

SELENIUM MATERIAL

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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, and Selenium. Under Selenium, there's a src folder containing selenium.browser (with files FacebookAccount.java, GmailAccount.java, InternetExplorer.java, and Opera.java), driver, lib, and SeleniumTesting.
- Code Editor:** Displays the Java code for FacebookAccount.java, which sets up a Firefox driver, navigates to Facebook, and closes it.
- Console:** Shows the command-line output of the Java application. It includes log messages from geckodriver indicating it's listening on port 41052 and starting a browser using Mozilla Firefox with args ["-marionette"].
- Taskbar:** At the bottom, the taskbar shows various icons for Windows, Internet Explorer, File Explorer, Task View, Firefox, Opera, Google Chrome, and Microsoft Word.



Program output:

The screenshot shows a Windows desktop environment with a taskbar at the bottom containing icons for various applications like File Explorer, Internet Explorer, and Microsoft Word. The main window is a web browser displaying the Facebook login page. On the left, there's a promotional message about connecting with people in your life, accompanied by a world map with orange user icons. On the right, the 'Create an account' form is visible, prompting for first name, surname, mobile number or email address, and new password. Below these fields are dropdowns for birthday (set to 21 Jun 1999) and gender (set to Male). A link for 'Why do I need to provide my date of birth?' is present. At the bottom of the form is a large green 'Create an account' button. The status bar at the bottom right shows the date and time as 8:16 PM 6/21/2017.

- 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:

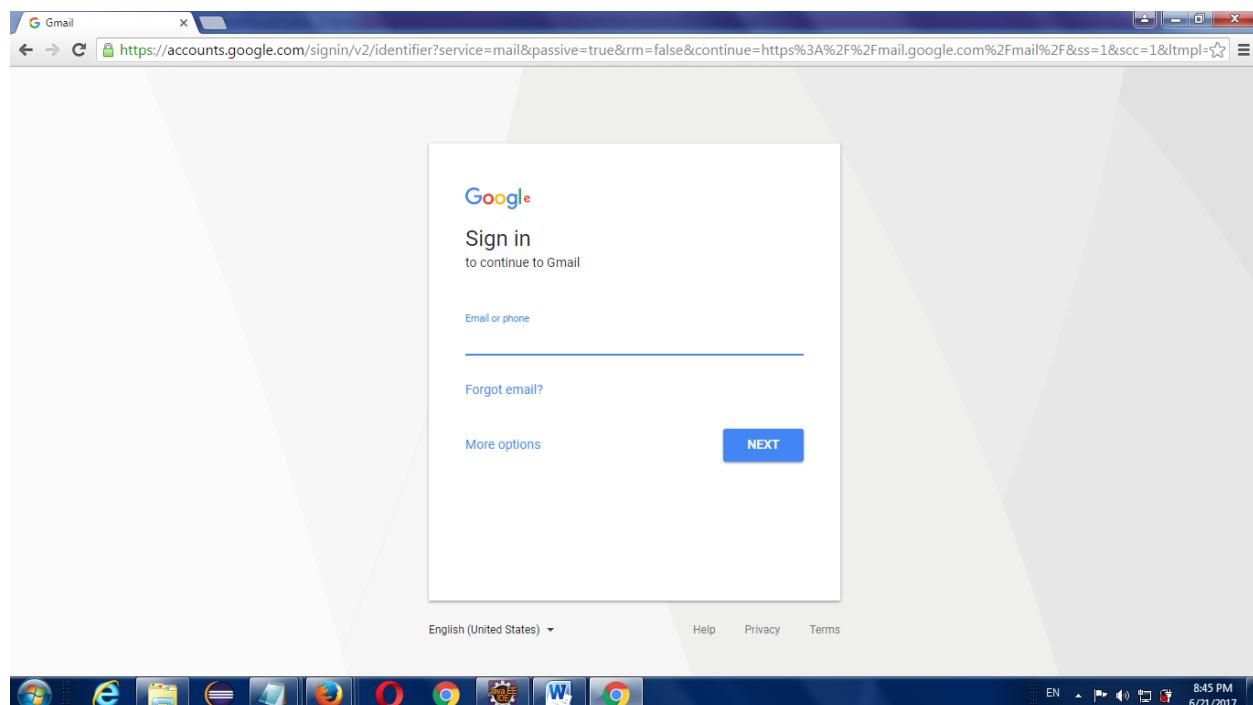
program running

The screenshot shows the Eclipse IDE interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, and Help. The title bar says "Java - Selenium/src/selenium/browser/GmailAccount.java - Eclipse". The left side features the Package Explorer with various Java files like FacebookAccount.java, GmailAccount.java, InternetExplorer.java, and Operajava. The center workspace shows the Java code for "GmailAccount.java":

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

The right side of the interface includes a "Console" window showing the command-line output of the Java application running in the background. The bottom status bar displays the date and time as "6/21/2017 8:42:48 PM".

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

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

- Project Explorer:** Shows several Java projects: Array, Assignment, Dummy, firstproject, kkkkk, Selenium, selenium.browser, String, and SeleniumTesting.
- Code Editor:** Displays the Java code for launching Internet Explorer. The code imports the WebDriver class from org.openqa.selenium and creates a new InternetExplorerDriver instance, setting the driver's URL to "https://www.facebook.com/" and maximizing the window.
- Console:** Shows the execution output of the Java application. It includes the command "IntenetExplore [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:48:41 PM)", the message "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".
- Taskbar:** At the bottom, the taskbar shows various icons for Windows, Internet Explorer, File Explorer, Task View, Firefox, Opera, Chrome, Microsoft Word, and Microsoft Excel.



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

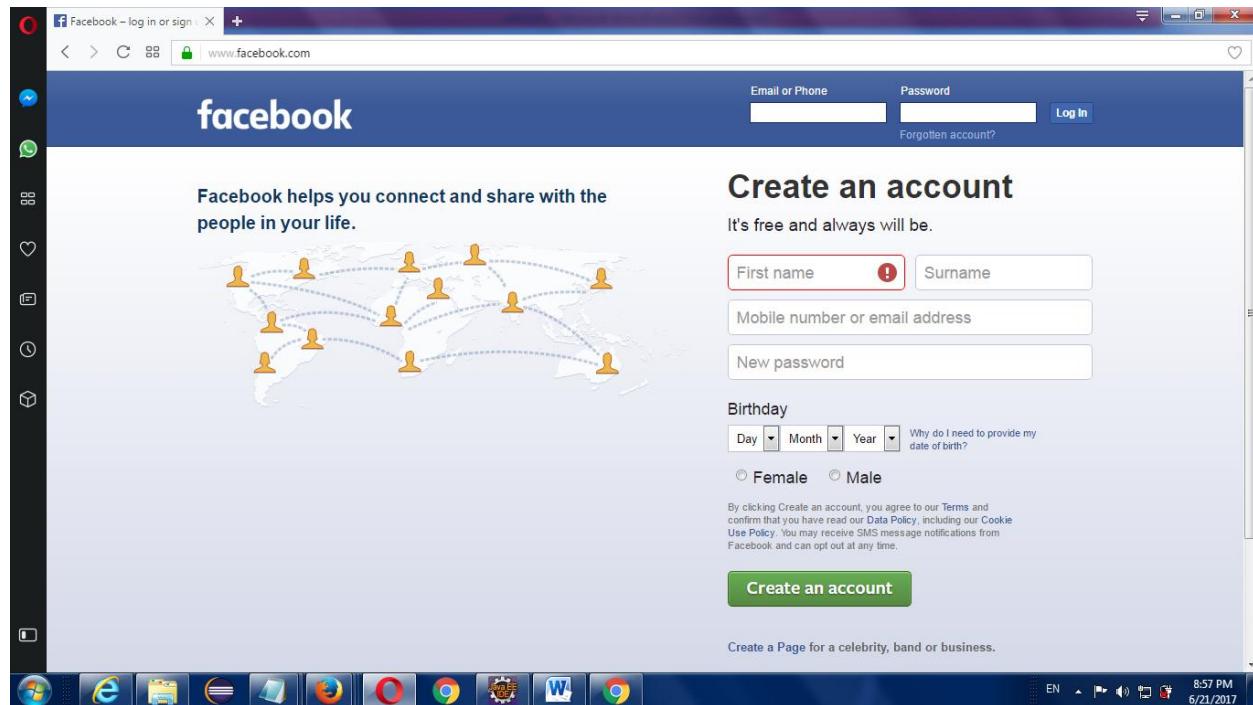
The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Shows a Java project named "Java - Selenium/src/selenium/browser/OperaJava - Eclipse". It contains packages like "Array", "Assignment", "Dummy", "firstproject", "kkkkk", "Selenium", and "selenium.browser". Under "selenium.browser", there are files: FacebookAccount.java, GmailAccount.java, InternetExplorer.java, and Opera.java.
- Code Editor:** Displays the Java code for the "Opera" class:

```
1 package selenium.browser;
2
3 import org.openqa.selenium.WebDriver;
4
5 public class Opera {
6
7     public static void main(String[] args) {
8         System.setProperty("webdriver.opera.driver", "C:/Users/siva/workspace/Selenium/driver/operadriver.exe");
9
10        WebDriver driver = new OperaDriver();
11        driver.get("https://www.facebook.com/");
12        driver.manage().window().maximize();
13    }
14
15 }
```
- Console:** Shows the terminal output of the program's execution:

```
<terminated> Opera [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:56:11 PM)
Starting OperaDriver 2.27 (f6105e56dd197467fd6d27c7fb0d7fe572fe8bd) on port 24778
Only local connections are allowed.
Jun 21, 2017 8:56:18 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: OSS
```
- Bottom Bar:** Shows the Windows taskbar with various application icons and the system tray indicating the date and time (6/21/2017, 8:56 PM).

