86)\AutoIt3 '



And click on 'Au3Info.exe' file, the element identifier opens as shown in below screen.



Note: Once you done with this element identifier you need to close manually, it will not close automatically.

Finding element through element Identifier and writing script on AutoIT editor.

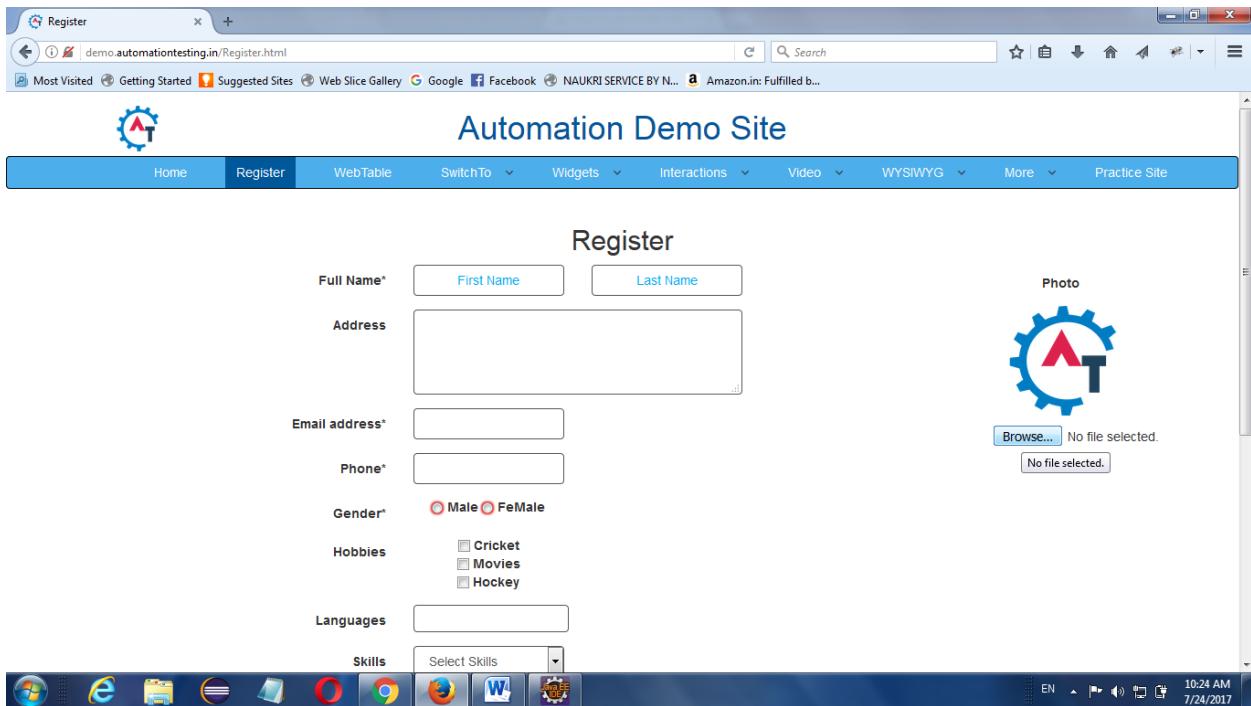
Under this, we will see how to find element on file uploader window through AutoIT Element Identifier (Element identifier is a tool like selenium IDE, identifier find the element of window GUI or non HTML popups and provide the attribute of element like **title**, **class**, **instance**) and how to write script on AutoIT editor using 3 methods.

For Example: We will use <http://demo.automationtesting.in/Register.html> this page for uploading **Raja.doc** file.

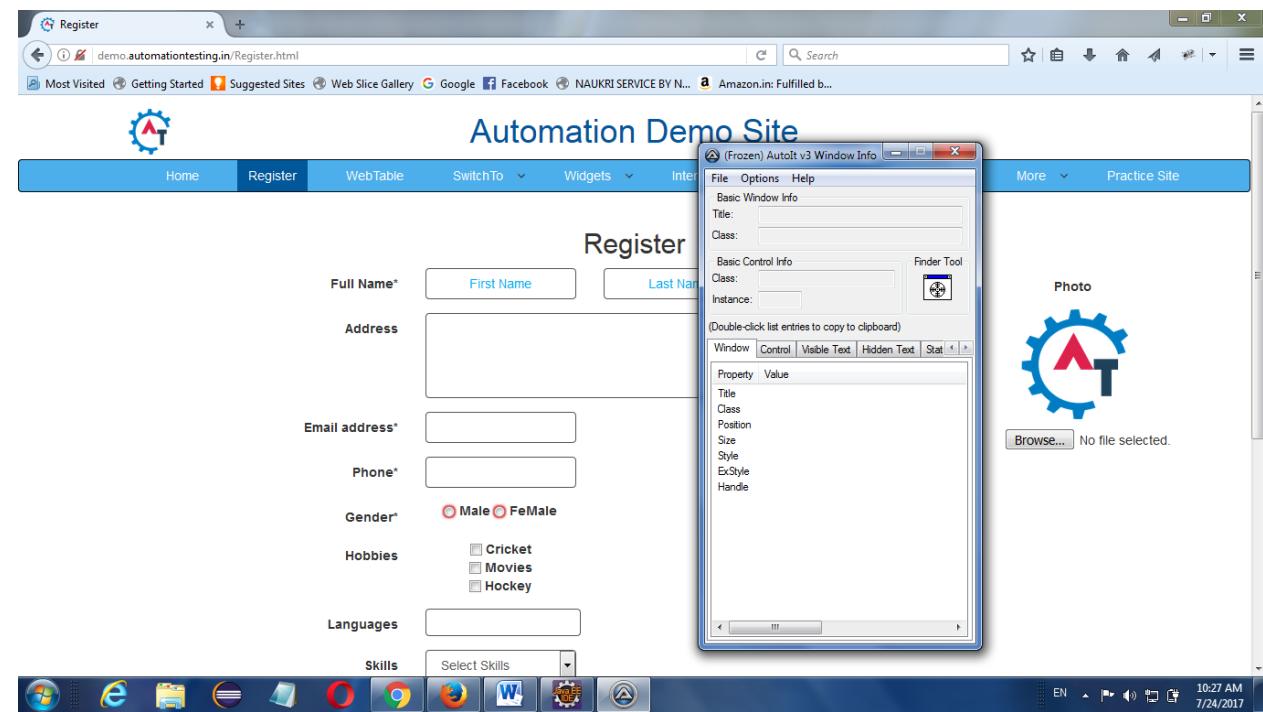
After clicking on 'Choose File' button from the "Write to us" page, we need to call AutoIT script. The control immediately transferred to autoit after clicking 'Choose File' by the below statement which takes care of uploading part.

```
Runtime.getRuntime().exec("E:\\AutoIT\\FileUpload.exe");
```

Finally, when we run selenium script-it will fill the form-> upload resume-> Submit form.



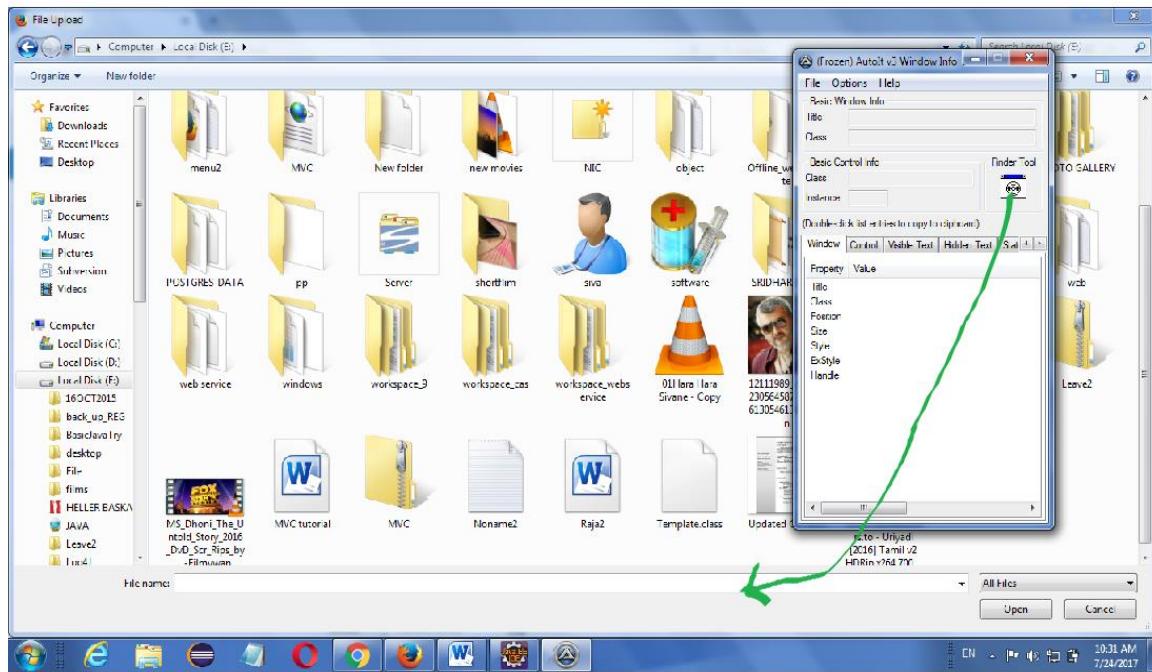
Step 1): Now open element Identifier- Go to 'C:\Program Files (x86)\AutoIt3' and click on 'Au3Info.exe' file, the element identifier window opens as shown in below screen.



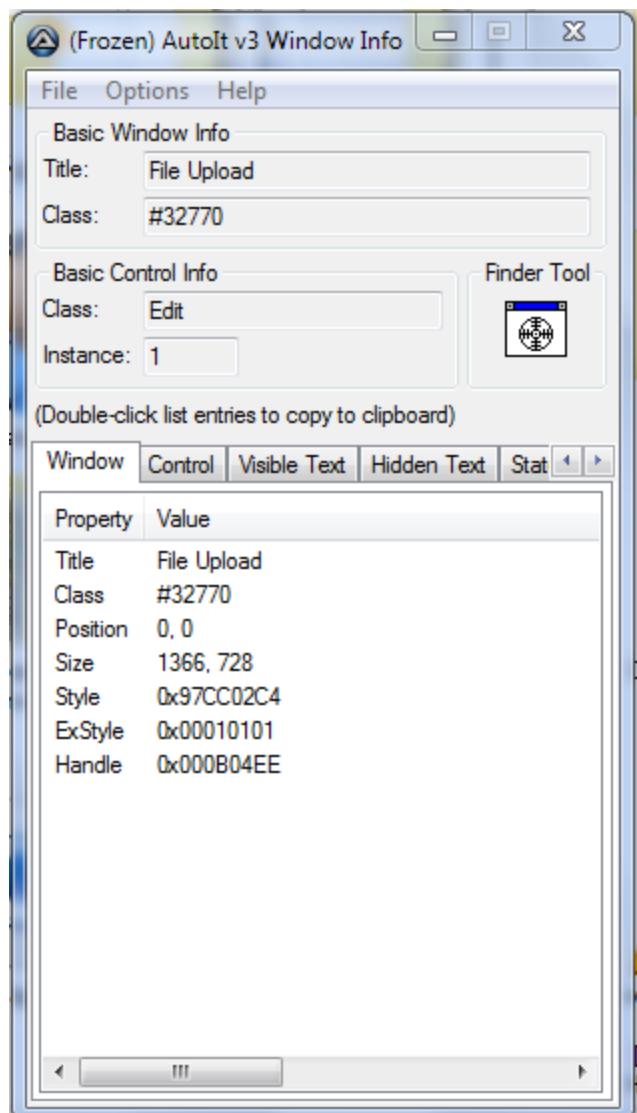
Step 2): Now open file uploader window by clicking on 'Choose File' which is windows activity.



Step 3): Drag the finder tool on the " File Name" box element of file uploader window to find the basic attributes info as shown in the below screen with the arrow.



We can get the value of attributes i.e. **title='Open'**, **class='Edit'** and **instance='1'** as shown below. These values are used in writing AutoIT script as explained in below step 4.



Step 4): Now open AutoIT script editor, goto 'C:\Program Files (x86)\AutoIt3\SciTE' and click on 'SciTE.exe' as shown in step 7 from the 1st topic.

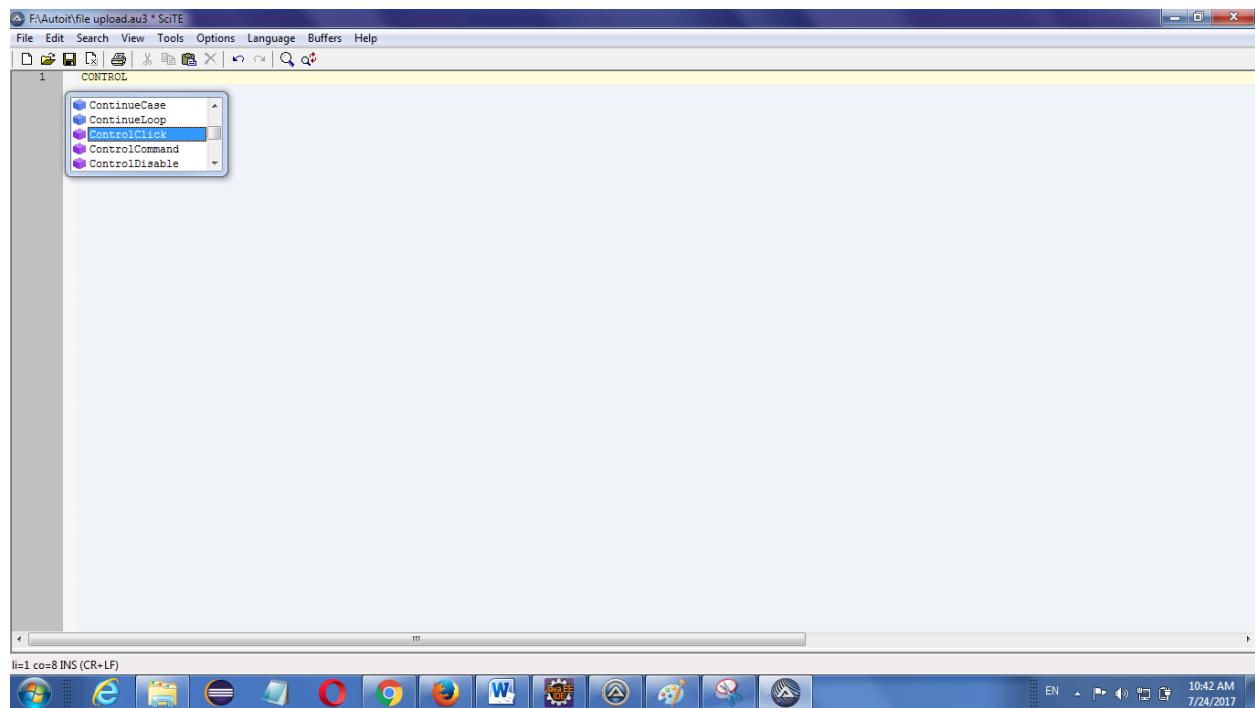
Start writing a script for selecting a file to upload.

There are lots of method available which we can use in a script according to the requirement, but right now we will focus on the below methods as these methods are required for writing file upload script:

1. ControlFocus(" title "," text ",controlID) //Sets input focus to a given control on a window.

- 2. ControlSetText(" title "," text ",controlID , " File path which need to upload ") // Sets text of a control.**
- 3. ControlClick(" title "," text ",controlID) //Sends a mouse click command to a given control.**

You can see a number of methods are displayed as shown in below screen. The good feature of AutoIT is that it is somewhat like Eclipse that suggests you some of the methods.



Here in the AutoIT editor, we have selected "**control focus**" method. Element identifier is already opened and minimized as the element is already identified in above step 3. We can open it by maximizing it.

Now, we will take the values from element identifier for 'ControlFocus' and 'ControlSetText' methods as these methods works on same element i.e. 'File name' text box but for 'ControlClick' method need to capture values of different element i.e. 'Open' button.