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

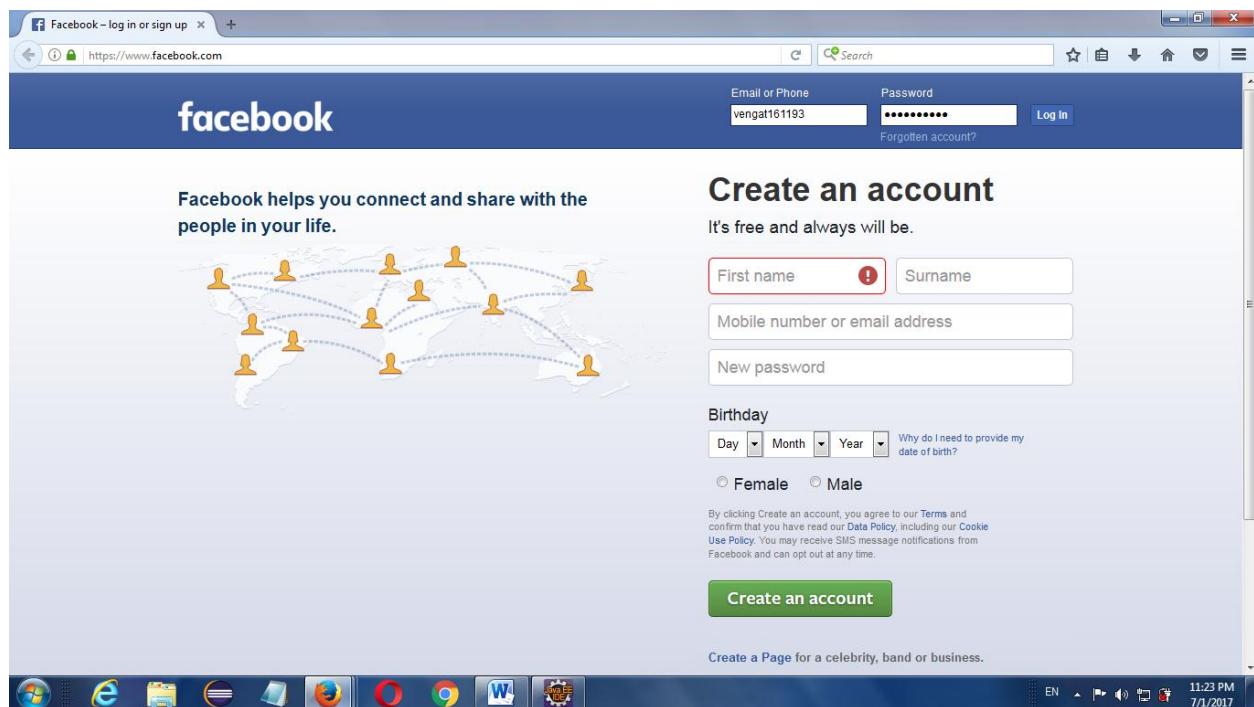


Java - Selenium/src/selenium/assign1/Dummy.java - Eclipse

```
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer Ex3.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java Dummy.java >30
src
  org.dummy
    AxisBank.java
    Dummy.java
    HdfcBank.java
    OnlineShoppingSite.java
  JRE System Library [JavaSE-1.7]
  Exception
  firstproject
  kkkkk
  Selenium
    selenium.assign1
      Dummy.java
      Ex1.java
      Ex10.java
      Ex2.java
      Ex3.java
      Ex4.java
      Ex5.java
      Ex6.java
      Ex7.java
      Ex8.java
      Ex9.java
    selenium.browser
  JRE System Library [JavaSE-1.7]
  Referenced Libraries
  driver
  lib
Ex3.java
1
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.firefox.FirefoxDriver;
6
7 public class Dummy {
8     public static void main(String[] args) throws InterruptedException {
9         System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
10        WebDriver driver=new FirefoxDriver();
11        driver.get("https://www.facebook.com/");
12        driver.findElement(By.xpath("//[@id='email']")).sendKeys("vengat161193");
13        driver.findElement(By.xpath("//[@id='pass']")).sendKeys("90473680818");
14        driver.findElement(By.xpath("//[@id='u_0_r']")).click();
15        Thread.sleep(3000);
16        driver.quit();
17    }
18
Console
Dummy (1) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 1, 2017, 11:17:03 PM)
1498931227467 geckodriver INFO Listening on 127.0.0.1:31989
1498931228232 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
Writable Smart Insert 3:31
EN 11:17 PM 7/1/2017
```

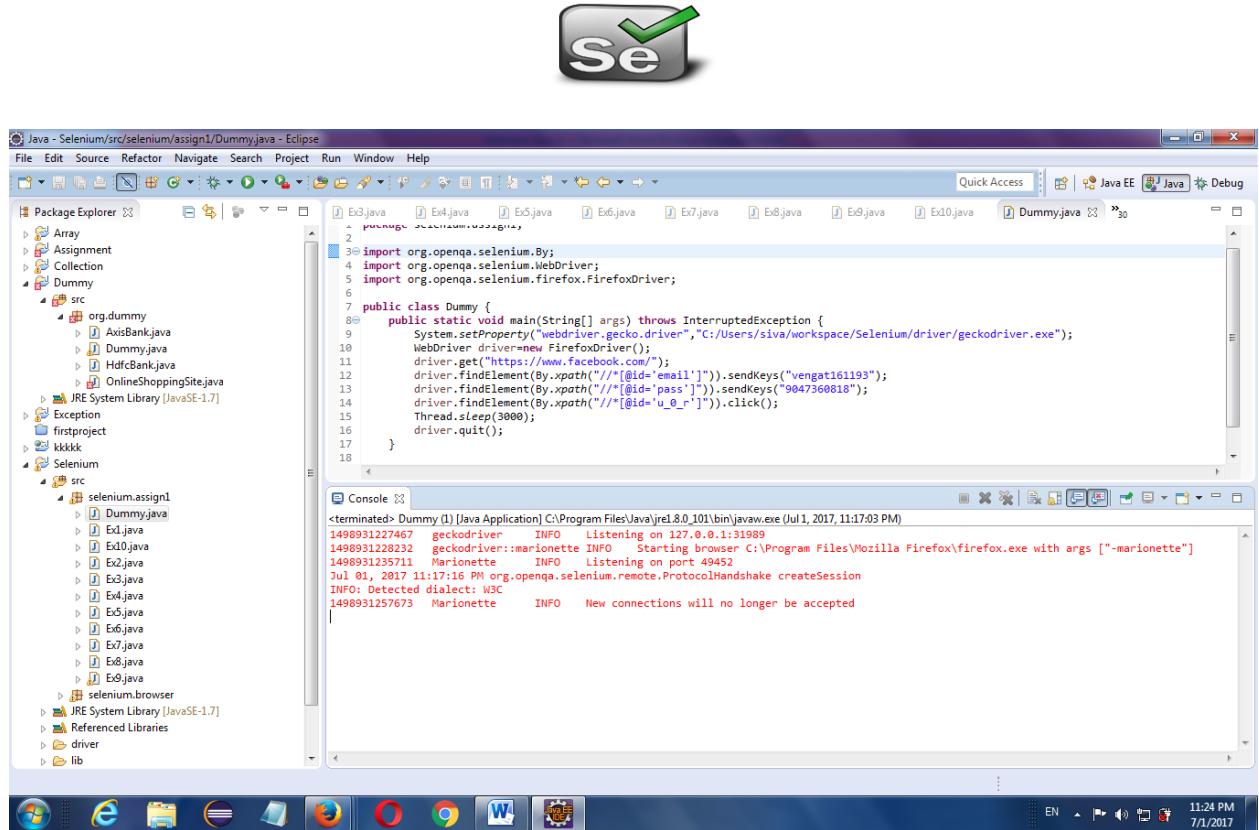
Step 2;

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:

```
Java - Selenium/src/selenium/assign1/Dummy.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer Ex4.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java Dummy.java
Ex4.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java Dummy.java
1 package selenium.assign1;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.firefox.FirefoxDriver;
6
7 public class Dummy {
8     public static void main(String[] args) throws InterruptedException {
9         System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
10        WebDriver driver=new FirefoxDriver();
11        driver.get("https://www.facebook.com/");
12        driver.findElement(By.xpath("//[@id='email']")).sendKeys("vengat161193");
13        driver.findElement(By.xpath("//[@id='pass']")).sendKeys("9047360818");
14        String s = driver.getTitle();
15        System.out.println(s);
16    }
17 }
18 }

Console <terminated> Dummy (1) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 1, 2017 11:39:49 PM)
1498932591964 geckodriver INFO Listening on 127.0.0.1:2313
1498932592753 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-m marionette]
1498932604989 Marionette INFO Listening on port 49638
Jul 01, 2017 11:40:08 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Facebook - log in or sign up
```

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/g
eckodriver.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 "Java - selenium/src/selenium/assign1". It contains several source files (Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java) and a testng.xml file.
- Code Editor:** Displays the content of Ex4.java. The code is a simple Java application that uses Selenium to interact with the Adactin Hotel App. It includes imports for WebDriver, By, and WebElement from the selenium package.
- Console:** Shows the terminal output of the Java application. It includes log messages from the geckodriver and Marionette, and the printed message "u r in adactin website".
- Bottom Bar:** Shows the Windows taskbar with various icons like Start, Task View, File Explorer, and a search bar.

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:

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

- Project Explorer:** Shows a Java project named "Java - Selenium/src/selenium/assign1/Ex5Java - Eclipse". It contains several source files: Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, and Ex9.java.
- Code Editor:** The current file is Ex5.java. The code is as follows:

```

7 public class Ex5 {
8     public static void main(String[] args) {
9         System.setProperty("webdriver.gecko.driver", "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
10        WebDriver driver=new FirefoxDriver();
11        driver.get("http://www.actin.com/HotelApp/index.php");
12        driver.findElement(By.id("username")).sendKeys("vengat16");
13        driver.findElement(By.id("password")).sendKeys("karthick");
14        String s = driver.findElement(By.id("username")).getAttribute("value");
15        String sl = driver.findElement(By.id("password")).getAttribute("value");
16        System.out.println(s);
17        System.out.println(sl);
18    }
19}
20
21
22}
23

```
- Console:** Displays the terminal output of the Java application:

```

<terminated> Ex5 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 1, 2017, 11:54:58 PM)
149893507453 geckodriver INFO Listening on 127.0.0.1:38215
149893510028 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
149893528496 Marionette INFO Listening on port 49892
Jul 01, 2017 11:55:32 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
venga16
Karthick

```
- Bottom Status Bar:** Shows the date (7/1/2017), time (11:56 PM), and other system information.

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/g
eckodriver.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")).i
sDisplayed();

        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:** Displays the project structure under "selenium.assign1".
- Editor:** Shows the Java code for "Ex6.java". The code uses Selenium to open Facebook and check if the logo is displayed.
- Console:** Displays the terminal output of the Java application running. It shows the browser being started and the logo being checked.

```
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");
    }
}
```

```
<terminated>: Ex6 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 8:11:14 AM)
1498963277441 geckodriver INFO Listening on 127.0.0.1:48138
1498963278300 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1498963285061 Marionette INFO Listening on port 49327
Jul 02, 2017 8:11:26 AM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
logo is available
```

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. The left pane displays the 'Package Explorer' with a project named 'selenium.assign1' containing several Java files (Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java). The right pane shows the Java code for 'Ex1.java' and the 'Console' tab. The code initializes a Firefox driver, navigates to Facebook, and checks if the logo's 'isEnabled()' method returns true or false. The console output shows the application running and printing 'Text box is enable to print'.

```
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");
    }
}
```

```
<terminated> Dummy (1) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 8:20:59 AM)
1498963862152 geckodriver    INFO    Listening on 127.0.0.1:45252
1498963862287 geckodriver::marionette INFO    Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-"marionette"]
1498963871744 Marionette    INFO    Listening on port 49469
Jul 02, 2017 8:21:13 AM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Text box is enable to print
```

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:

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

- Top Bar:** File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help.
- Project Explorer:** Shows a project named "Dummy (1)" under "terminated".
- Code Editor:** Displays the Java code for the "Dummy" class.
- Console Output:** Shows the terminal output of the application's execution. It includes log messages from the geckodriver and Marionette, and the printed text "Female" and "Male".
- Taskbar:** Shows various application icons including Internet Explorer, Mozilla Firefox, and Microsoft Word.
- System Tray:** Shows the date and time as "Jul 02, 2017 12:47:27 PM" and "12:48 PM".



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

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* 02/07/2017 (dd/mm/yyyy)
Check Out Date* 03/07/2017 (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.

Book on HP UFT/QTP

A step by step guide to learn the latest version of HP QTP

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

```

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");
        }
    }
}

<terminated> Ex4 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:20:24 PM)
1498981826966 geckodriver INFO Listening on 127.0.0.1:14887
1498981827747 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
1498981835532 Marionette INFO Listening on port 51968
Jul 02, 2017 1:20:36 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
u r in adactin website
  
```

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:

- Title Bar:** Debug - Selenium/src/selenium/assign1/Ex5.java - Eclipse
- Menu Bar:** File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help
- Toolbars:** Standard, Java EE, Java, Debug
- Left Sidebar (Package Explorer):** Shows the project structure with packages like selenium.assign1 and selenium.browser, and files like Ex1.java, Ex2.java, etc.
- Central Area (Editor):** Displays the Java code for Ex5.java, which sets up a Firefox driver, navigates to a URL, and prints the page title.
- Bottom Area (Console):** Shows the terminal output of the application's execution, including log messages from the geckodriver and Marionette, and the printed page titles.
- Bottom Status Bar:** Shows the date (Jul 2, 2017), time (1:24:00 PM), and file path (C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe).

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 Output:

```

<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

Package Explorer Ex2.java Ex3.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java

```

14     driver.findElement(By.id("username")).sendKeys("admin");
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 }
```

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 127.0.0.1:2828
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. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, and Help. The toolbar below has various icons for file operations. The Package Explorer view on the left lists several Java files under the package selenium.assign1. The central editor window displays the Java code for Program 8. The bottom Console tab shows the execution output:

```
<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
1498982972003 geckodriver::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:

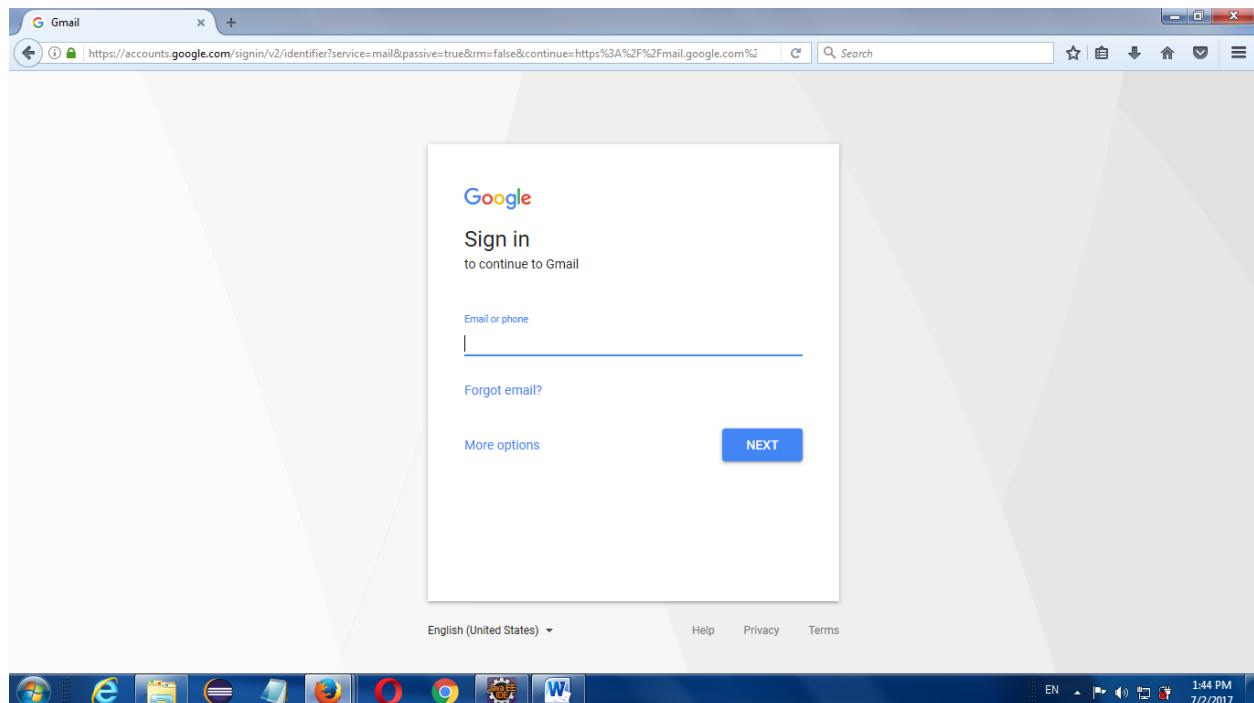
```
public class Ex8 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.google.co.in/");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

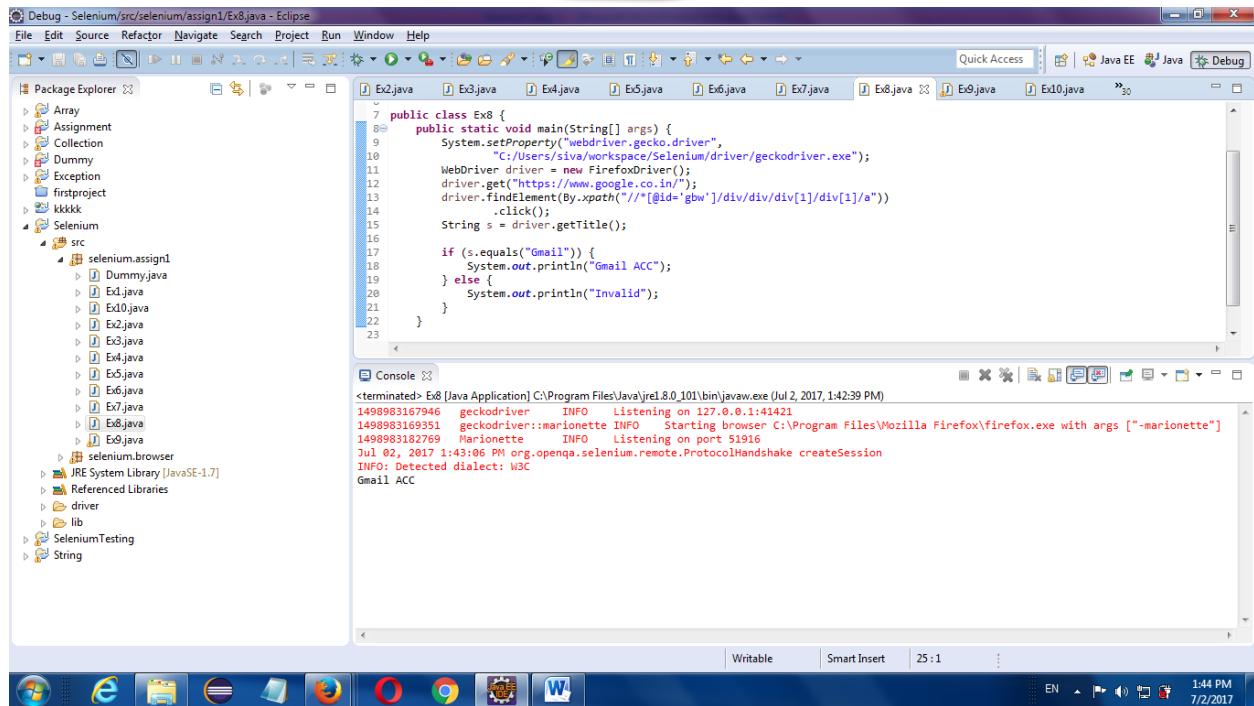