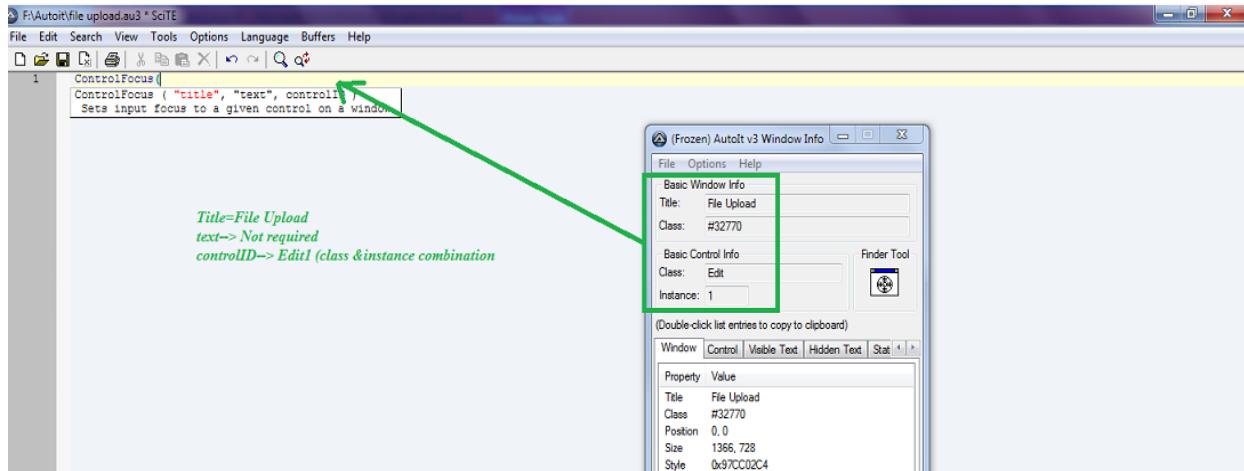
Parameter values for **ControlFocus** method:

This method sets focus to the 'file name' text box of the file uploader window.

- 1st parameter **title** is " File Upload ".
- We ignore 2nd parameter, the **text** is not required.

- 3rd parameter **controlID** is the combination of class='Edit' and Instance='1' i.e., . 'Edit1.'

ControlFocus("File Upload","","","Edit1") // This method sets input focus to 'File name' text box.



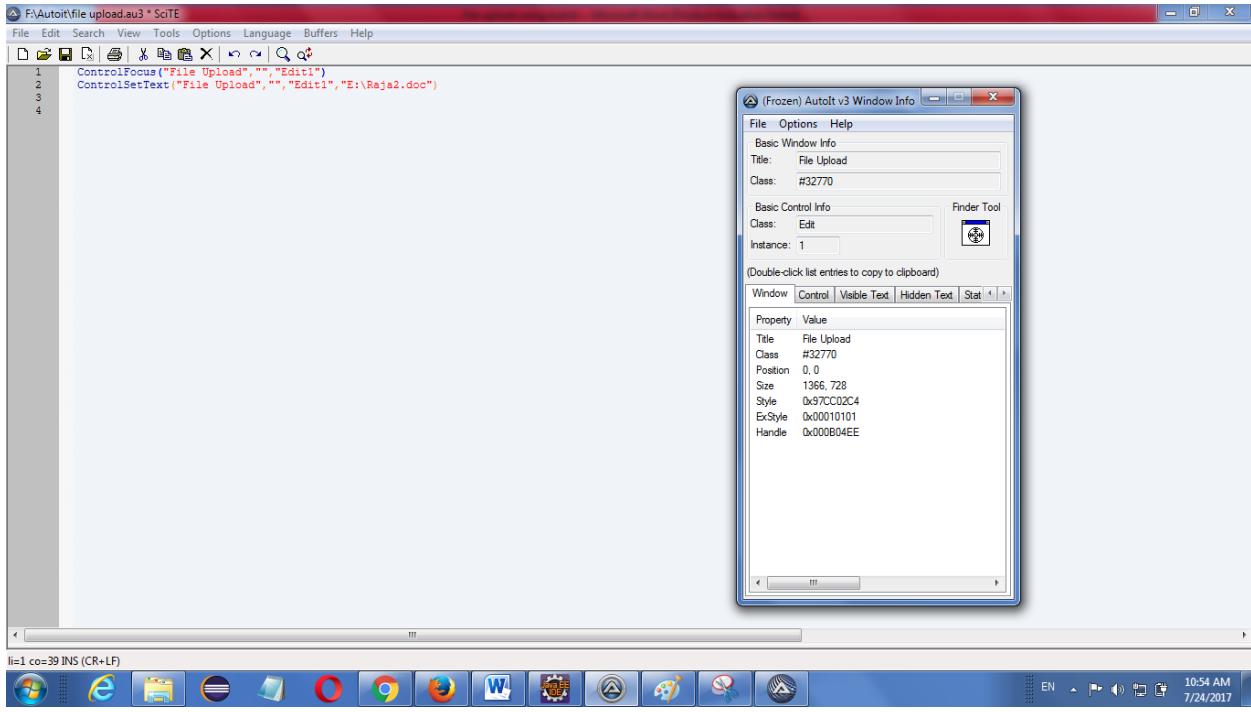
Parameter values for ControlSetText method :

This method is used to define the path of a file which we need to upload in 'file name' text box.

In another way, we can say that this method is used to set the text to the input element.

- 1st parameter **title** is "File Upload".
- We ignore 2nd parameter, the **text** is not required.
- 3rd parameter **controlID** is the combination of class='Edit' and Instance='1' i.e., "Edit1".
- 4th parameter **new text**, we pass the path of the file which we need to upload.

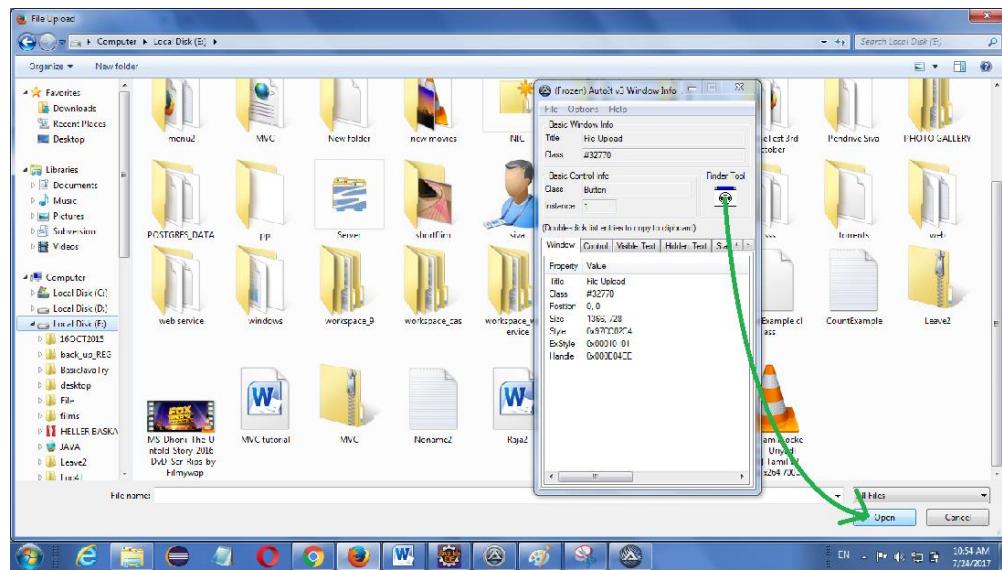
ControlSetText("File Upload","","","Edit1","E:\Raja.doc") // This method input file path of a control.



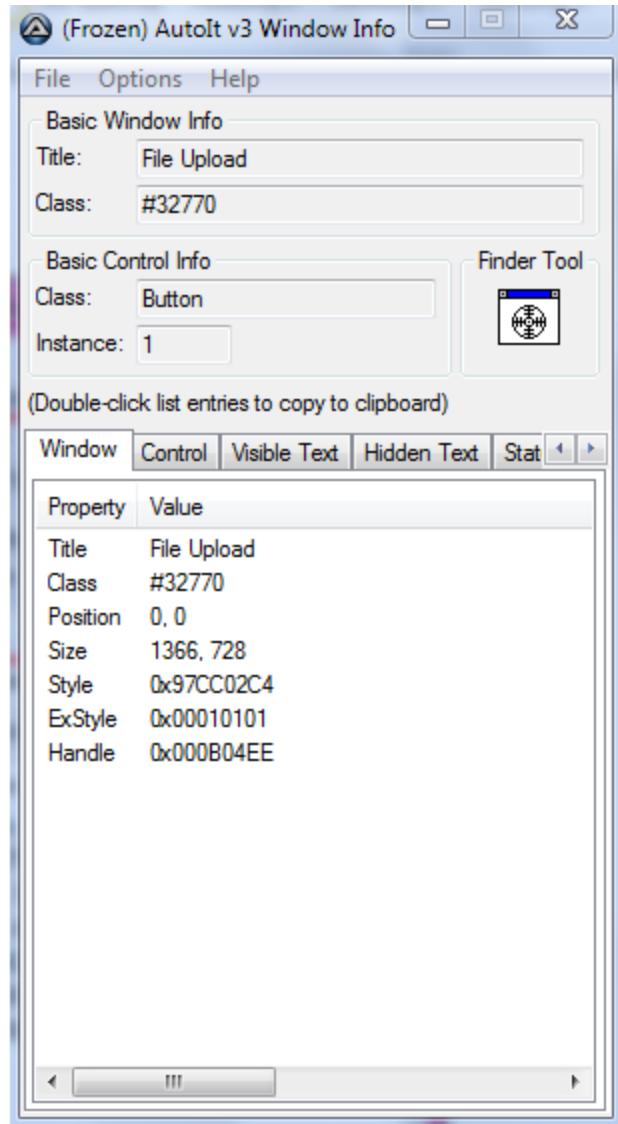
After following the above step, don't close the windows (editor and element identifier), keep it remain open. You again need to open file uploader window as to find attributes of 'Open' Button as shown in below step 5.

Step 5): Now drag the finder tool on the "Open" button element of file uploader window to find the basic attribute information.

Previous values (i.e. attributes of 'File name' text box) overwrite with new values of 'Open' button. You can see the class attribute is now changed to "button" which was previously "edit" in AutoIT element identifier window.



We can get the value of attributes i.e. **title='Open'**, **class='Button'** and **instance='1'** as shown below. These values are used in writing Autoit script as explained in below.

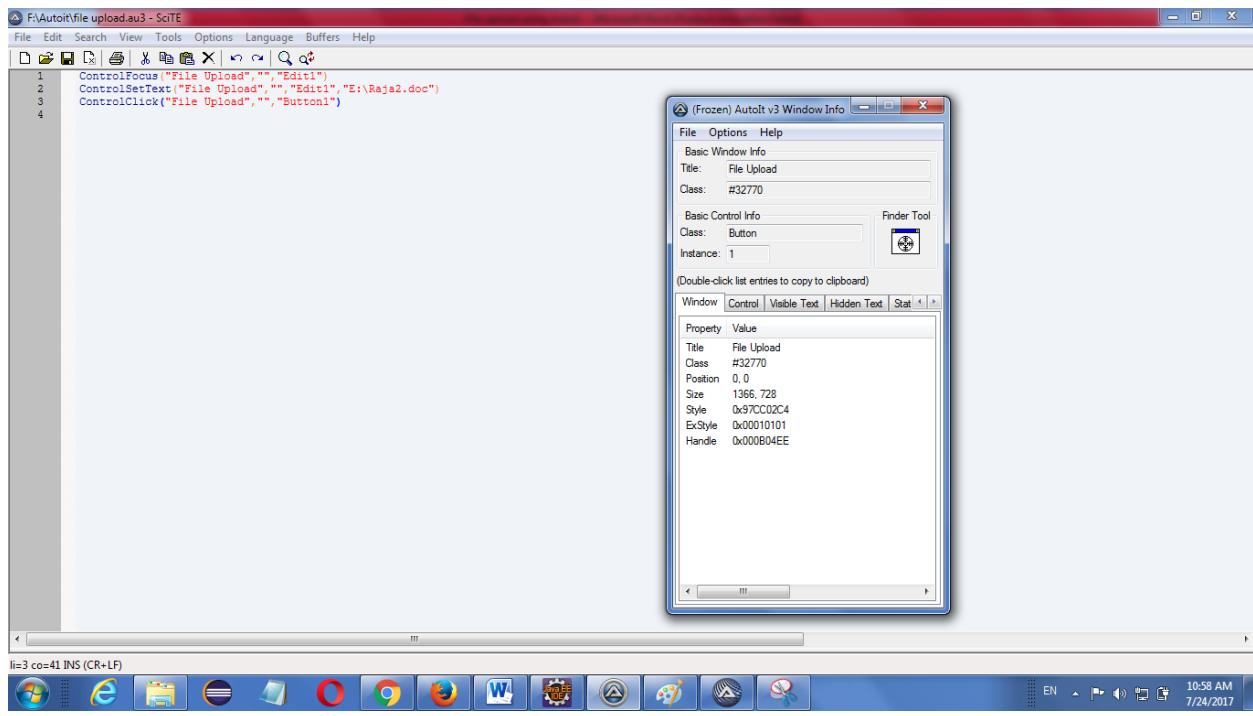


Parameter values for **ControlClick** method:

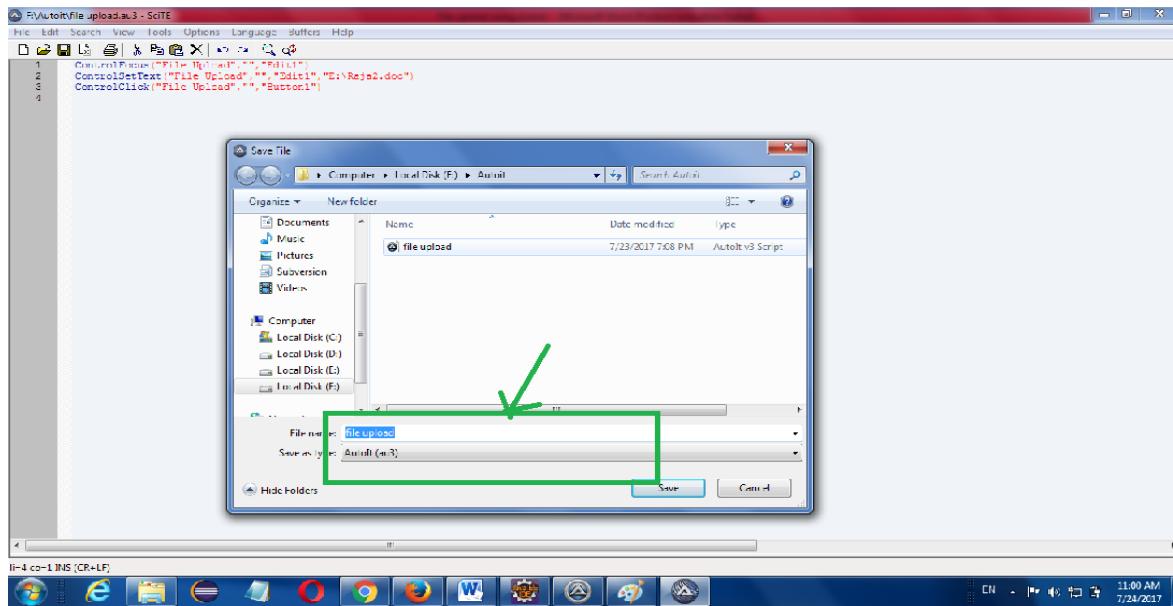
This method clicks on 'Open' button of the file uploader window.

- 1st parameter **title** is "File Upload".
- We ignore 2nd parameter; the **text** is not required.
- 3rd parameter **controlID** is the combination of class and Instance, i.e., "Button1".

ControlClick("File Upload","","","Button1") //This method click on 'Open' button of file uploader.

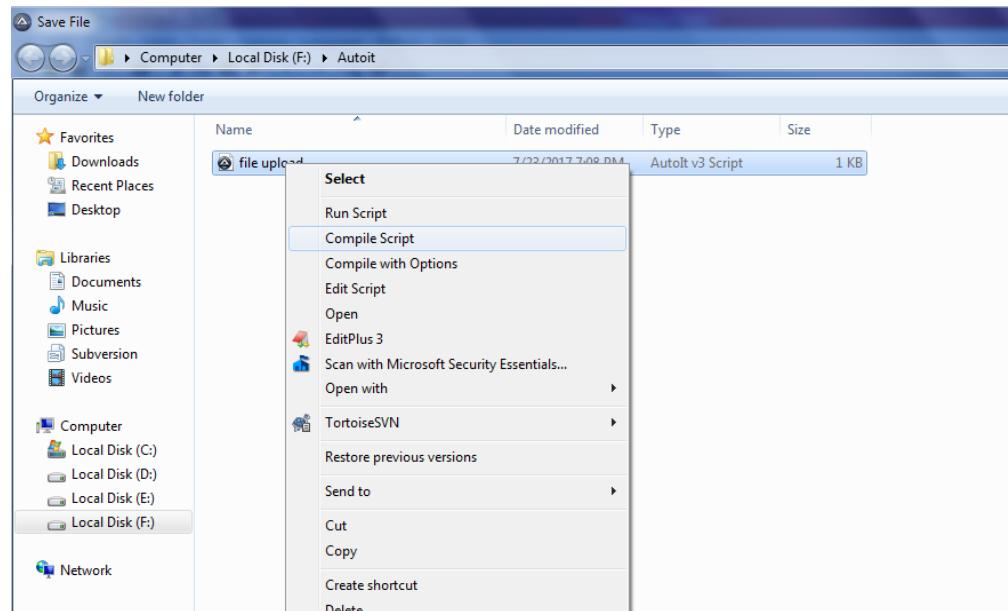


Step 6: You can see in below screen that AutoIT script is completed to handle file uploader. Now you can close the element identifier and save the script as " FileUpload " at the given location (E:\AutoIT).