```
.click();
String s = driver.getTitle();

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

Output





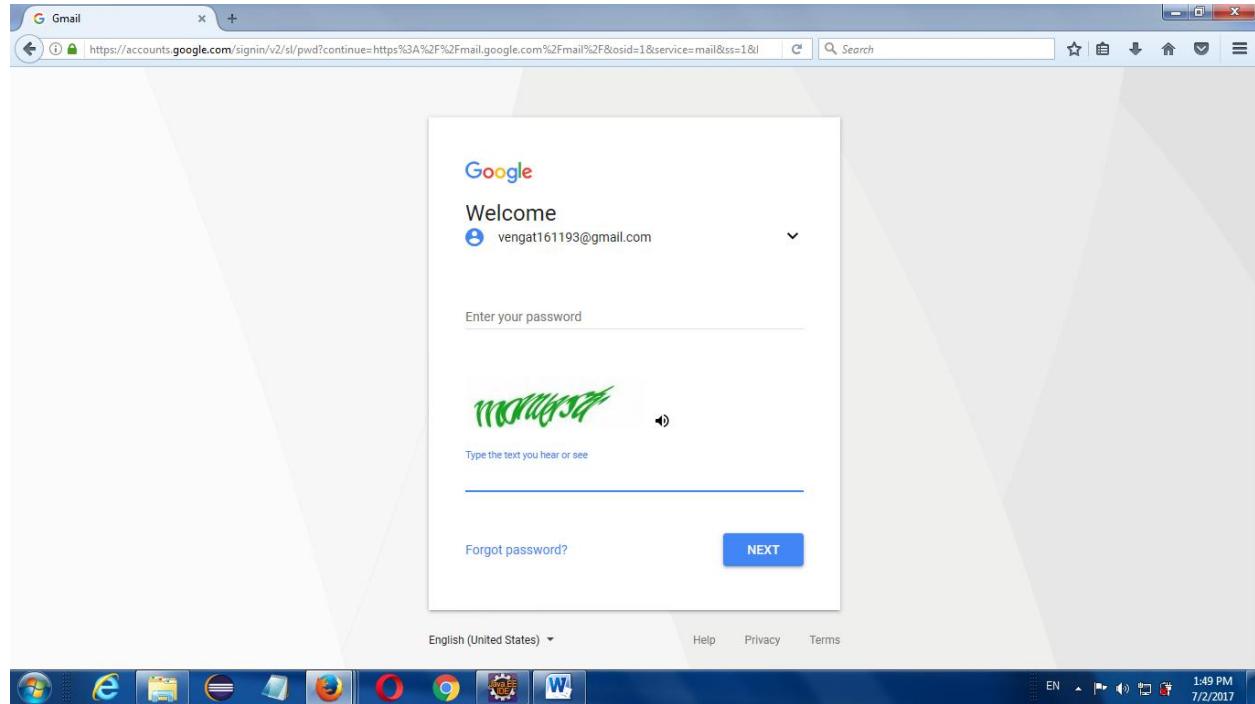
Program 9: Gmail Account Login

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%2Fmail.google.com%2Fmail%2F&ss=1&scc=1&ltmpl=default&ltmplcache=2&emr=1&osid=1&flowName=GifWebSignIn&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

facebook

Find Your Account

Please enter your email address or phone number to search for your account.

vengat16

Search Cancel

English (UK) தமிழ் அலுவல்கள் மற்றும் பொருள்கள் மற்றும் பண்ணி வள்ளுக்கூடுதல் மீதான பெண்ணின் வாழ்வை நிறைவேற்றுகிறது. பொருள்கள் மற்றும் பண்ணி வள்ளுக்கூடுதல் மீதான பெண்ணின் வாழ்வை நிறைவேற்றுகிறது.

Sign Up Log In Mobile Find Friends Pages Help

Messenger Facebook Lite People Places Games Locations Celebrities Marketplace Groups Recipes Moments

Instagram About Create Advert Create Page Developers Careers Privacy Cookies AdChoices Terms

Facebook © 2017

facebook

Reset Your Password

How do you want to get the code to reset your password?

Send code via email
v*****3@gmail.com
k*****h@***.com

Send code via SMS
+*****72

Vengat Ram Gurumoorthy
Facebook user

No longer have access to these? Continue Not You?

You can see your name and profile picture because your privacy settings allow it.

English (UK) தமிழ் அலுவல்கள் மற்றும் பொருள்கள் மற்றும் பண்ணி வள்ளுக்கூடுதல் மீதான பெண்ணின் வாழ்வை நிறைவேற்றுகிறது. பொருள்கள் மற்றும் பண்ணி வள்ளுக்கூடுதல் மீதான பெண்ணின் வாழ்வை நிறைவேற்றுகிறது.

Sign Up Log In Mobile Find Friends Pages Help

EN 2:09 PM 7/2/2017

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/g  
eckodriver.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/g  
eckodriver.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(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 with a Java project named "selenium.assign2". The "src" folder contains files Ex1.java through Ex10.java and Ex2.java. The "Console" tab displays the execution output of the "Dummy" class, which uses Selenium to interact with a demoqa registration page. The log shows the browser starting, navigating to the URL, and executing the code to click checkboxes based on their value attributes. The output ends with a JavaScript error message.

```
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 with the following details:

- Project Explorer:** Shows a project named "selenium.assign2" containing packages "Collection", "Dummy", "Exception", "firstproject", "kkkkk", and "Selenium". Under "src", there are files: Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, Ex10.java, and Ex2.java.
- Code Editor:** Displays Java code for a "Dummy" class. The code sets up a Firefox driver, navigates to a dropdowns page, and prints the text of all options in a select element.
- Console:** Shows the command-line output of the Java application. It includes log messages from the geckodriver and Marionette, and the printed text "black", "cream", "sugar", "regular", and "crisp".
- Bottom Bar:** Shows the Windows taskbar with various pinned icons like File Explorer, Internet Explorer, and Google Chrome.

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 with the following details:

- Project Explorer:** Shows a project named "selenium.assign2" containing packages "Collection", "Dummy", "Exception", "firstproject", "kkkkk", and "Selenium". Under "Selenium/src", there are files: Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, Ex10.java, and Ex12.java.
- Code Editor:** Displays the content of Ex1.java, which contains Java code for interacting with a dropdown menu using Selenium WebDriver.
- Console:** Shows the command-line output of the Java application. It includes log messages from the geckodriver and Marionette, and the application's own output:

```
<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"]
1499086264135 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...)
```
- Taskbar:** Shows various application icons including Windows Taskbar, Internet Explorer, File Explorer, Task View, Taskbar settings, Edge, Google Chrome, Firefox, and Word.

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:

The screenshot shows a web browser window with the URL ironspider.ca/forms/dropdowns.htm. The page displays a dropdown menu titled 'Software Programmer' with options 'Jobs - Loc: Chennai, Exp: 4-10 Yrs'. Below the menu, there is a brief description and a link to monsterindia.com. A sidebar on the left contains links for 'Dropdown Menus', 'Push Buttons', 'Layout and Presentation', 'CSS', 'Basic CSS', 'CSS Properties', 'hosting', 'All About Web Hosting', 'resources', 'Free Web Design Tools', 'Setting Up HTML Kit', 'Free Templates', 'Website Templates Help', 'Web Design Tips', 'Twitter Backgrounds', 'All About Web Browsers', 'Contact', and 'other'. At the bottom of the page, there is a 'html kit' link and a W3C HTML 4.01 validation logo. The browser's taskbar at the bottom shows various open tabs and icons.



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:

The screenshot shows the Eclipse IDE interface. The left pane displays the Package Explorer with a project named 'Selenium' containing several Java files (Ex1.java, Ex2.java, etc.). The central editor pane shows a Java code snippet for a 'Dummy' class. The right pane shows the Java EE perspective with various tabs like 'Java EE', 'Java', and 'Debug'. Below the editor is a 'Console' tab showing the terminal output of the Java application. The output shows log messages from the Selenium framework and the browser driver, followed by the printed result 'With cream'.

```
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:

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

- Project Explorer:** Shows a project named "Selenium" containing several Java files: Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Dummy.java.
- Code Editor:** Displays the content of the `Dummy.java` file, which contains Java code for interacting with a dropdown menu using Selenium WebDriver.
- Console:** Shows the output of the Java application run in the terminal. It includes log messages from the geckodriver and Marionette, and the application's own output indicating it found a multiple-select dropdown and printed "true".
- System Tray:** Shows various icons for system applications like Task Manager, File Explorer, and browser icons.

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:

The screenshot shows a Microsoft Internet Explorer window with the URL ironspider.ca/forms/dropdowns.htm. The page contains two sections: 'MAKING MENU SUBSECTIONS' and 'AN ADVANCED DROPODOWN MENU'. The 'MAKING MENU SUBSECTIONS' section includes explanatory text and a link to an example. The 'AN ADVANCED DROPODOWN MENU' section includes explanatory text and a screenshot of a dropdown menu titled 'I like my coffee with:' containing options: Honey, Snack, A donut, A danish, and A muffin. The dropdown is currently open, with 'Snack' selected. The browser's toolbar and status bar are visible at the bottom.

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:

The screenshot shows a Microsoft Internet Explorer window with the title "Dropdown Menus". The URL is "ironspider.ca/forms/dropdowns.htm". The page content includes two sections: "MAKING MENU SUBSECTIONS" and "AN ADVANCED DROPODOWN MENU".

MAKING MENU SUBSECTIONS

An extensive list of menu items may serve the user better if it was organized into subsections. Each subsection is then given a title that describes the group of menu items it contains. This is accomplished by placing all the menu items you wish to define as a subsection between a set of `<optgroup>...</optgroup>` tags. The `label="section_name"` attribute-value pair is inserted in the `<optgroup>` start tag where `section_name` equals the title of the subsection. To see this in effect, please refer to the [example below](#).

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AN ADVANCED DROPODOWN MENU

In the following example, the menu employs `subsections`, displays **five** rows at a time and permits the user to make `multiple selections`. The menu item "Cream" is selected by default. The user makes multiple selections by pressing Ctrl on his keyboard while clicking on each menu item. (Menu items are 'deselected' in the same manner).

I like my coffee with:

Dairy

- Skim Milk
- Milk (2%)
- Cream
- Whipped cream

[^ Top ^](#)

EXERCISE 2:

Program 1: Gmail registration

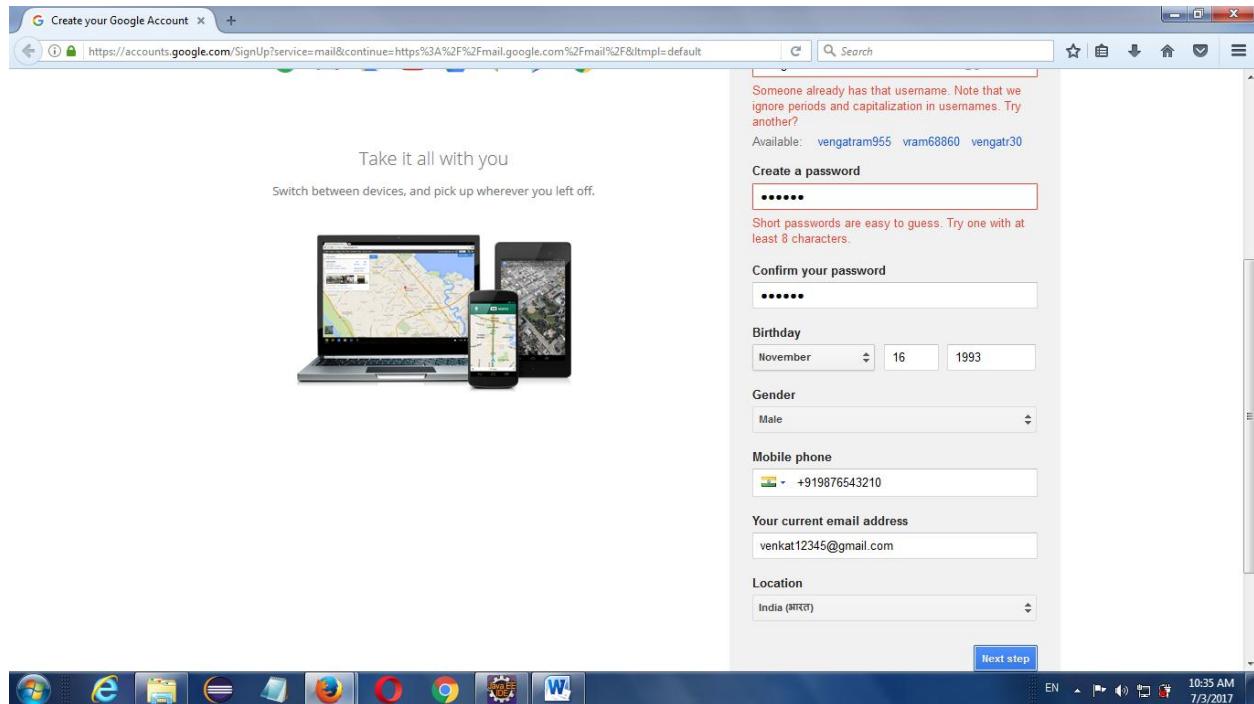
Program:

```
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(
"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='i']")).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&.don  
e=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:

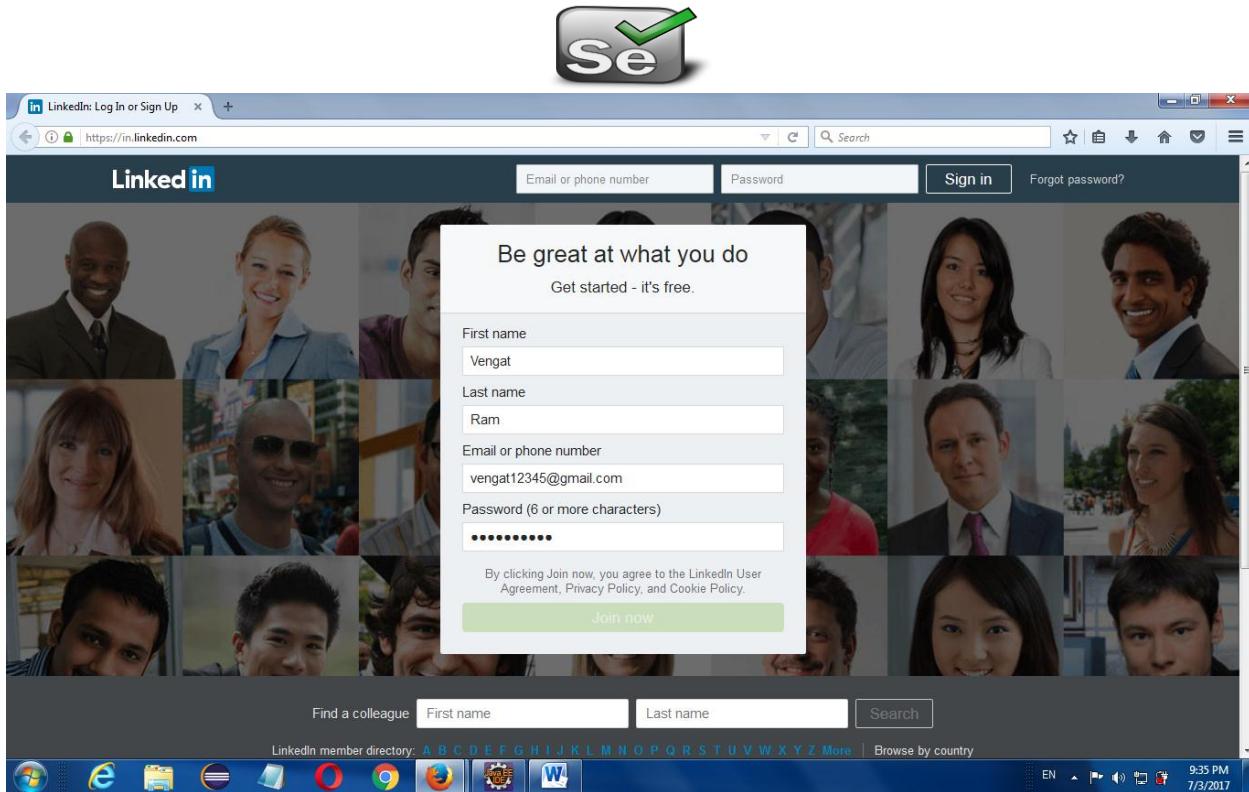
The screenshot shows a Microsoft Windows desktop environment with a Firefox browser window open. The URL in the address bar is <https://login.yahoo.com/account/create?specId=yidReg&altreg=0&intl=in&.done=http://in.mail.yahoo.com>. The page title is "YAHOO!". A "Sign up" form is displayed, with "Vengat" entered in the first name field and "Ram" in the last name field. In the email field, "vengat12344444" is entered, followed by "@yahoo.com". A dropdown menu lists several suggested email addresses: vengatr, vengat.ram, ram.vengat, r.vengat, and vengatram973. Below the email field is a gender selection field with "Male" selected. At the bottom of the form is a blue "Continue" button. Below the form, a link says "Already have an account? [Sign in](#)". The taskbar at the bottom shows various icons for running programs, and the system tray indicates the date and time as 7/3/2017 at 9:20 PM.

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/geckodriver.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:

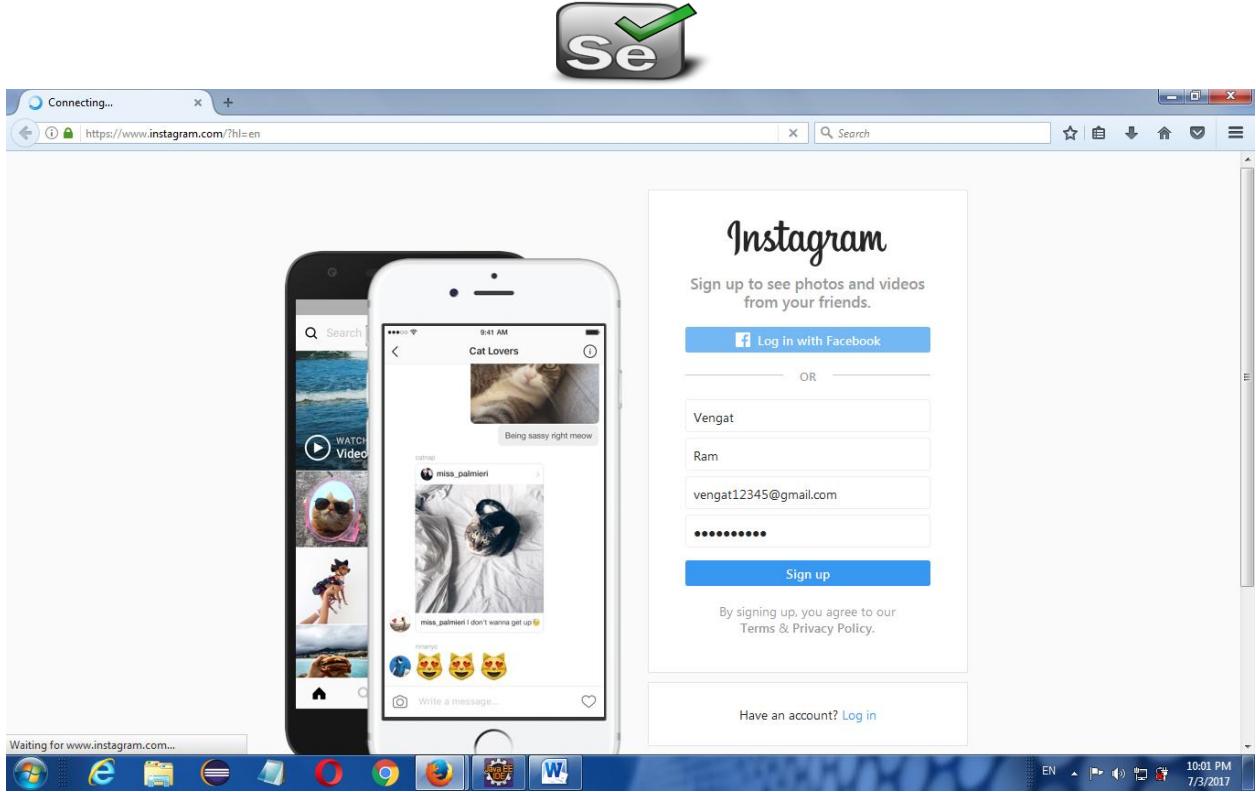
A screenshot of a Firefox browser window. The address bar shows 'Twitter, Inc. (US) | https://twitter.com/signup?lang=en'. A message at the top of the page says, 'We've updated our Privacy Policy, effective June 18th, 2017. You can learn more about what's changed on our Help Center.' Below this, there is a large button with the text 'Join Twitter today.' In the center of the page, it says 'Creating your account...'. At the bottom of the browser window, a status bar displays 'Sending request to twitter.com...' and the system tray shows various icons and the date/time '9:46 PM 7/3/2017'.

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
1000057&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:

Microsoft account

https://signup.live.com/signup?cid=1033&wa=wsignin1.0&rpsnv=13&ct=1499100057&rver=6.7.6626.0&wp=MBL_SSL&wreply=https%3a%

Create account

India (+91)

9876543221

••••••••••

Use your email instead

Choosing Next means that you agree to the Microsoft Services Agreement and privacy and cookies statement.

Next

✗ Skype cannot be used for emergency calling.
Microsoft

http://signup.live.com/signup?cid=1033&wa=wsignin1.0&rpsnv=13&ct=1499100057&rver=6.7.6626.0&wp=MBL_SSL&wreply=https://live.skype.com/login/auth/proxy/forms/microsoft_registration&site_name=live.skype.com&ft=phone2&c=1033&id...

EN 10:15 PM 7/3/2017

Microsoft account

https://signup.live.com/signup?cid=1033&wa=wsignin1.0&rpsnv=13&ct=1499100057&rver=6.7.6626.0&wp=MBL_SSL&wreply=https%3a%

Enter code

We just sent a code to 9876543221

Enter code

Back Next

✗ Skype cannot be used for emergency calling.
Microsoft





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 :

The screenshot shows a Firefox browser window with the URL ironspider.ca/forms/dropdowns.htm. The page content includes sections on 'MAKING MENU SUBSECTIONS' and 'AN ADVANCED DROPODOWN MENU'. An advanced dropdown menu is displayed, listing items like 'Honey', 'Snack', 'A donut', 'A danish', and 'A muffin'. The status bar at the bottom right shows the date and time as 12:47 PM 7/5/2017.



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:

The screenshot shows a Windows desktop environment with a Firefox browser window open. The URL in the address bar is 'ironspider.ca/forms/dropdowns.htm'. The page content discusses menu subsections and features an advanced dropdown menu example. The dropdown menu itself is displayed in a light gray box with a black border, containing the text 'I like my coffee with:' followed by a list of dairy options: 'Dairy', 'Skim Milk', 'Milk (2%)', 'Cream' (which is highlighted in blue), and 'Whipped cream'. The desktop taskbar at the bottom shows various application icons, and the system tray indicates the date and time as '12:56 PM 7/5/2017'.



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 :

The screenshot shows a Firefox browser window with the title 'Dropdown Menus'. The URL 'ironspider.ca/forms/dropdowns.htm' is visible in the address bar. The page content discusses menu subsections and features an advanced dropdown menu. A modal dialog box is displayed in the center, titled 'I like my coffee with:', listing five options: 'Cream', 'Whipped cream', 'Sweetener', 'Sugar', and 'Honey'. The 'Cream' option is currently selected, indicated by a blue highlight.



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 packages like Array, Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Sample, Sample1, Selenium, and SeleniumTesting.
- Editor:** Displays the `Dummy.java` file content:

```
1 package org.vengat;  
2  
3 ④import java.util.List;  
4  
5 public class Dummy {  
6     ④public 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("http://toolsqa.com/automation-practice-table/");  
11        String s = driver.findElement(By.xpath("//*[@id='content']/table/tbody/tr[2]/td[2]")).getText();  
12        System.out.println(s);  
13    }  
14}
```
- Console:** Shows terminal output:

```
<terminated> Dummy (3) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 5, 2017, 5:00:35 PM)  
149925424932E Marionette INFO Listening on port 49568  
Jul 05, 2017 5:00:50 PM org.openqa.selenium.remote.ProtocolHandshake createSession  
INFO: Detected dialect: W3C  
Mecca
```



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  
661m  
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:

The screenshot shows the Eclipse IDE interface with the title bar "Debug - Sample1/src/main/java/org/vengat/Dummy.java - Eclipse". The "Console" tab is selected, displaying log messages from the Selenium WebDriver setup. The messages include:

```
Dummy (3) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 5, 2017, 5:40:31 PM)
1499256635388 geckodriver INFO Listening on 127.0.0.1:5104
1499256636608 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499256644562 Marionette INFO Listening on port 51134
Jul 05, 2017 5:40:45 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Mecca
```

The Eclipse toolbar, Java EE perspective icons, and a taskbar with various application icons are visible at the bottom.

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:

Eclipse IDE screenshot showing the development environment for Selenium testing:

- Project Explorer:** Shows the project structure with packages like Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Sample, Sample1, and Selenium.
- Code Editor:** Displays the Java code for the `Dummy.java` file, which uses Selenium WebDriver to interact with a Facebook login page.
- Console:** Shows the terminal output of the Java application, indicating it's running on port 49849 and creating a session.
- Operating System Taskbar:** Shows the Windows taskbar with various application icons.
- Browser Screenshot:** A screenshot of a Firefox browser window showing the Facebook login page. An error message box is visible, stating: "The email address or phone number that you've entered doesn't match any account. Sign up for an account." The URL in the address bar is `https://www.facebook.com/login.php?login_attempt=1&lwv=110`.
- System Tray:** Shows the system tray with icons for battery, volume, and network.



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:

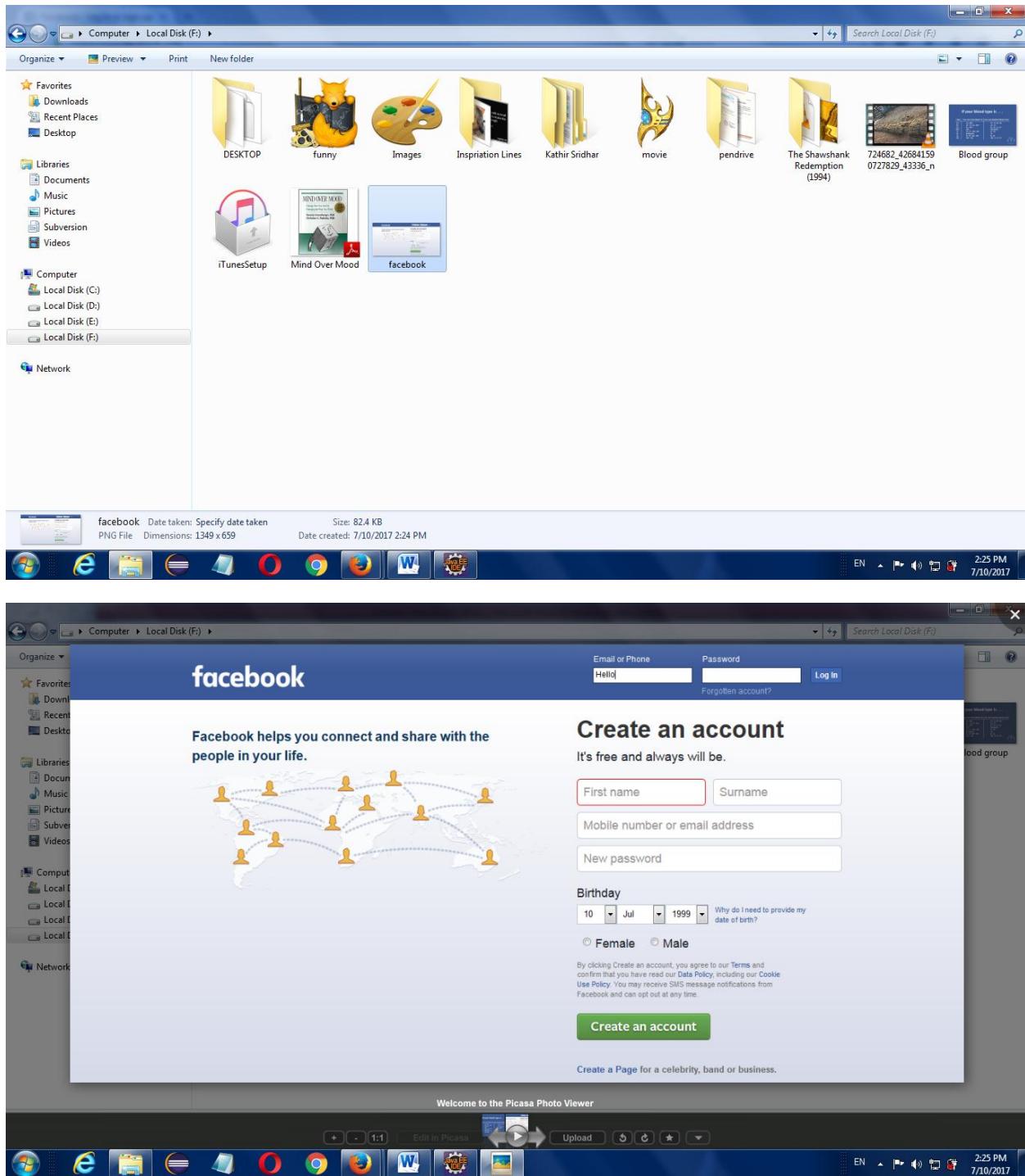
TakesScreenshot → interface

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:

The screenshot shows a Firefox browser window with the title 'iPhones | ONLINE STORE'. The address bar shows the URL 'store.demoqa.com/products-page/product-category/iphones/'. The page content includes a header with the word 'TOOLS' and a gear icon. Below the header, there are navigation links for 'Home', 'Product Category', '#0 (no title)', and 'All Product'. A search bar with the placeholder 'Search Products' is also present. The main content area displays a product listing for 'Magic Mouse'. The product image is a white Apple Magic Mouse. The product name is 'Magic Mouse'. The description states: 'Splashing Pixels' WordPress e-commerce themes offer the best e-commerce solution for online stores. Our highly customizable WordPress e-commerce theme design and technology is unlike anything else on the market. We put an amazing amount of care and detail into the design and functionality to ensure that we're creating the best user experience for your customers.' The price is listed as '\$12.00' with a strike-through of '\$200.00' and a save of '\$50.00'. A 'Add To Cart' button is visible. On the right side of the page, there is a sidebar titled 'Meta' with links for 'Register' and 'Log in'. The browser's status bar at the bottom shows 'EN' and the date and time '7/10/2017 3:50 PM'.



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:

Mobile Cases & Covers (Showing 1 – 40 products of 63,366,088 products)

Product	Rating	Price	Offer	Actions
Flipkart SmartBuy Back Cover for Motorola Moto G5 Plus	4.5 ★ (67)	₹424	₹409 15% off	
Flipkart SmartBuy Back Cover for Mi Redmi Note 4	4.4 ★ (65)	₹424	₹409 15% off	
Noise Back Cover for Mi Redmi Note 4	3.4 ★ (767)	₹249	₹209 15% off Offers No Cost EMI	
Flipkart SmartBuy Back Cover for Mi Redmi Note 4	3.8 ★ (14)	₹269	₹209 32% off	