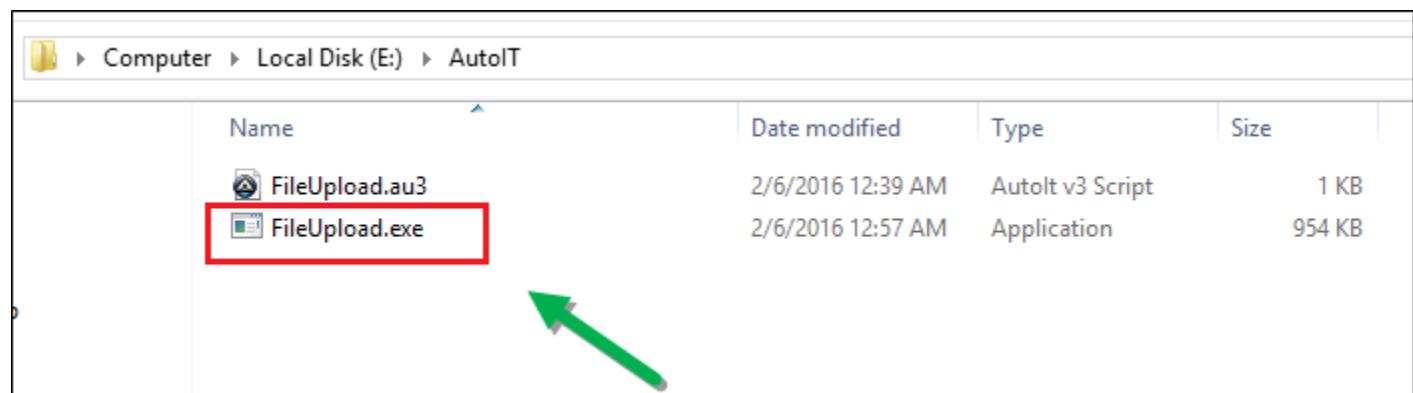


Now you can't execute this script directly, you need to compile this script.

For compiling this script, you have two options " **compile script x64** " and " **compile script x86** ", if you have windows 32-bit machine then u go with " **compile script x86** " and for windows 64-bit machine then u go with " **compile script x64** ."



Step 7): 'FileUpload.exe' file generated after compilation, you can see in the below screen. Now we can use this file in Selenium webdriver script.

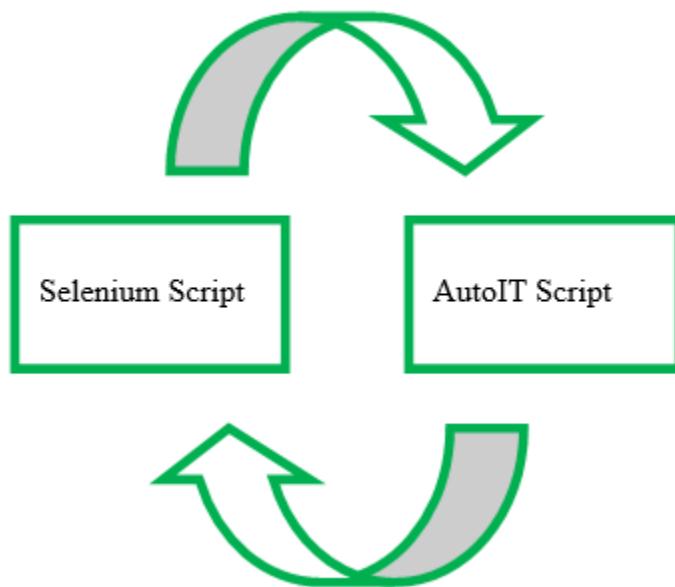


Now we will use this AutoIT script in Selenium web driver. Check below for output.

AutoIT Upload file in Selenium Webdriver

In Selenium script, we find the elements of the form and fill the data in each element as required and upload 'resume.doc' file by executing AutoIT exe file generated from AutoIT script and then allow to submit the form in selenium script.

- Open Eclipse and start writing code.
- When selenium clicks on Choose File button, file uploader box opens.
- Then we need to call AutoIT script, the control immediately transferred to AutoIT in order to upload a file and then control send back to selenium as shown below.



Step 1): Develop and execute the selenium script in eclipse.

- Runtime class allows the script to interface with the environment in which the script is running.
- getRuntime() get the current runtime associated with this process.
- exec() methods execute the AutoIT script (FileUpload.exe) .

```
Runtime.getRuntime().exec("E:\\AutoIT\\FileUpload.exe");
```

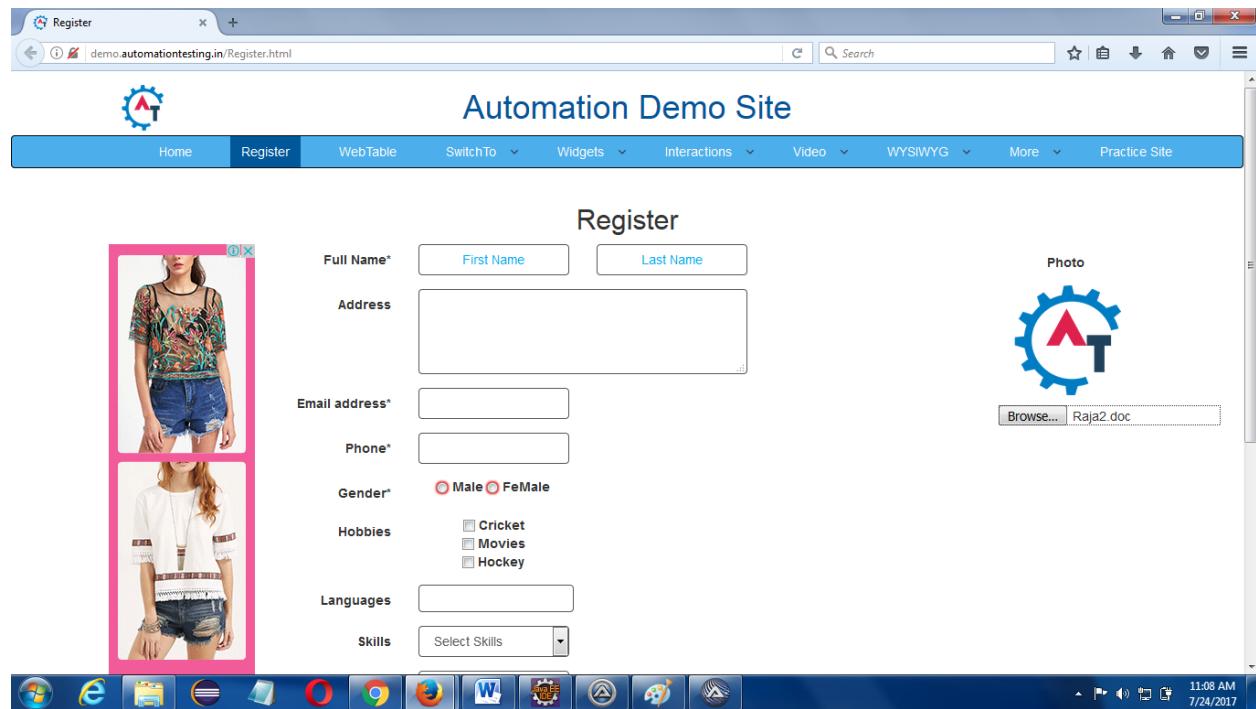
above line will call **AutoIT script** in selenium and upload file .

```

public class Demo {
    @Test
    public void upload() throws IOException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://demo.automationtesting.in/Register.html");
        driver.findElement(By.xpath("//*[@id='imagesrc']")).click();
        Runtime.getRuntime().exec("F:\\Autoit\\file upload.exe");
    }
}

```

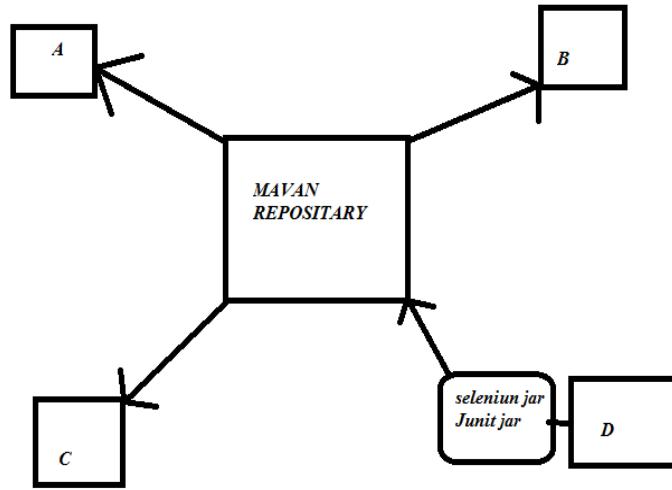
Step 3): Verify the output, Raja.doc file uploaded



TOOLS:

MAVEN:

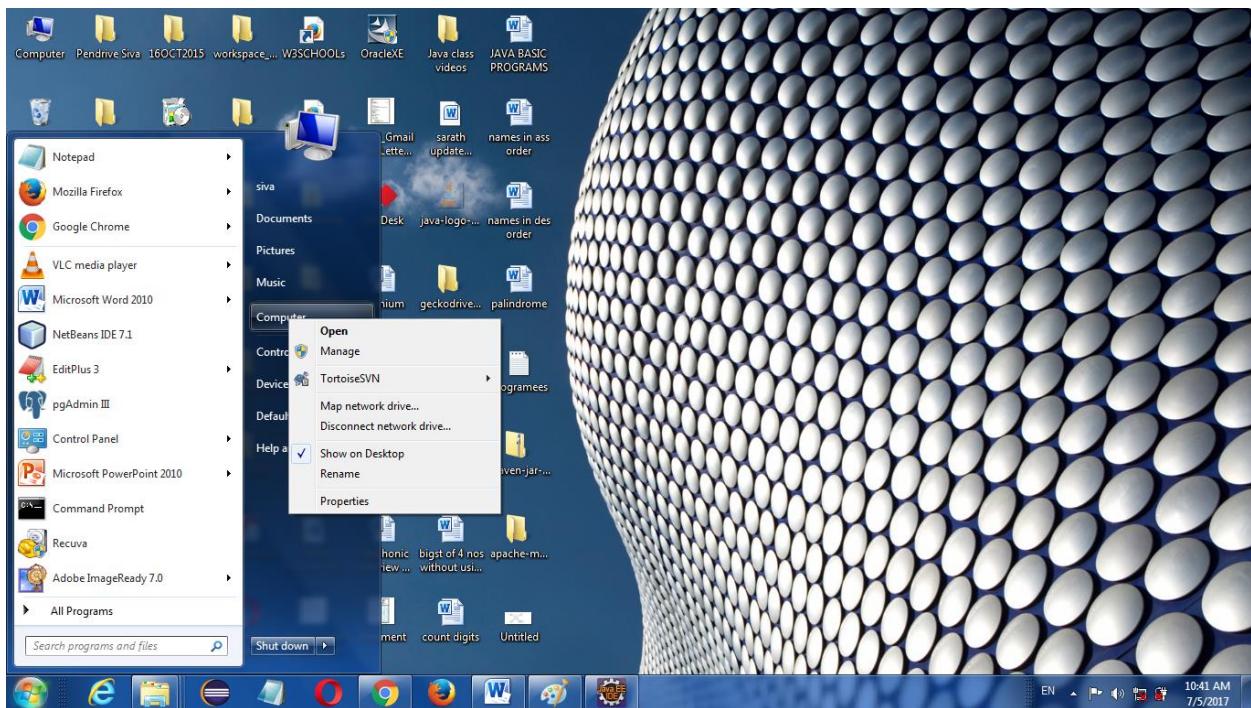
- Project build tool



-
- If one person (D) download jar file, it will automatically updated in maven repository. Then anyone can use

Maven configuration steps

- Download maven jar file.(Apache- maven 3.50)
- Configure maven jar file in Environment variable
- Computer→right click→properties→advance system setting→environment variable



A screenshot of the Windows Control Panel 'System' settings page. The left sidebar shows links for Control Panel Home, Device Manager, Remote settings, System protection, and Advanced system settings (which is selected). The main content area displays basic computer information:

View basic information about your computer

Windows edition: Windows 7 Professional
Copyright © 2009 Microsoft Corporation. All rights reserved.
Service Pack 1
Get more features with a new edition of Windows 7

System

Rating:
Processor: Intel(R) Pentium(R) CPU P6200 @ 2.13GHz 2.13 GHz
Installed memory (RAM): 2.00 GB (1.74 GB usable)
System type: 32-bit Operating System
Pen and Touch: No Pen or Touch Input is available for this Display

Computer name, domain, and workgroup settings

Computer name: siva-PC
Full computer name: siva-PC
Computer description:
Workgroup: WORKGROUP

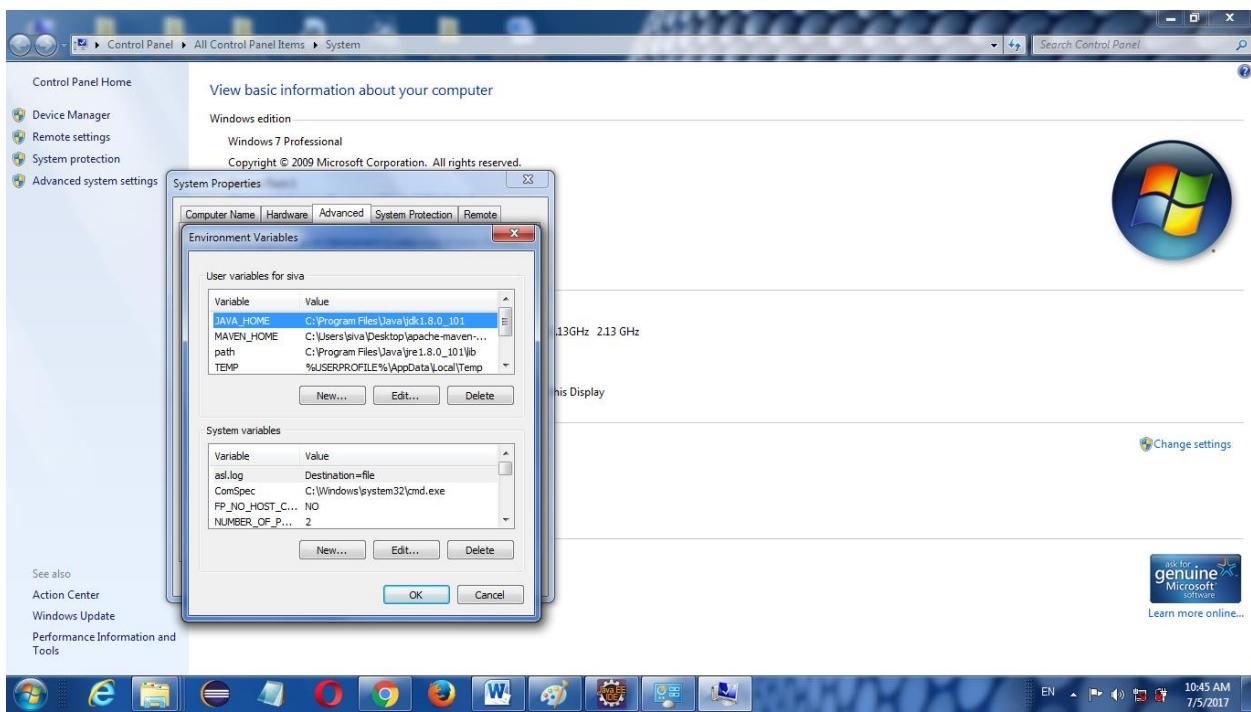
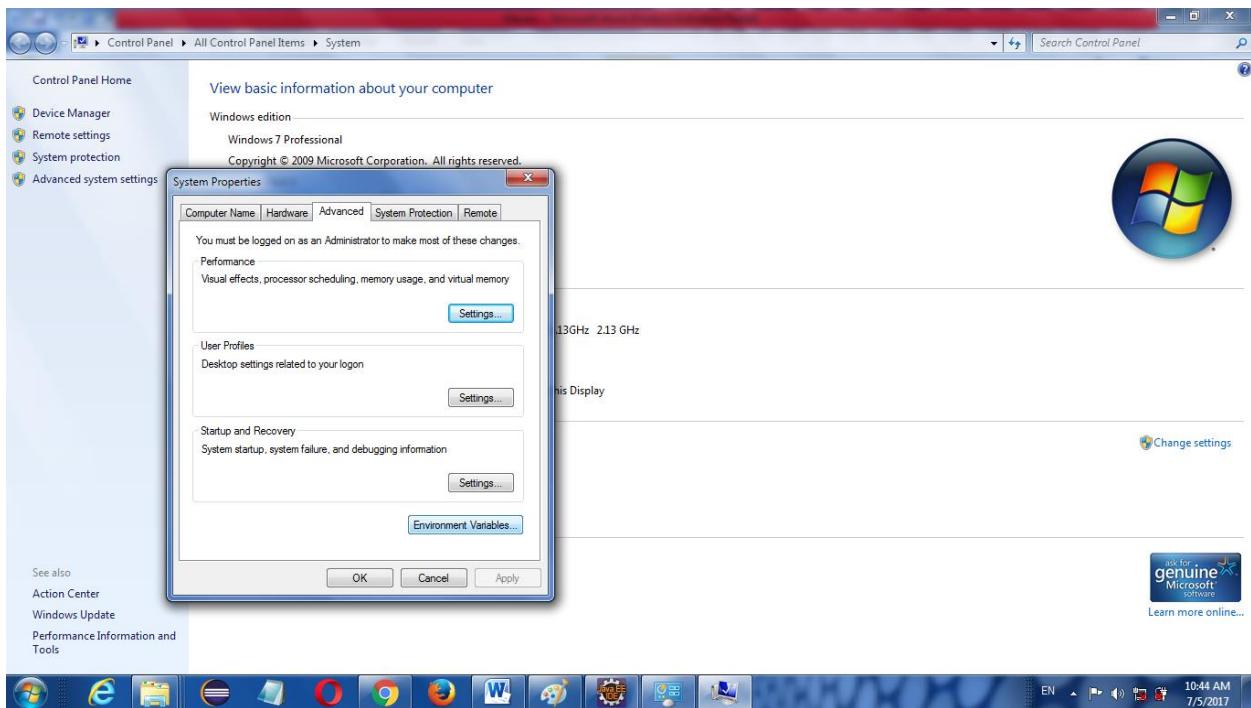
Windows activation

Windows is activated
Product ID: 00371-OEM-8992671-00004

See also: Action Center, Windows Update, Performance Information and Tools

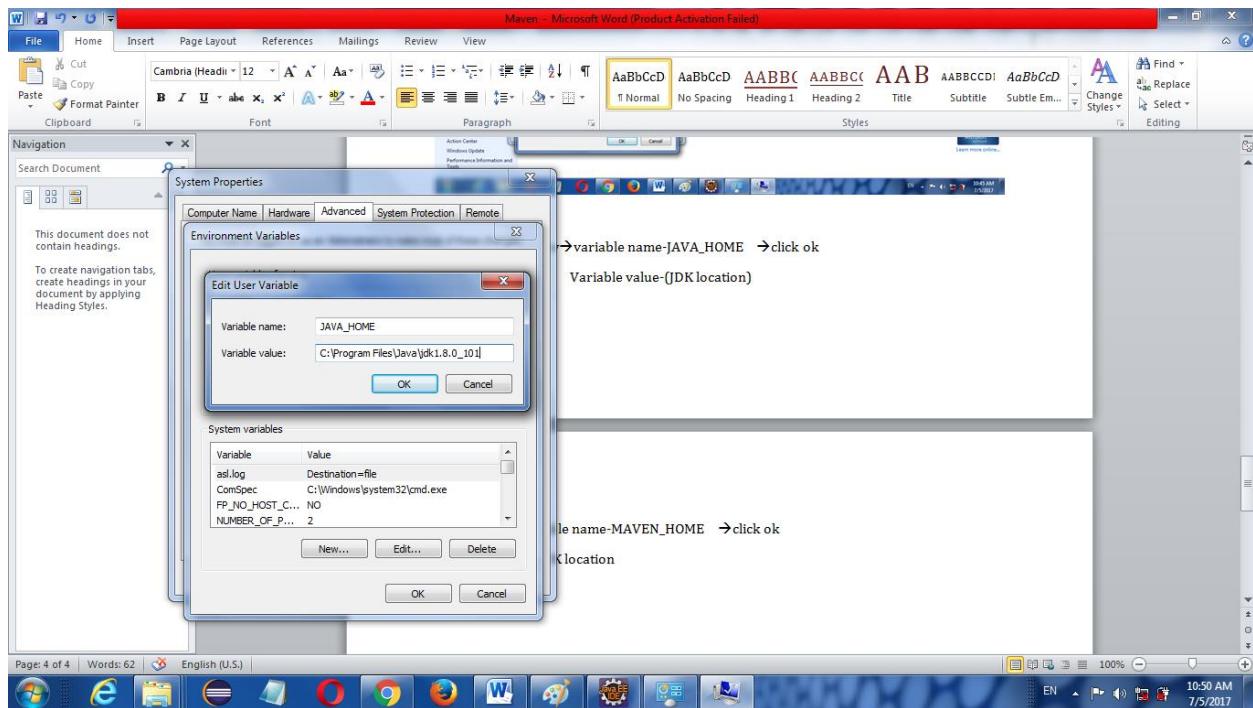
Ask for genuine Microsoft software
Learn more online...

The desktop bar at the bottom includes icons for Start, Task View, File Explorer, Taskbar settings, and other system icons.



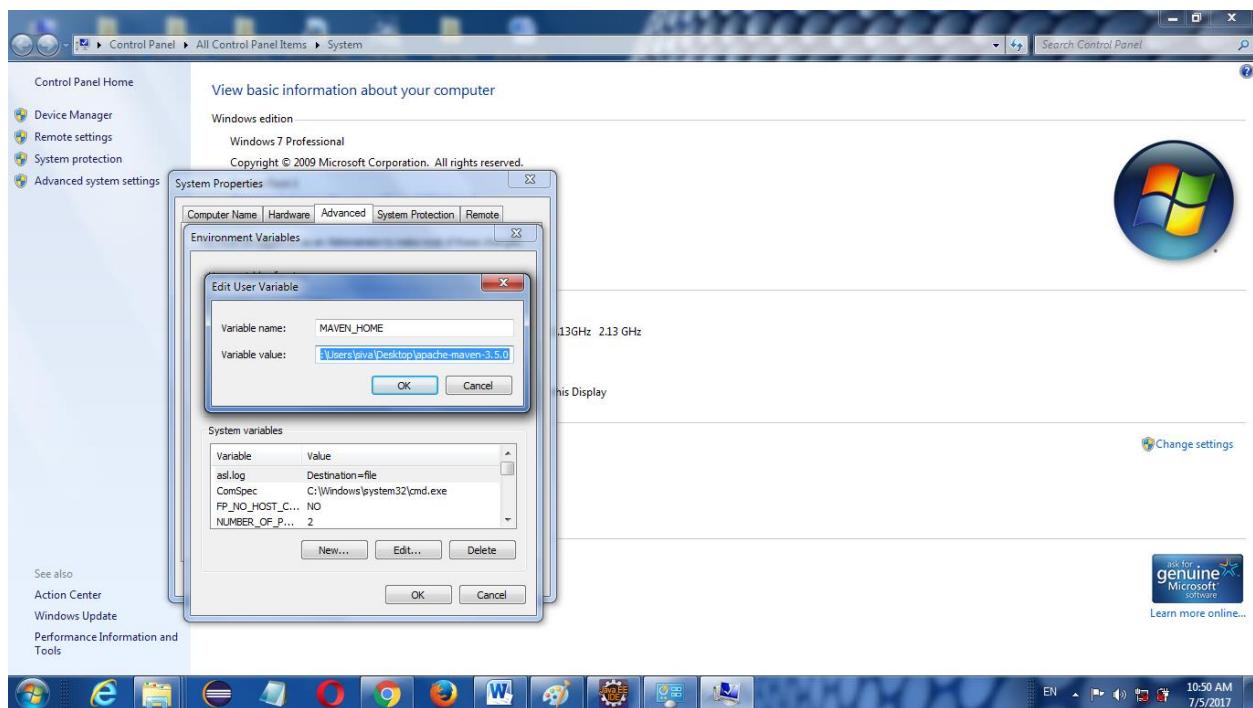
➤ User variable → new → variable name-JAVA_HOME → click ok

Variable value-(JDK location)

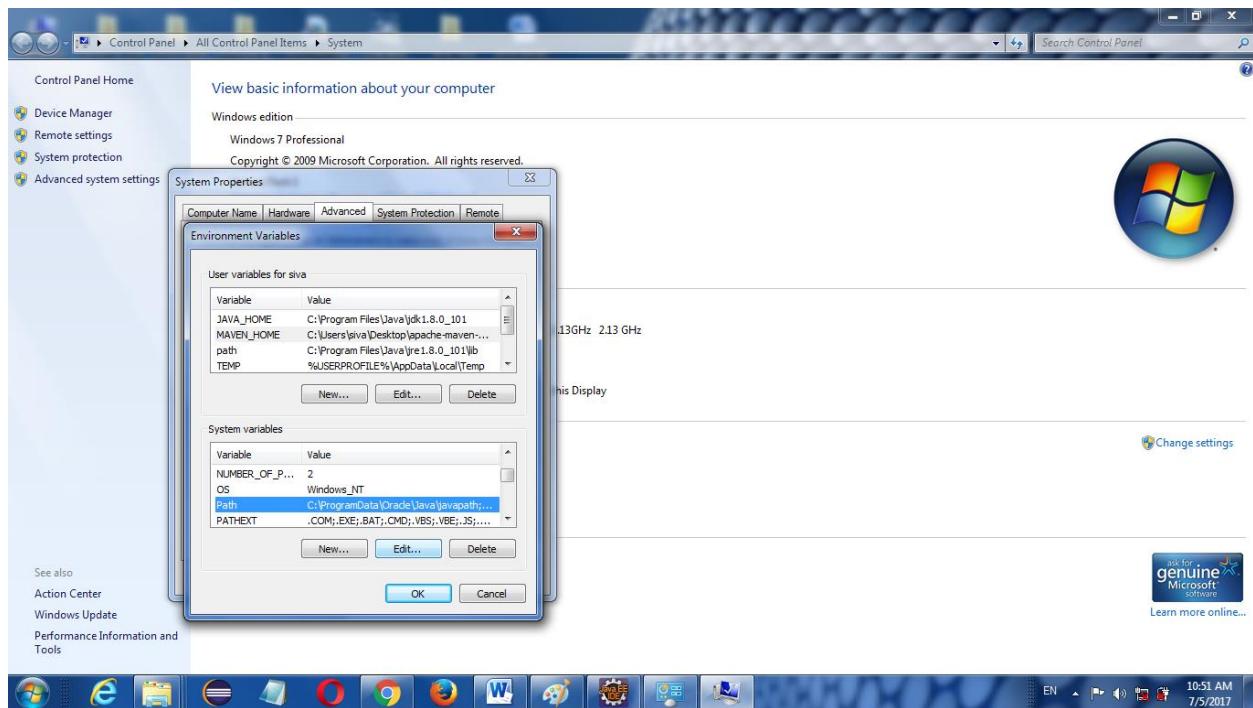


➤ Again new→ variable name-MAVEN_HOME →click ok

Variable value-(JDK location)



➤ System variables→click path→Edit

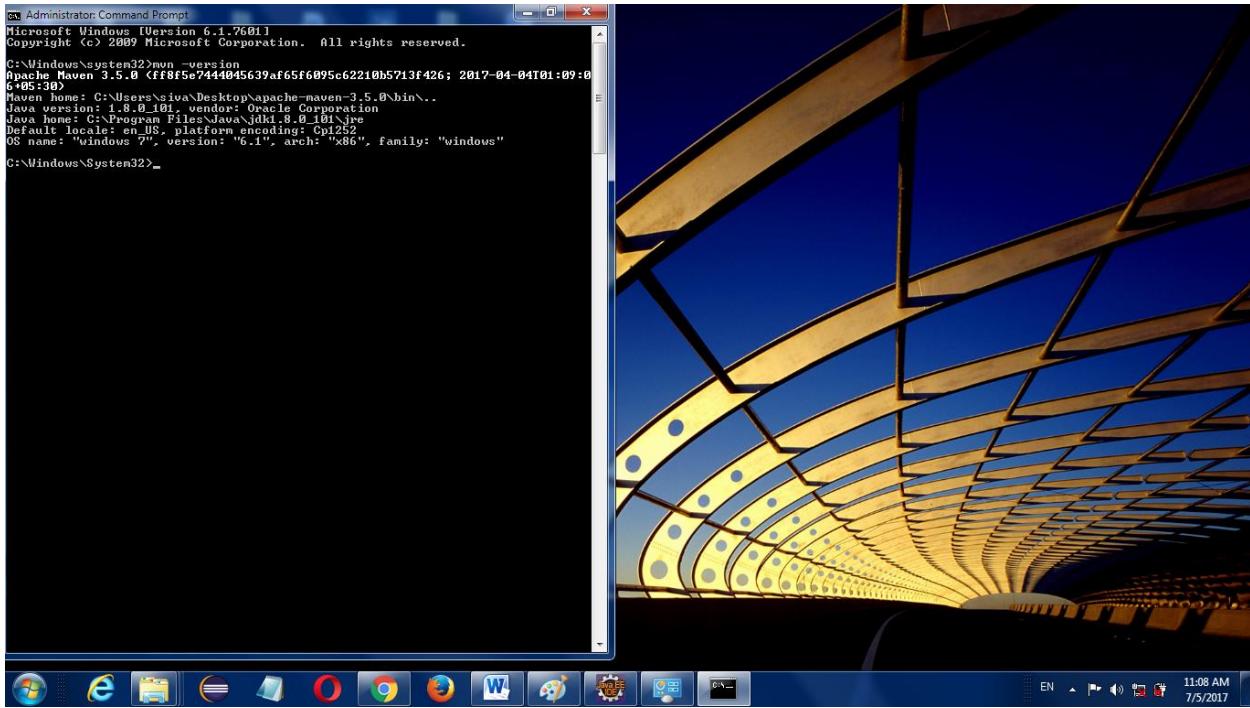


- Add JDK location and maven location

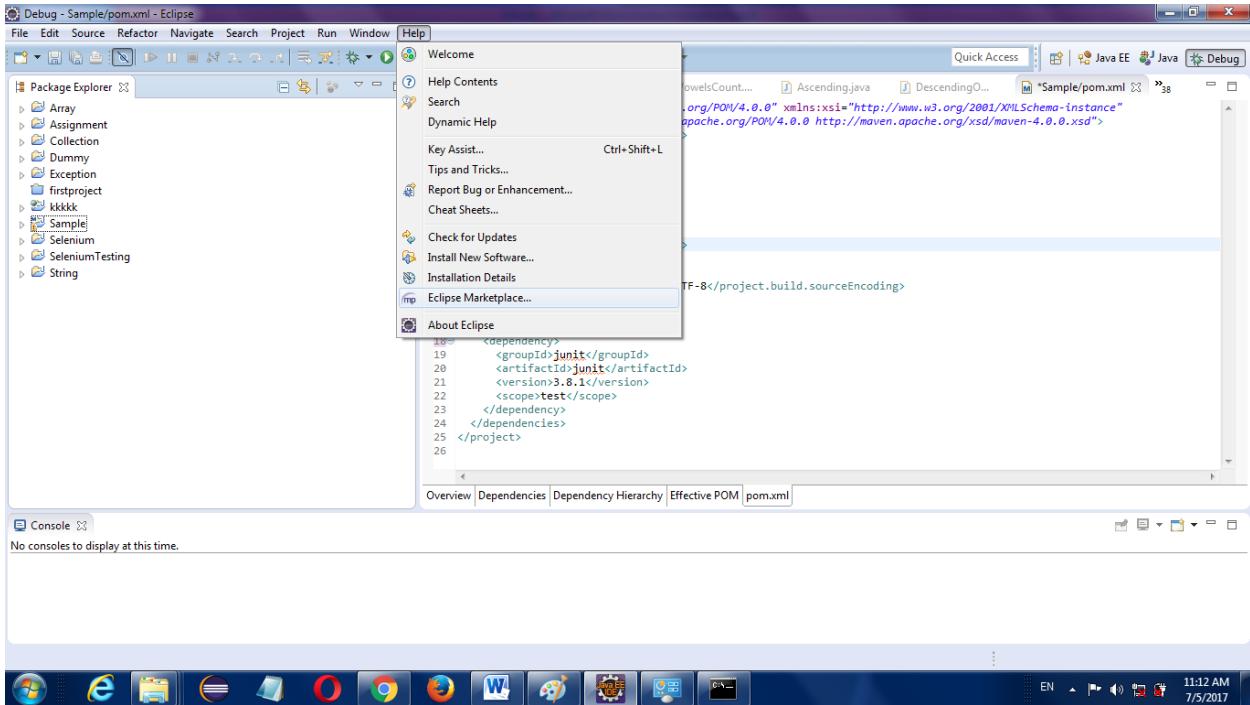
C:\ProgramData\Oracle\Java\javapath;C:\Program Files\Java\jre1.8.0_101\lib;C:\Program Files\Java\jdk1.8.0_101\bin;C:\Users\siva\Desktop\apache-maven-3.5.0\bin