```

public class Ex2 {
    public static void main(String[] args) throws IOException, InterruptedException {
        System.setProperty("webdriver.gecko.driver",
                           "C:/Users/siva/workspaces/Selenium/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.Flipkart.com");
        WebElement 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_Cases"))
            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);
}

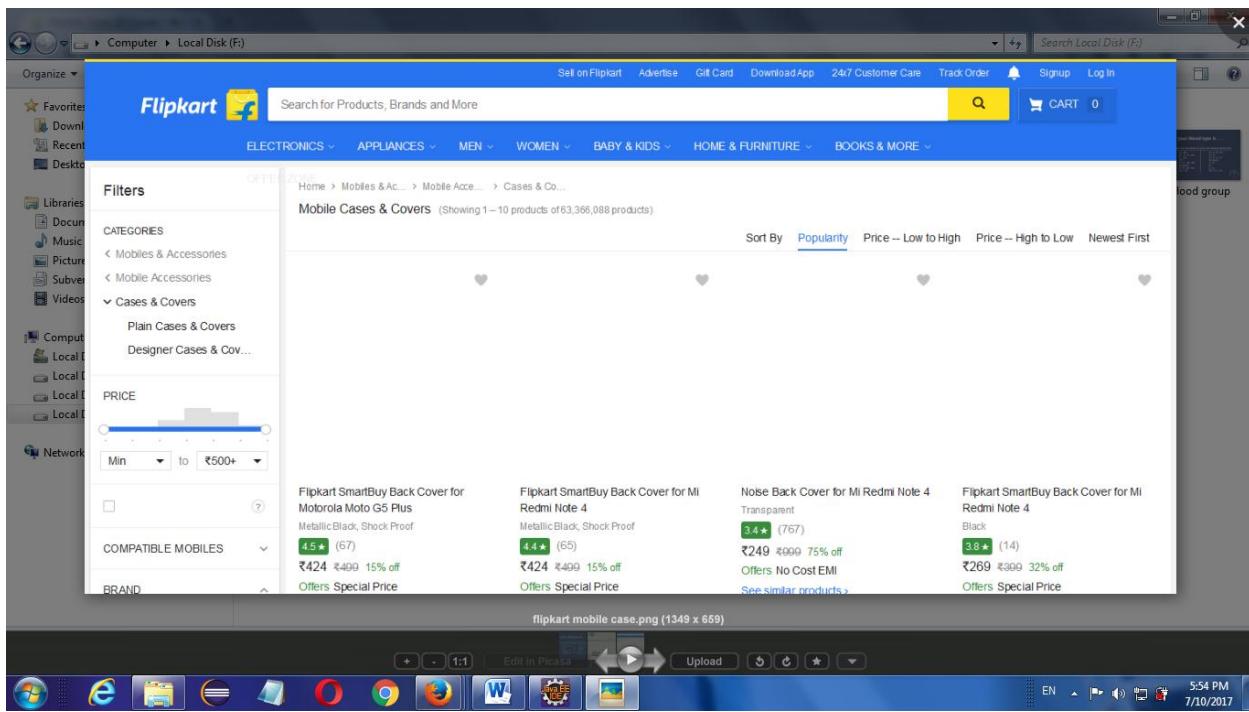
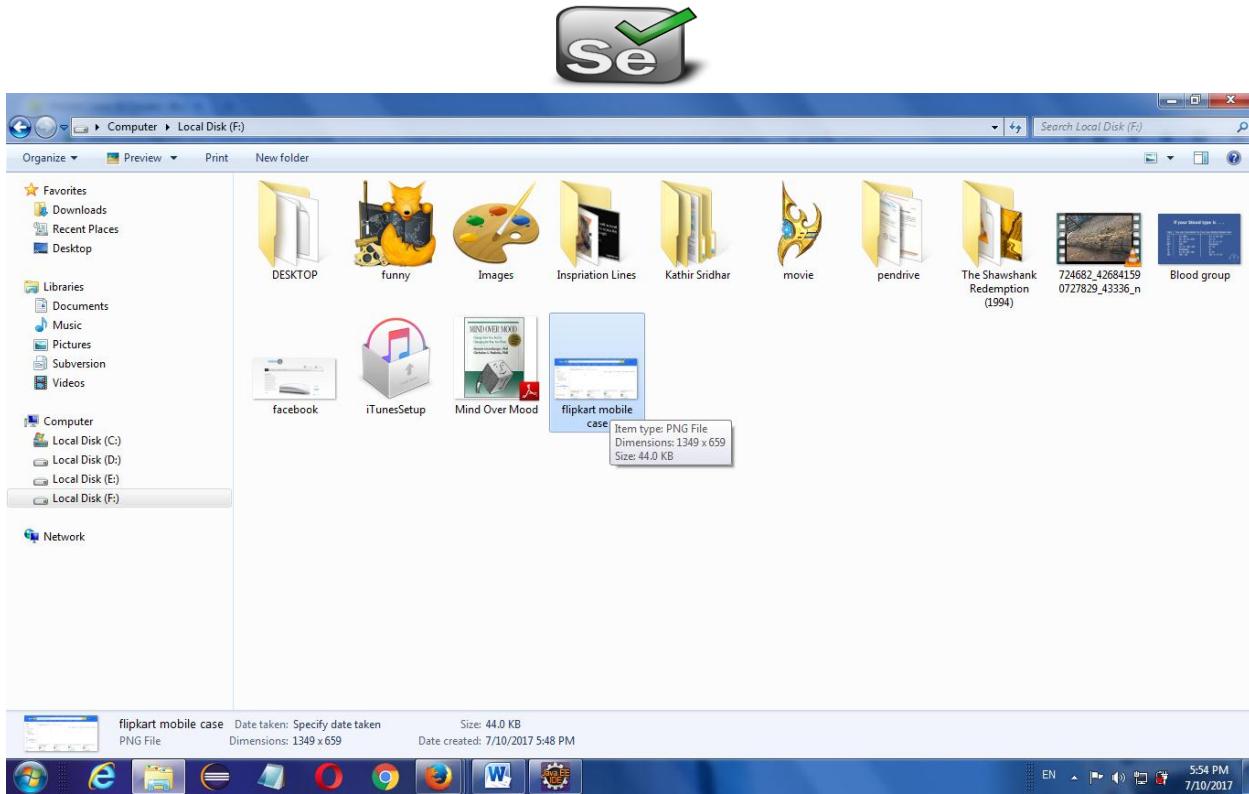
```

Console output:

```

<terminated> Ex2 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 10, 2017, 5:47:36 PM)
149968994003  Marionette  INFO  Listening on port 54928
Jul 10, 2017 5:48:17 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
u r in mobile case 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:

The screenshot shows the Adactin Hotel Booking Confirmation page. At the top, there's a banner for 'Adactin Innovation in Testing'. Below it, a navigation bar includes links for 'Search Hotel', 'Booked Itinerary', 'Change Password', and 'Logout'. The main content area is titled 'Booking Confirmation' and displays the following booking details:

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	

On the right side of the page, there are several links and sections:

- Sample TestCases**: A link to download sample test cases.
- HotelApp Web Services**: A link to learn about hotel app web services.
- Known Defects**: A link to a list of known defects.
- Book on Selenium Webdriver**: A link to a book on Selenium Webdriver.