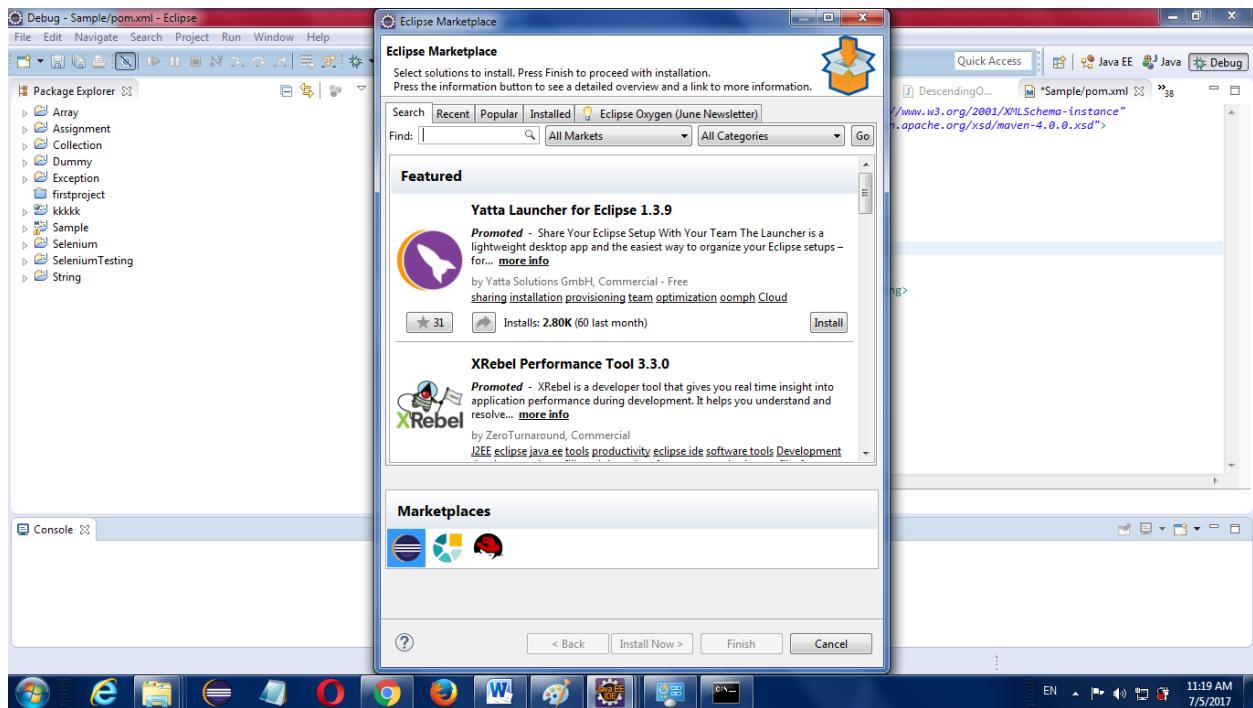
- → **Default location**
- → **JDK location**
- → **Maven location**

- To check maven installed or not
- Start → Run → cmd → right click → Run as admin → mvn –version → Enter → here will show maven version and jdk version

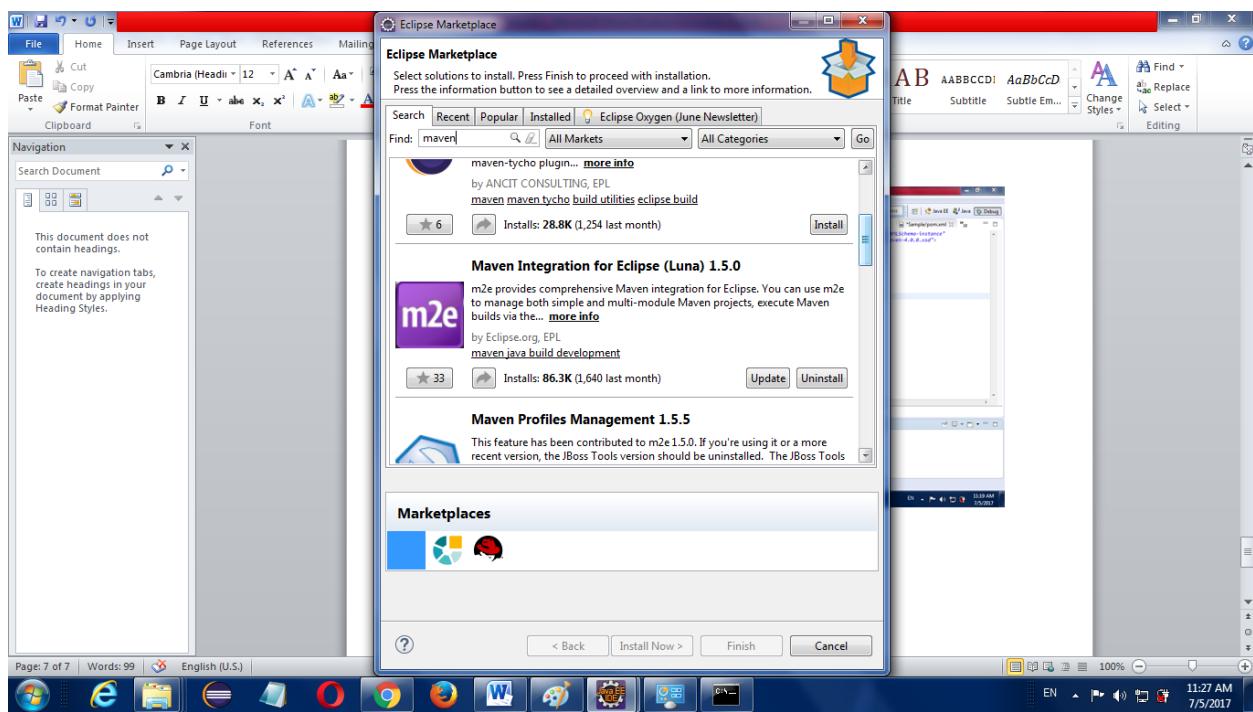


- Open Eclipse:
- Help→Eclipse Market Place



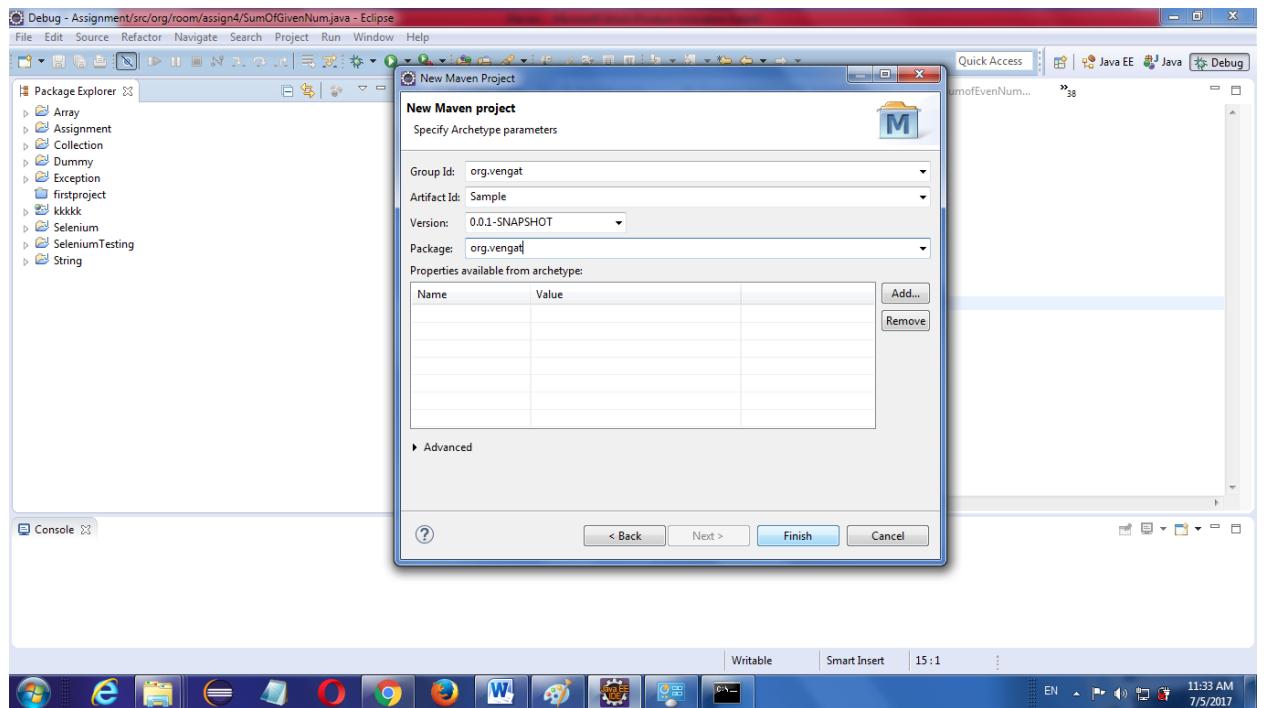


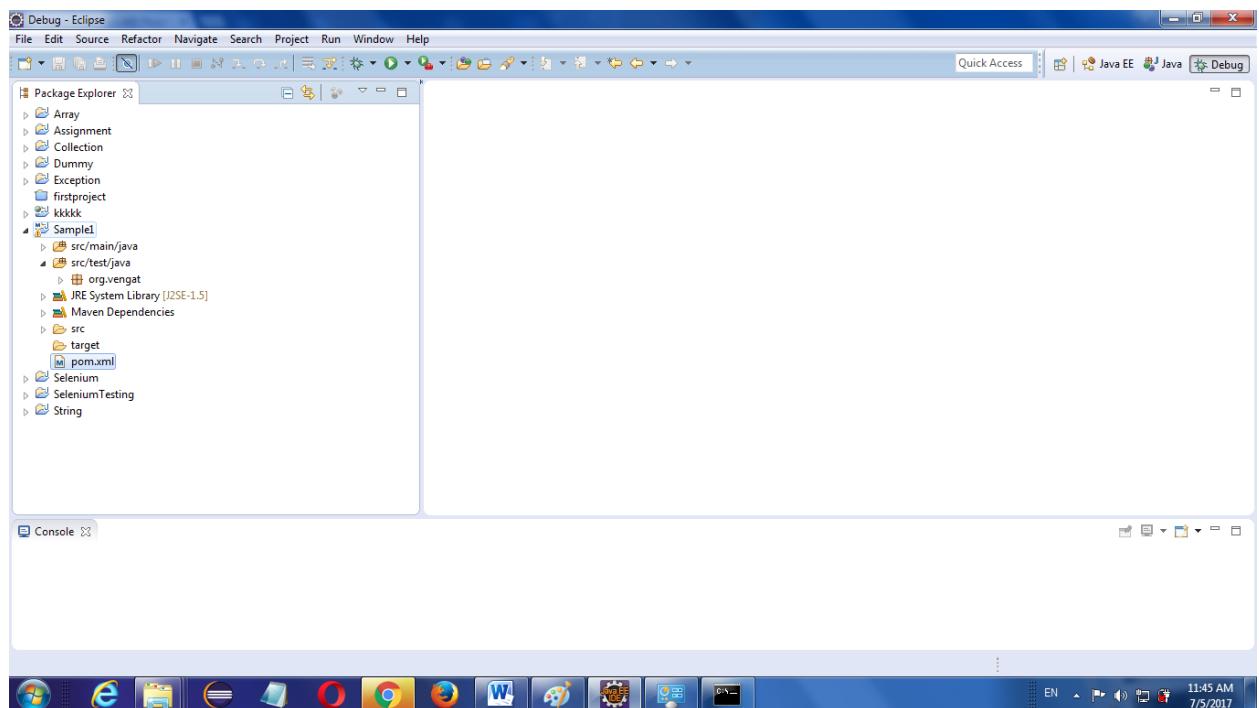
➤ Search→maven→enter



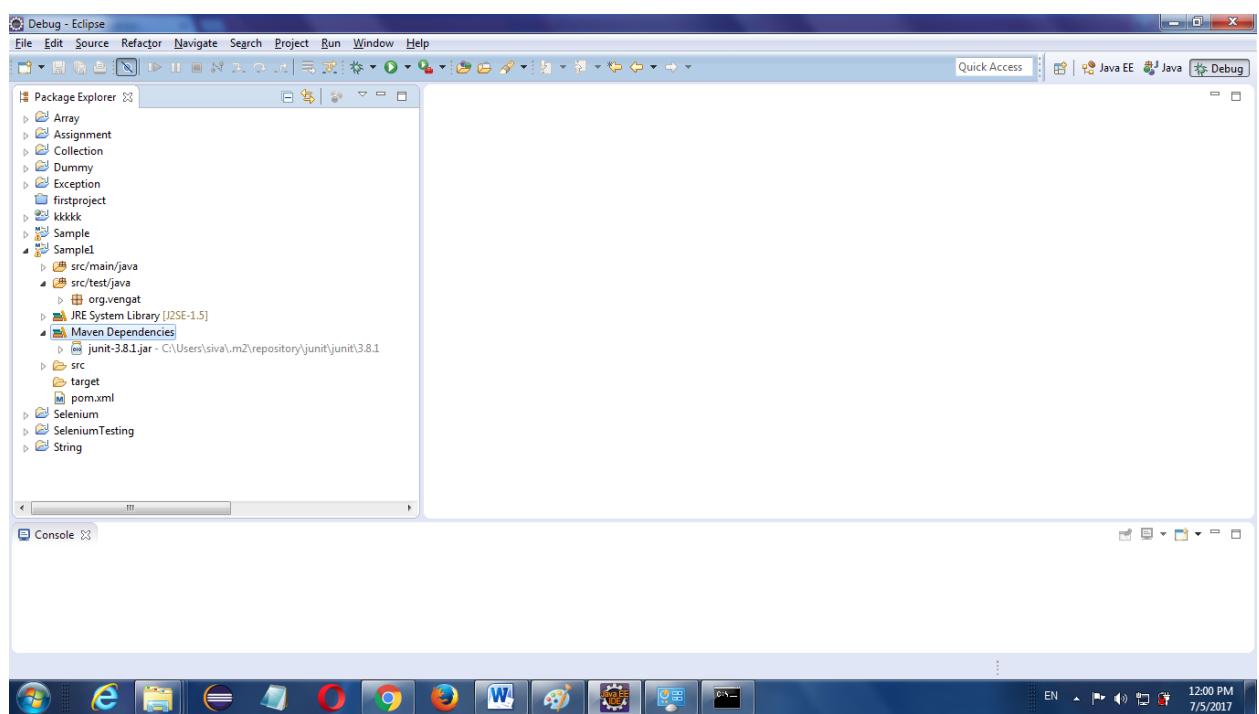
➤ Install mavan integration for eclipse → finish

- Create maven project
- New → project → maven project → Next → Next → Group id(package name) → finish
Artifact id(project name)





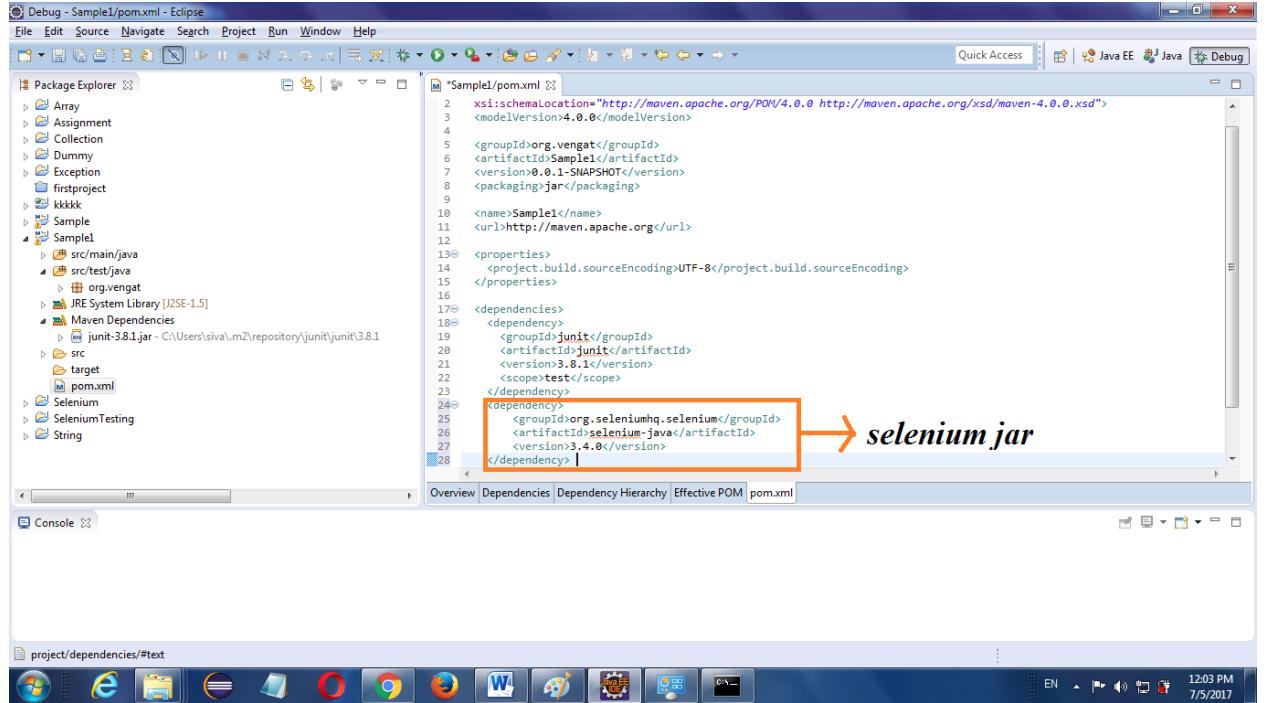
- Maven dependencies → have jail jar files
- In default , Maven dependencies have Junit jar.



- If we need to add selenium jar, download the dependency code from internet

```
<dependency>
<groupId>org.seleniumhq.selenium</groupId>
<artifactId>selenium-java</artifactId>
<version>3.4.0</version>
</dependency>
```

- Just add this jar in pom.xml.
- Click pom.xml → pom.xml → add selenium dependencies code → save



- After selenium jar added automatically in maven dependencies

Debug - Sample1/pom.xml - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access Java EE Java Debug

Package Explorer Sample1

```

<?xml version="1.0" encoding="UTF-8"?>
<pom>
    <modelVersion>4.0.0</modelVersion>
    <groupId>org.vengat</groupId>
    <artifactId>Sample1</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <packaging>jar</packaging>
    <name>Sample1</name>
    <url>http://maven.apache.org</url>
    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    </properties>
    <dependencies>
        <dependency>
            <groupId>junit</groupId>
            <artifactId>junit</artifactId>
            <version>3.8.1</version>
            <scope>test</scope>
        </dependency>
        <dependency>
            <groupId>org.seleniumhq.selenium</groupId>
            <artifactId>selenium-java</artifactId>
            <version>3.4.0</version>
        </dependency>
    </dependencies>
</pom>

```

Overview Dependencies Dependency Hierarchy Effective POM pom.xml

Console

Maven Dependencies - Sample1

EN 12:09 PM 7/5/2017

➤ Run a program in maven project:

Debug - Sample1/src/main/java/org/vengat/App.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Quick Access Java EE Java Debug

Package Explorer Sample1

```

package org.vengat;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.support.ui.Select;
public class App {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.facebook.com/");
        driver.findElement(By.xpath("//input[@name='firstname']")).sendKeys(
                "Vengat");
        driver.findElement(By.xpath("//input[@name='lastname']")).sendKeys(
                "Ram");
        driver.findElement(By.xpath("//input[@name='reg_email_1']")).sendKeys(
                "9876543210");
        driver.findElement(By.xpath("//input[@name='reg_passwd_1']")).sendKeys(
                "123456");
        WebElement w1 = driver.findElement(By.xpath("//[@id='day']"));
        Select s1 = new Select(w1);
        s1.selectByValue("16");
        WebElement w2 = driver.findElement(By.xpath("//[@id='month']"));
        Select s2 = new Select(w2);
        s2.selectByVisibleText("July");
    }
}

```

Console <terminated> App [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 5, 2017, 12:11:01 PM)

Hello World!

Writable Smart Insert 9:1 EN 12:12 PM 7/5/2017

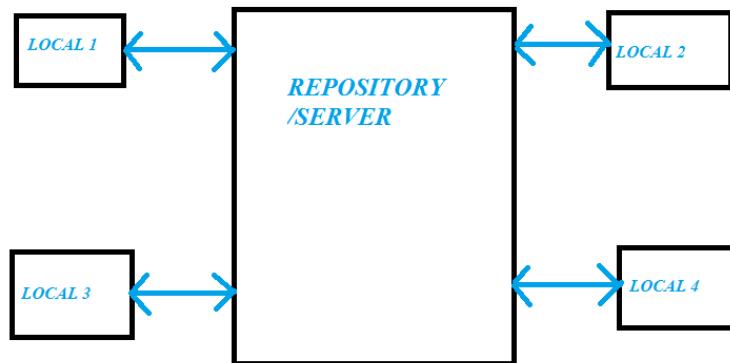
➤ Output:



- In case we getting error in program, go to dependencies location → m2 → (delete .last update files)
- Then in project → right click → run as → maven install
- Then maven update

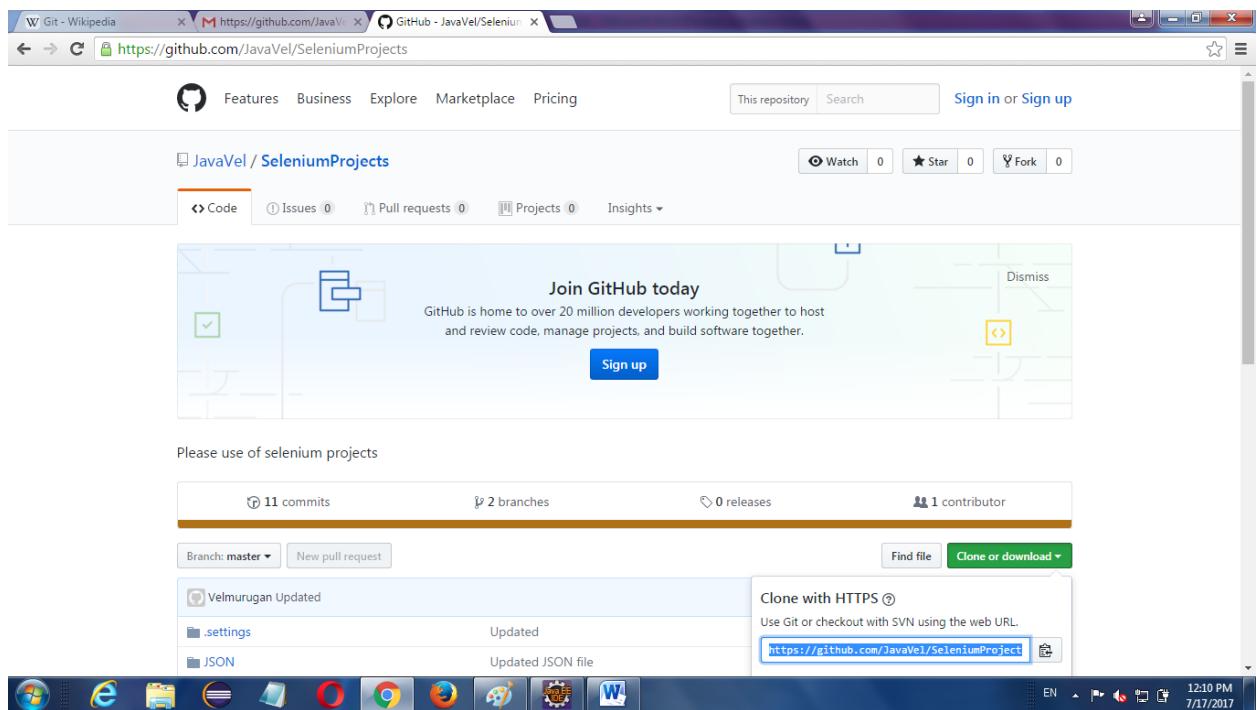
GIT:

- Version control system
- **Git** is a version control system (VCS) for tracking changes in computer files/eclipse project and coordinating work on those files among multiple people.
- It is primarily used for source code management in software development & testing but it can be used to keep track of changes in any set of files.

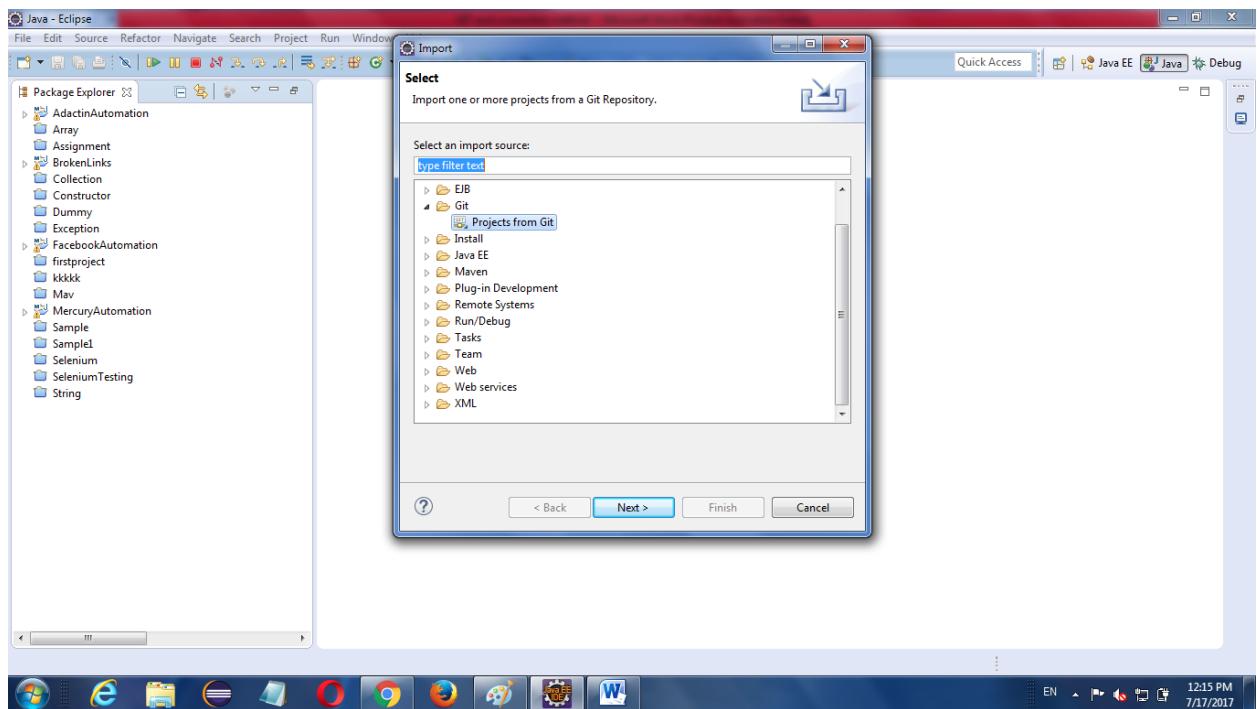


STEPS:

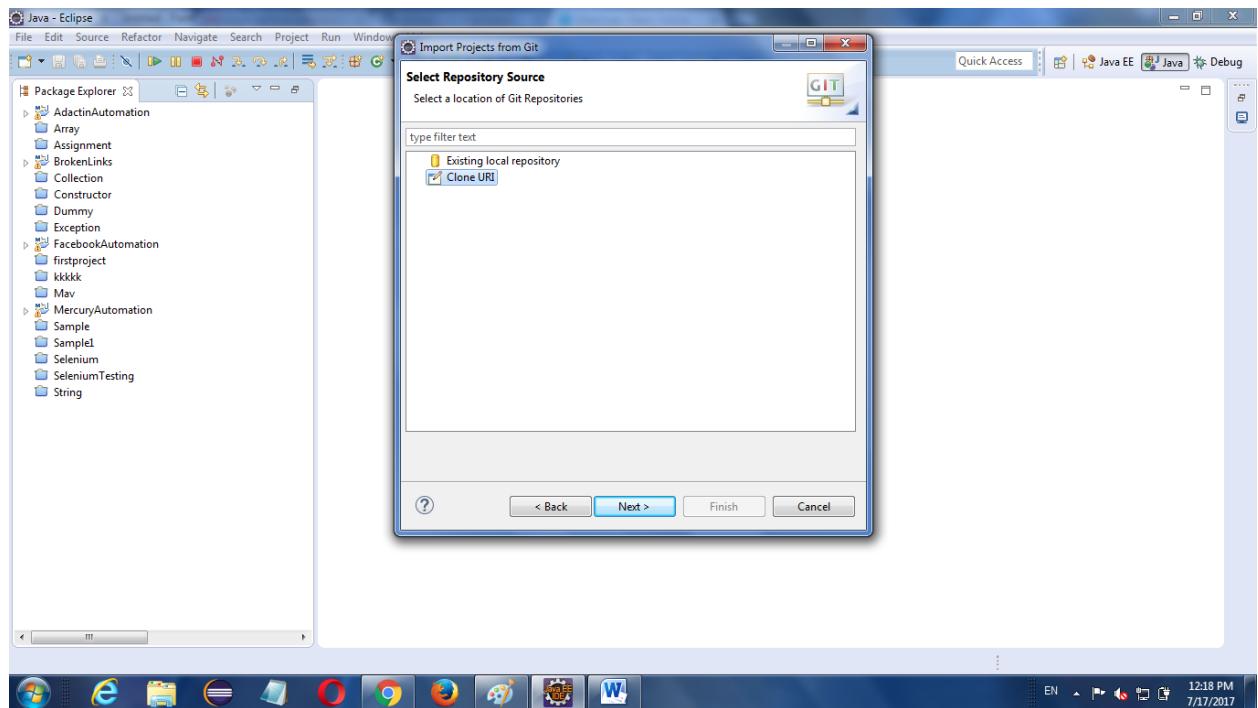
1. Get Git url.
2. Open Git website → click clone or download



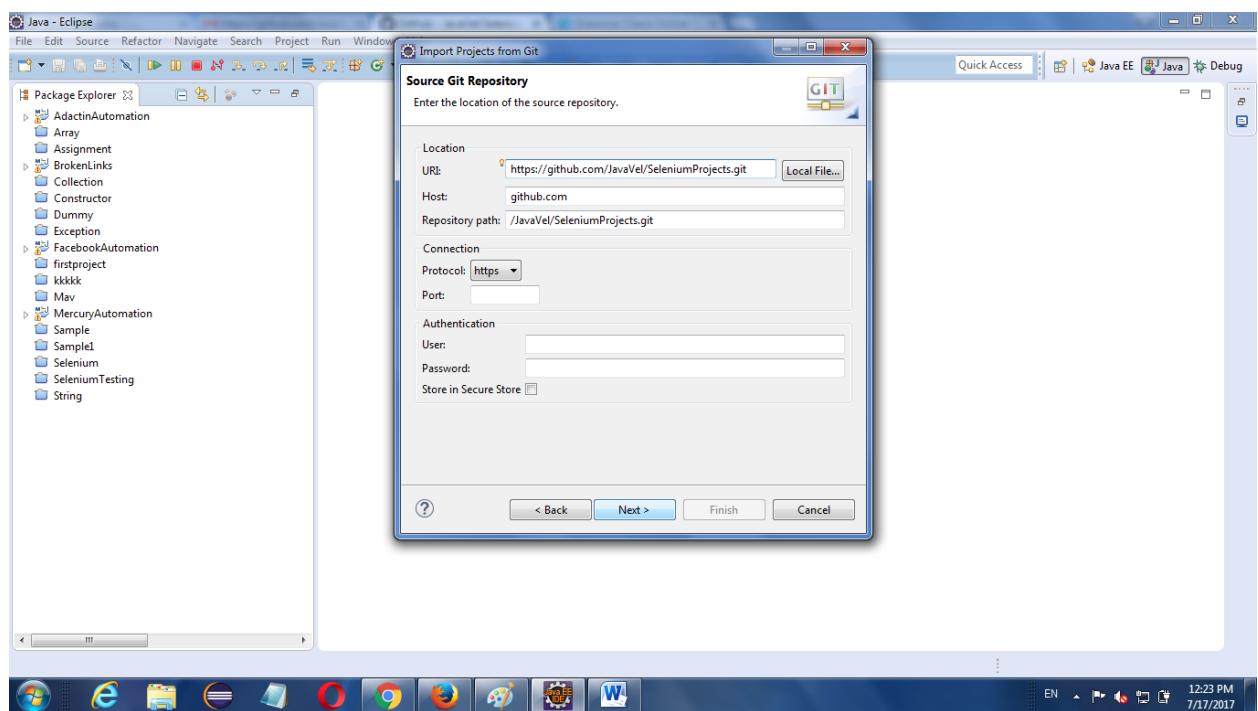
3. Copy the url from clone.
4. Open eclipse
5. In project explore, right click → import → Git → click project from Git



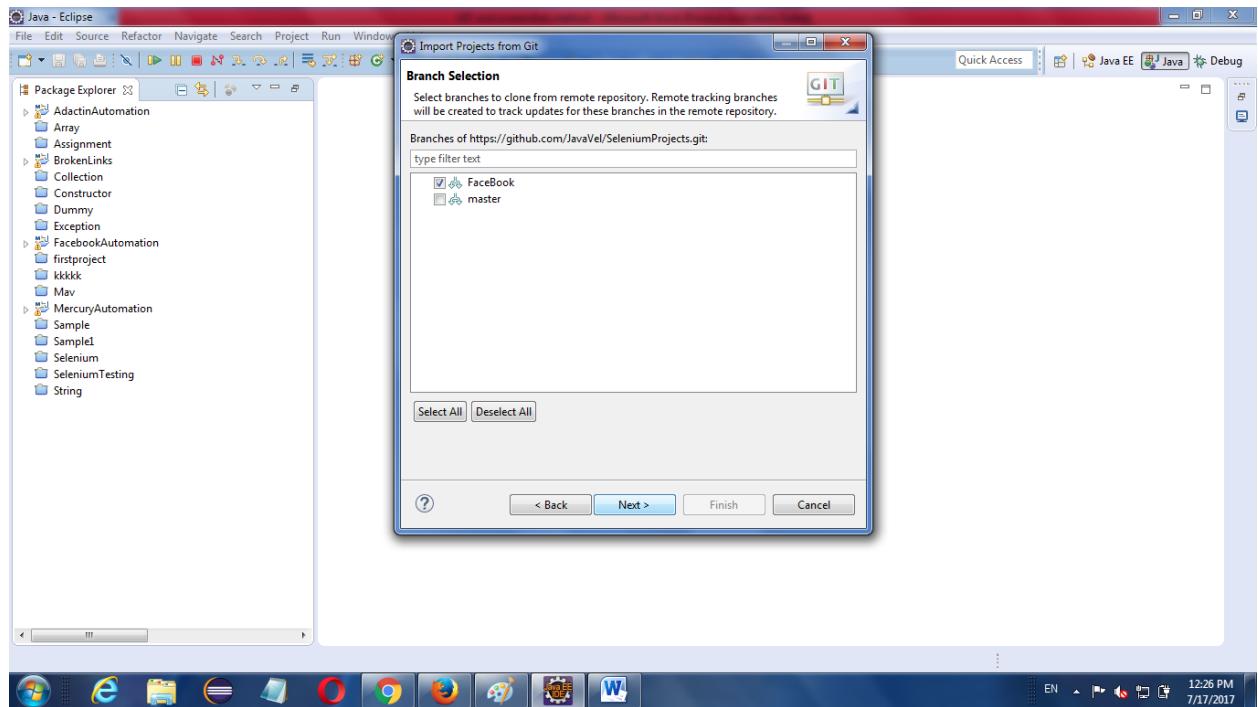
6. Click Next → clone URI → Next



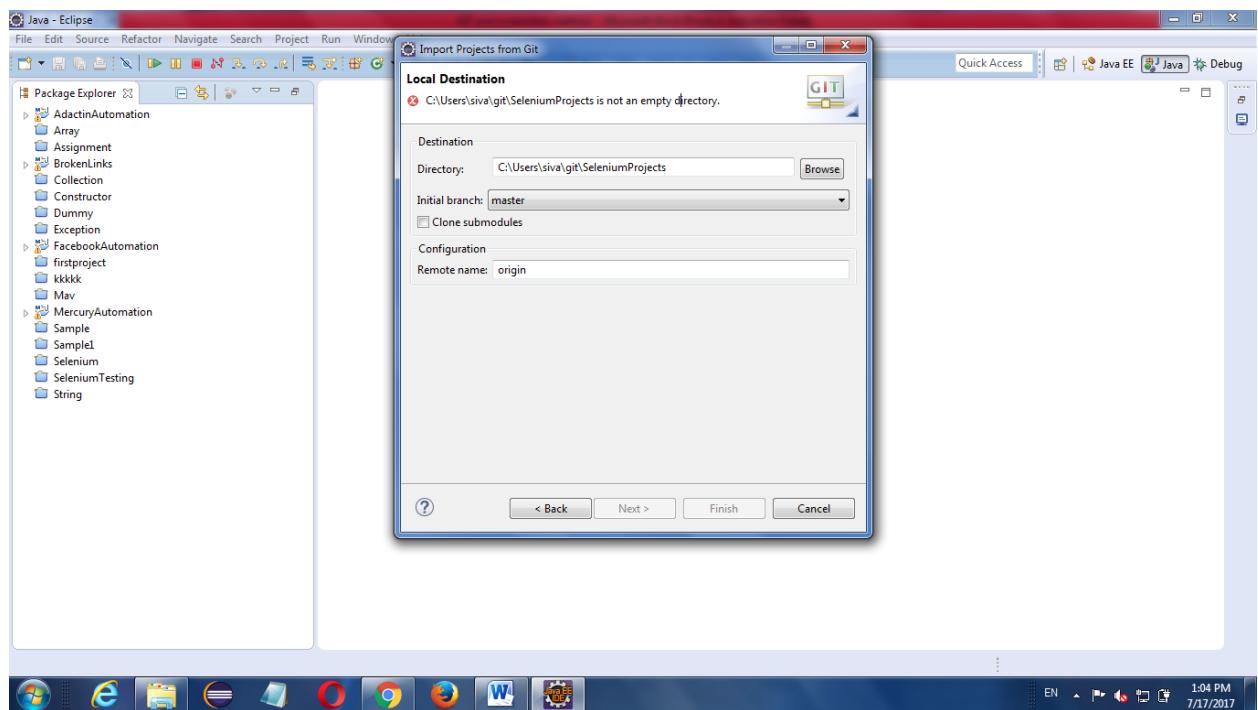
7. Paste the url in a URI → click Next



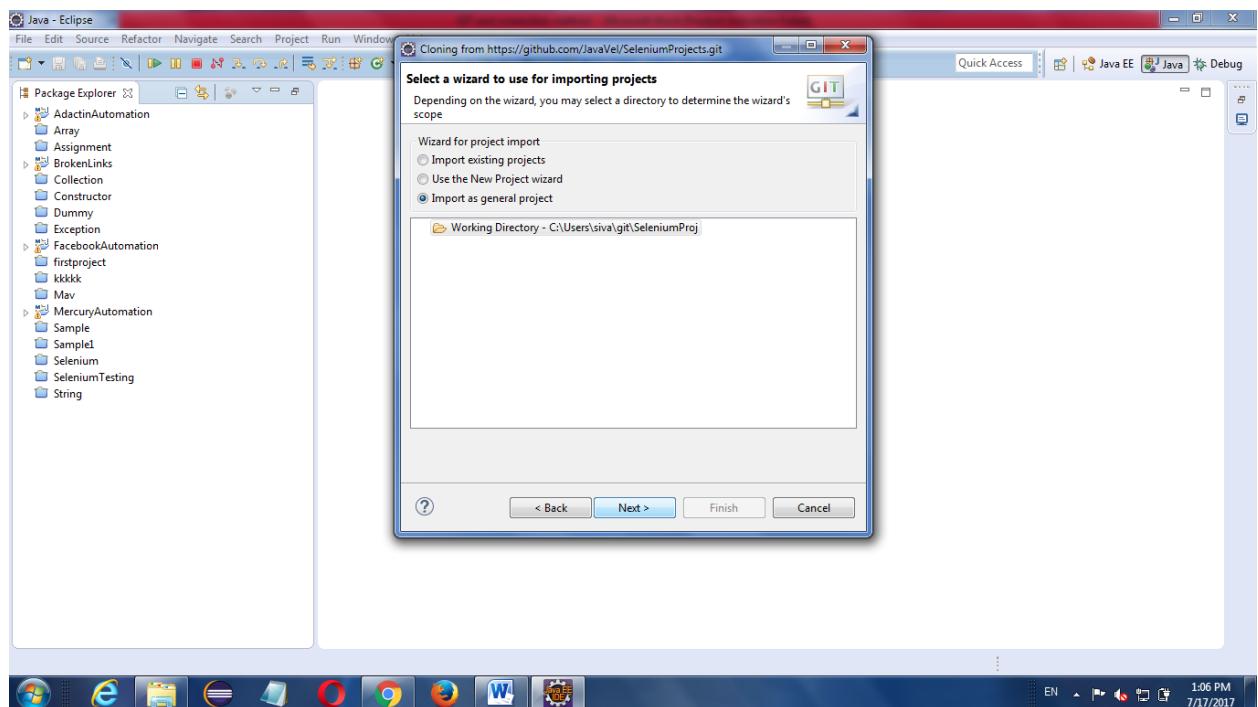
8. Select branch → click Next



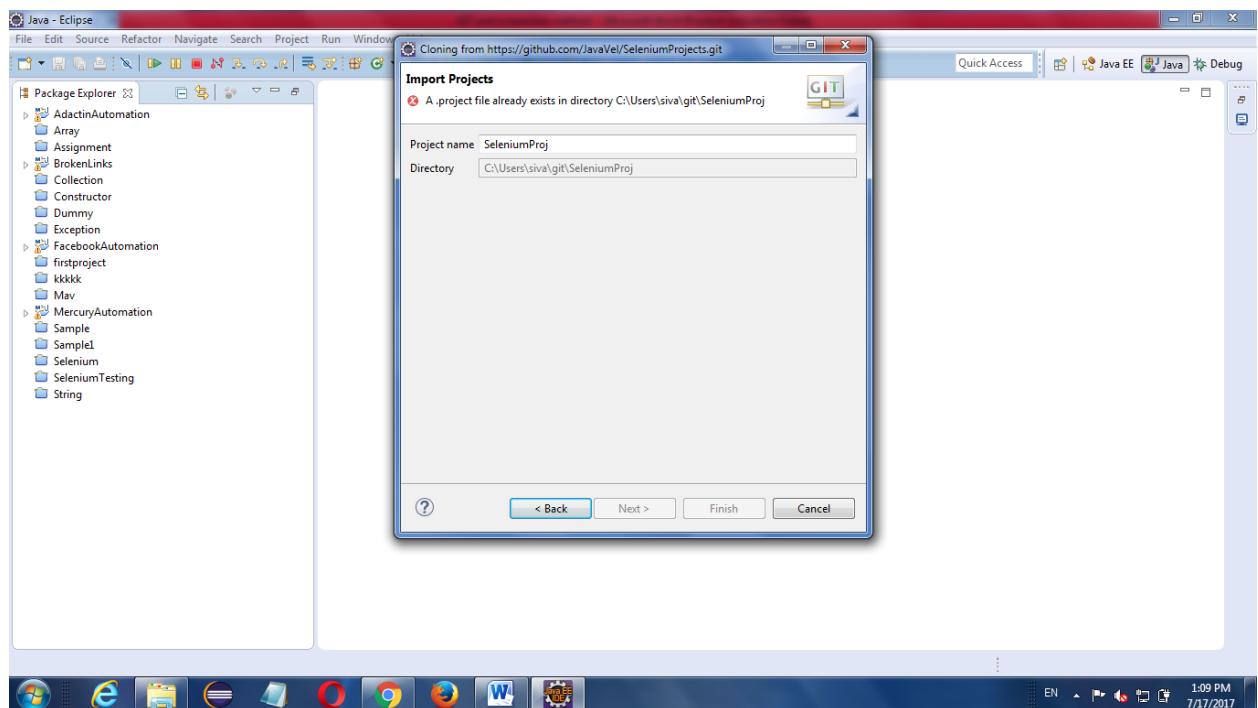
9. If we have that project we get an error message then we have to change the name and click next



10. Select import as general project and click next

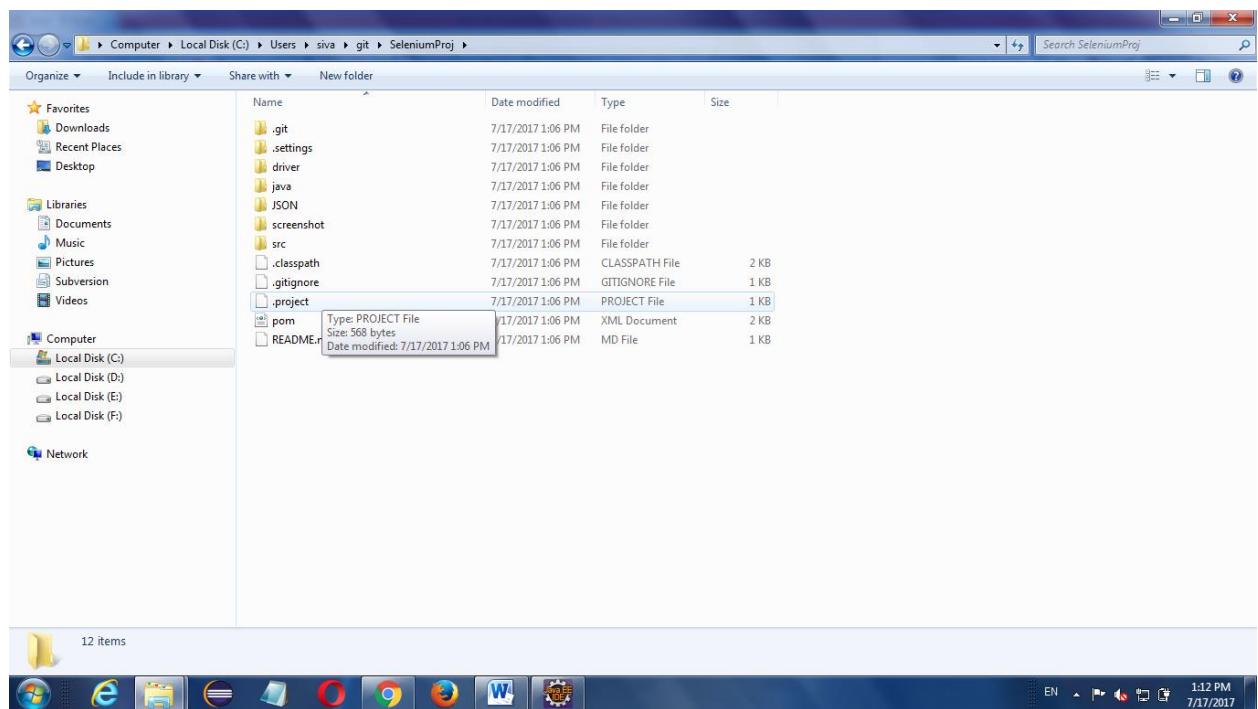


11. We get one error message (i.e.) a **.project** file is already exist. So we have to delete it from that location.



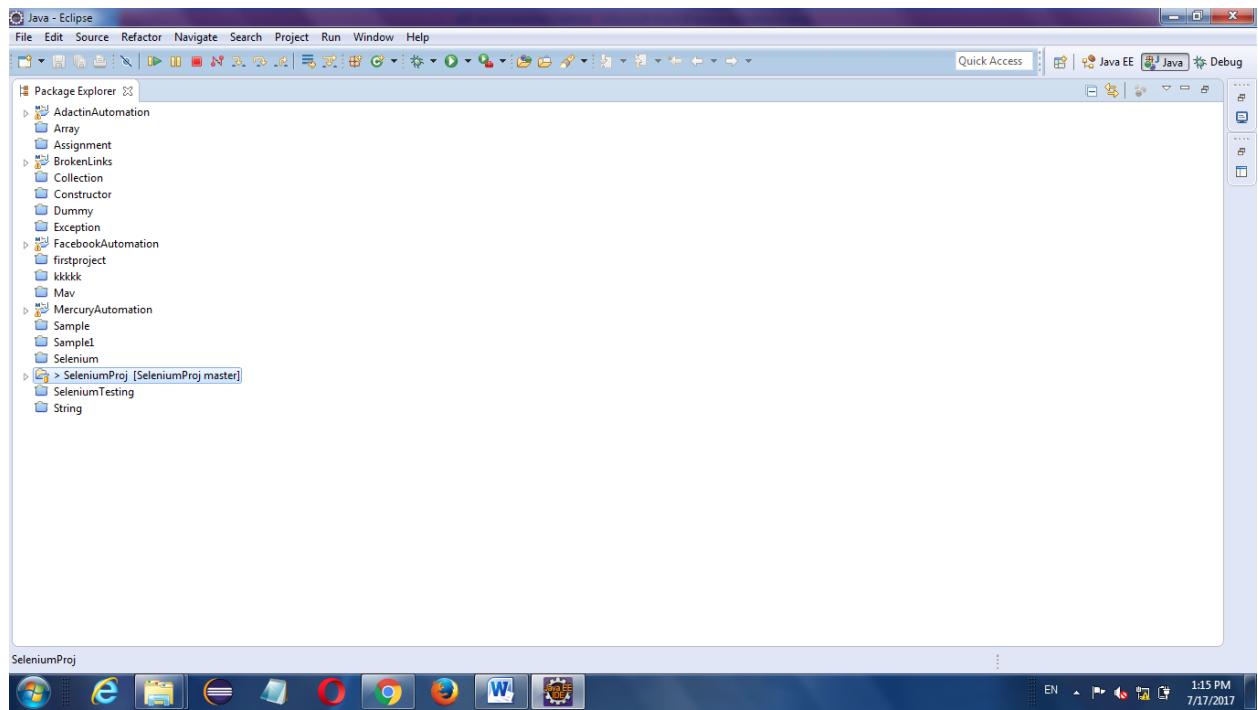
12. Click back → back → copy that location and go to that particular location

13. Delete .project file

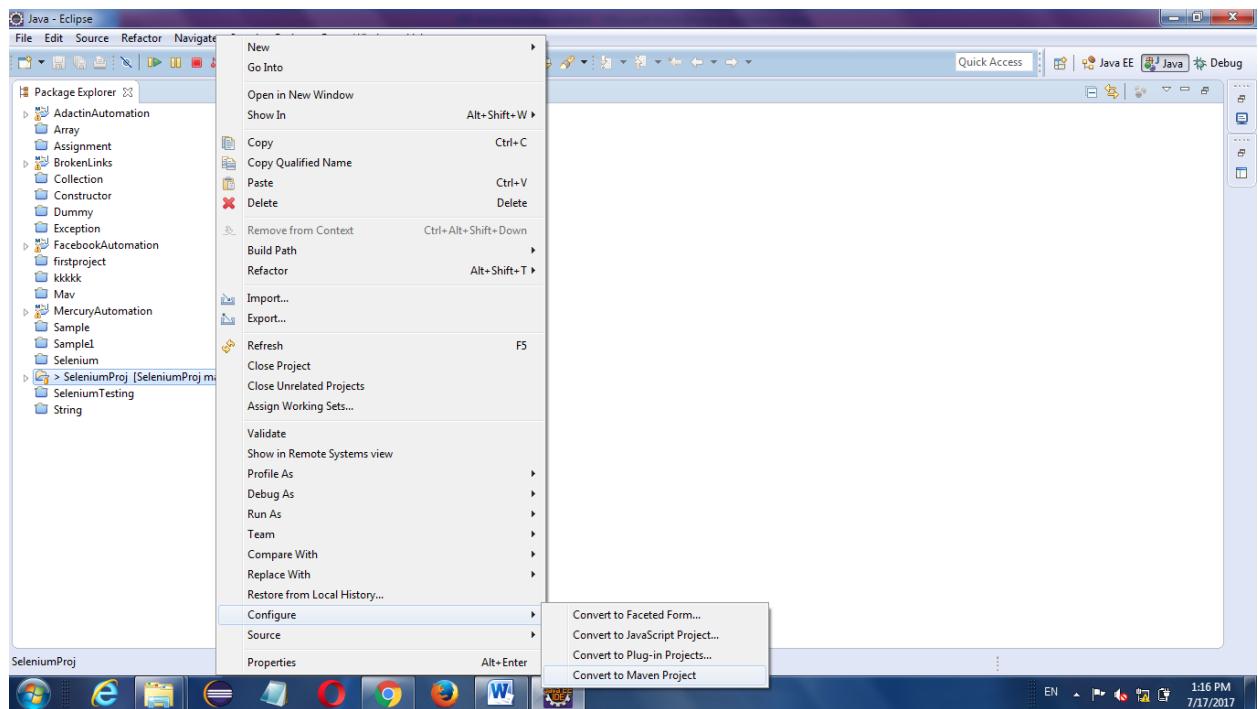


14. Go to eclipse click next → next → finish

15. Git project will be created in eclipse



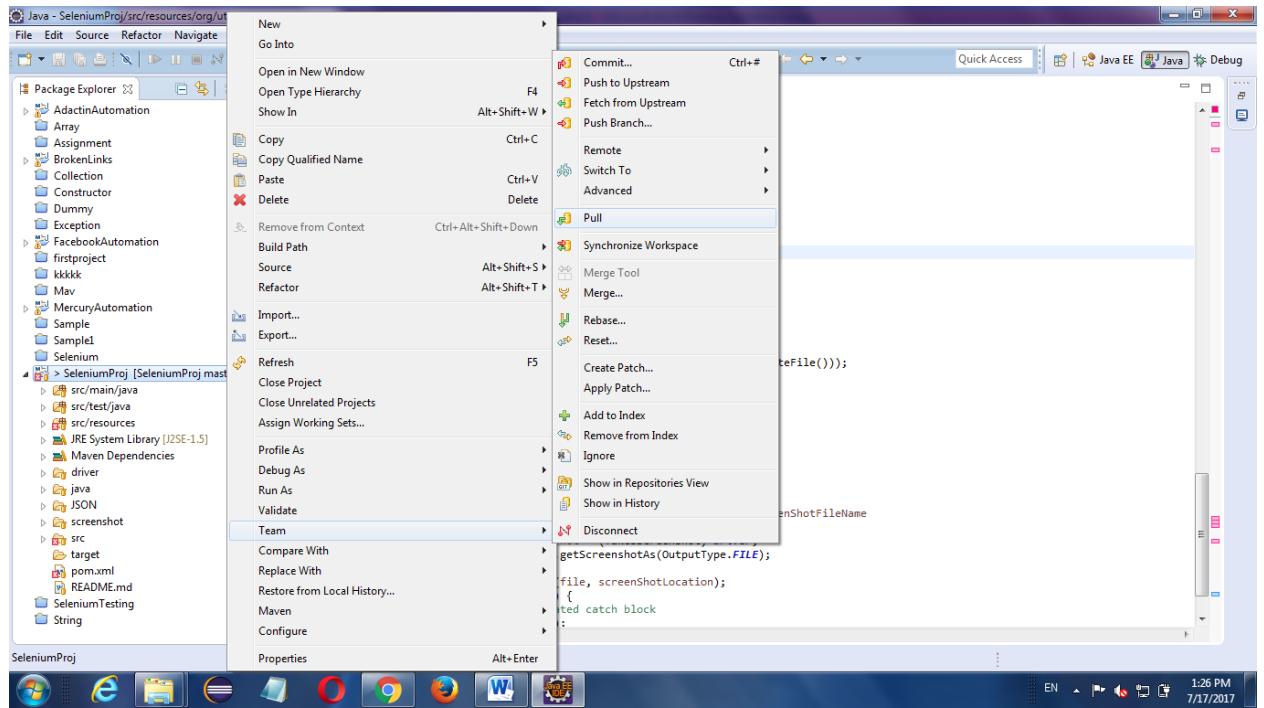
16. Right click that project → configure → click convert to maven project



17. Then it will convert to maven project

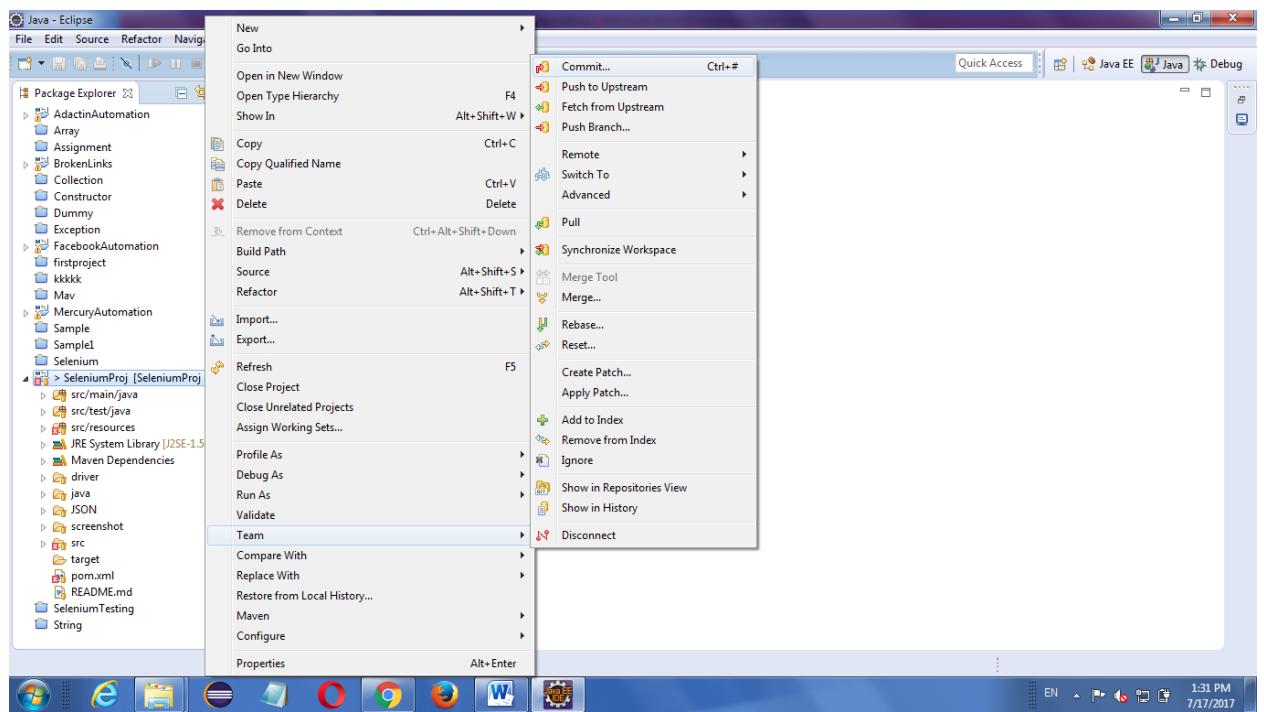
PULL:

- If we want to update the project from repository, right click the project → Team → Pull.
Then it will get updated

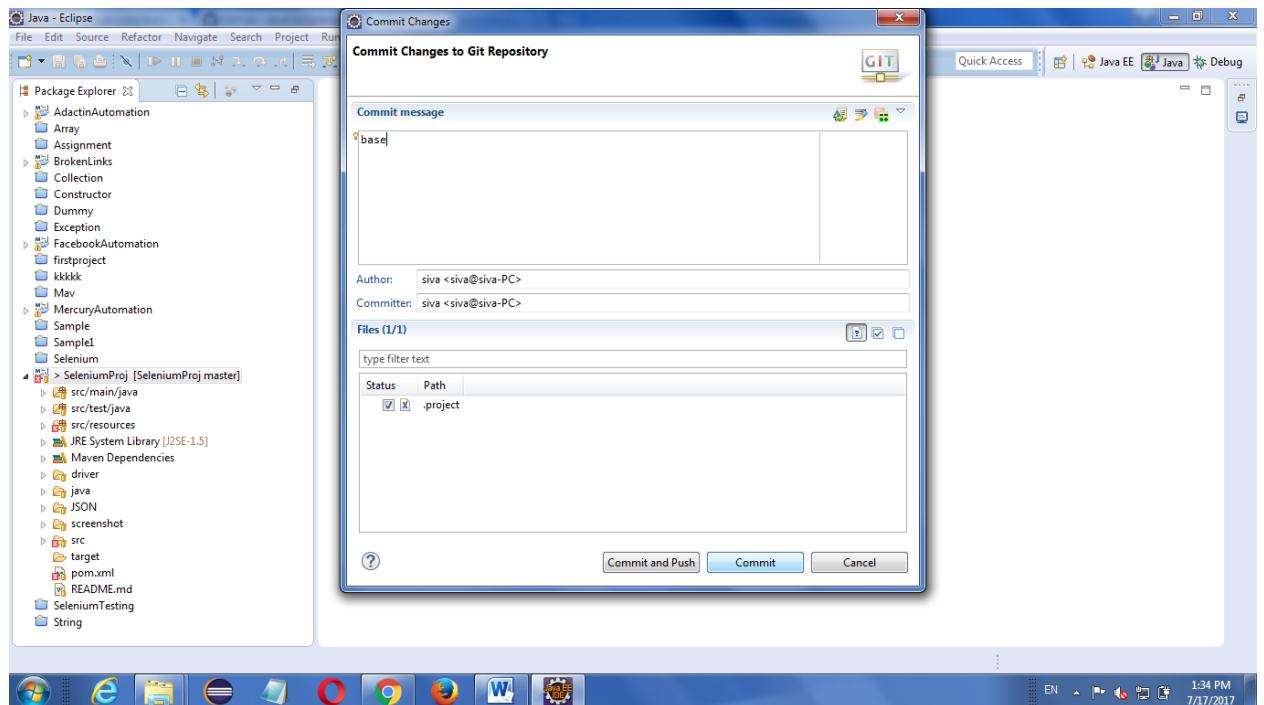


PUSH:

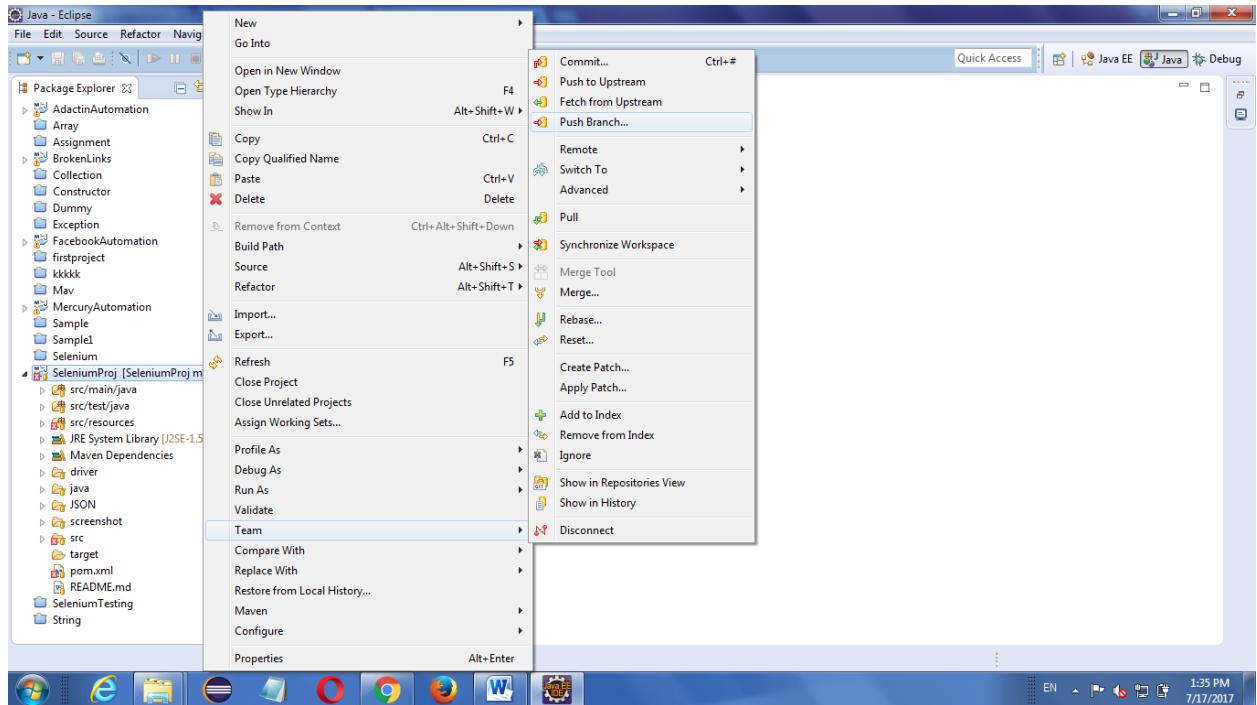
- If we want to modify something and push to repository, right click your project → Team
→ select commit



- Enter commit message and click enter



- Then right click your project → Team → select push branch



- Click next and give username and password and click finish