The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 6:57 PM on 7/10/2017.



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:

The screenshot shows a Microsoft Internet Explorer browser window. The title bar says 'dhtmlxTree Samples'. The address bar shows the URL 'https://dhtmlx.com/docs/products/dhtmlxTree/samples/index.html'. The main content area displays the 'dhtmlxTree' component, which is a tree view with several items listed under 'dhtmlxTree'. A sidebar on the left lists various components: Appearance, Checkboxes, Context menu, Dataprocessor (sending data back to server), Drag-n-drop, Error handlers, Events, and Getting tree data. The browser's taskbar at the bottom has multiple icons for other open tabs and windows.



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:

The screenshot shows a web browser window with the title "JavaScript Tree Menu - Ajax". The address bar displays the URL "https://dhtmlx.com/docs/products/dhtmlxTree/". The page content consists of two side-by-side tree structures. The left tree has nodes for Thrillers, Bestsellers, History, Horror, Fiction & Fantasy, Teens, Magazines, and Sport. The right tree has nodes for Thrillers, Bestsellers, Robert Crais, Ian Rankin, James Johns, Nancy Atherton, History, Horror, Fiction & Fantasy, Teens, and Magazines. At the bottom of the page is a blue button labeled "View more demos". The browser's taskbar at the bottom shows various application icons, and the status bar indicates the time as 1:03 PM and the date as 7/11/2017.



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:

The screenshot displays a web page titled "JavaScript Tree Menu - Ajax" from dhtmlx.com. The page features a navigation bar with links for Products, License, Services, Support, Company, and Download. Below the navigation bar are two tree menu components. The left tree menu is labeled "Books" and contains categories like Bestsellers, Thrillers, History, Horror, Fiction & Fantasy, Teens, and Magazines. The right tree menu is also labeled "Books" and shows a similar structure with additional categories such as Robert Crais, Ian Rankin, James Johns, Nancy Atherton, Joss Whedon, Meg Cabot, Garth Nix, Ann Brashares, and Sport. A "View more demos" button is located at the bottom center of the page. The browser's taskbar at the bottom shows various open tabs and system icons.



EXERCISE:

1.Gmail registration using scroll down:

Program:

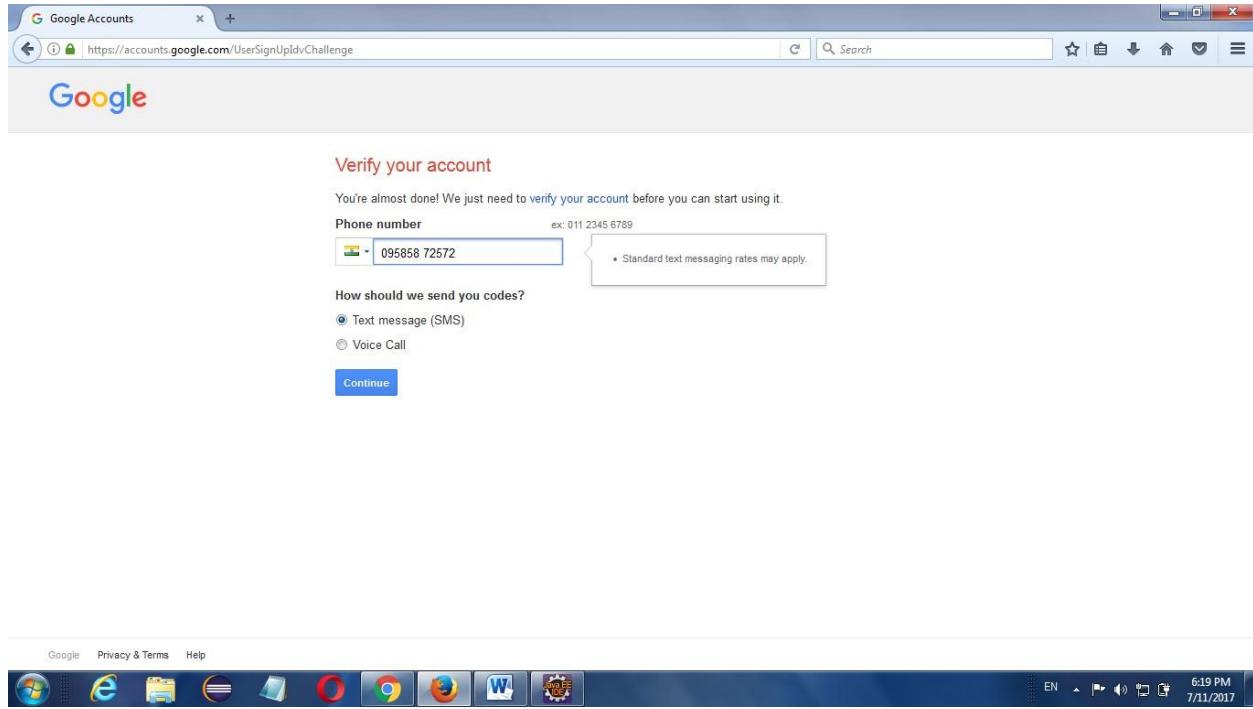
```
public class Ex2 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/SignUp?service=mail&continue=https%3A%2F%2Fmail.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)) {  
                // Logic to switch to the new window  
            }  
        }  
    }  
}
```



```
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(); }
```

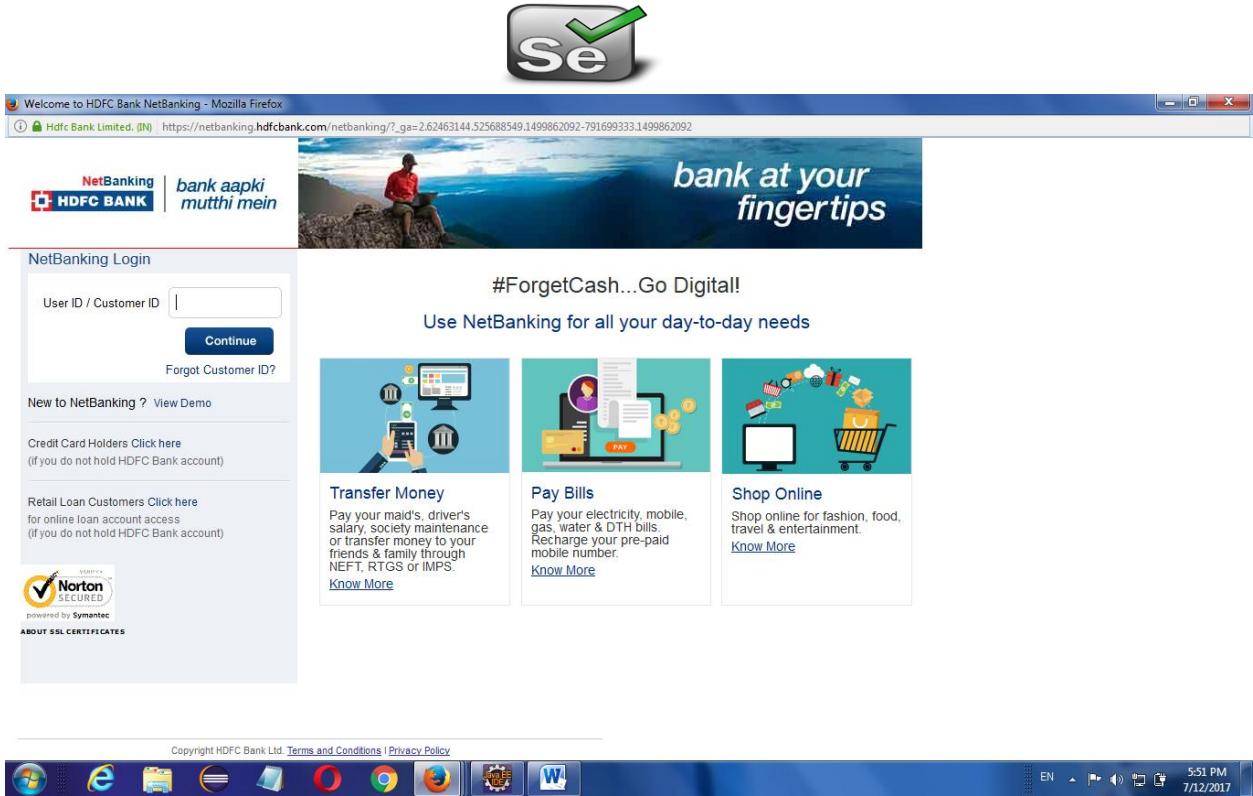
Here,

- 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:

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

- Java - Selenium/src/selenium/assign5/Dummy.java - Eclipse**: The active Java file contains the provided code for switching between windows.
- Package Explorer**: Shows the project structure with packages like Array, Assignment, Collection, Dummy, Exception, ExtRept, firstproject, kkkkk, Mav, Sample, and Selenium, along with their sub-directories and files (e.g., dummy.java, Ex1.java, dummy1.java, dummy2.java, dummy3.java, Ex2.java, Ex1.java, Dummy.java).
- Console**: Displays the terminal output of the Java application. The log includes:
 - <terminated> Dummy (5) [Java Application] C:\Program Files\Java\jre8.0_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



ALERTS:

It has 3 types,

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

1. Simple:

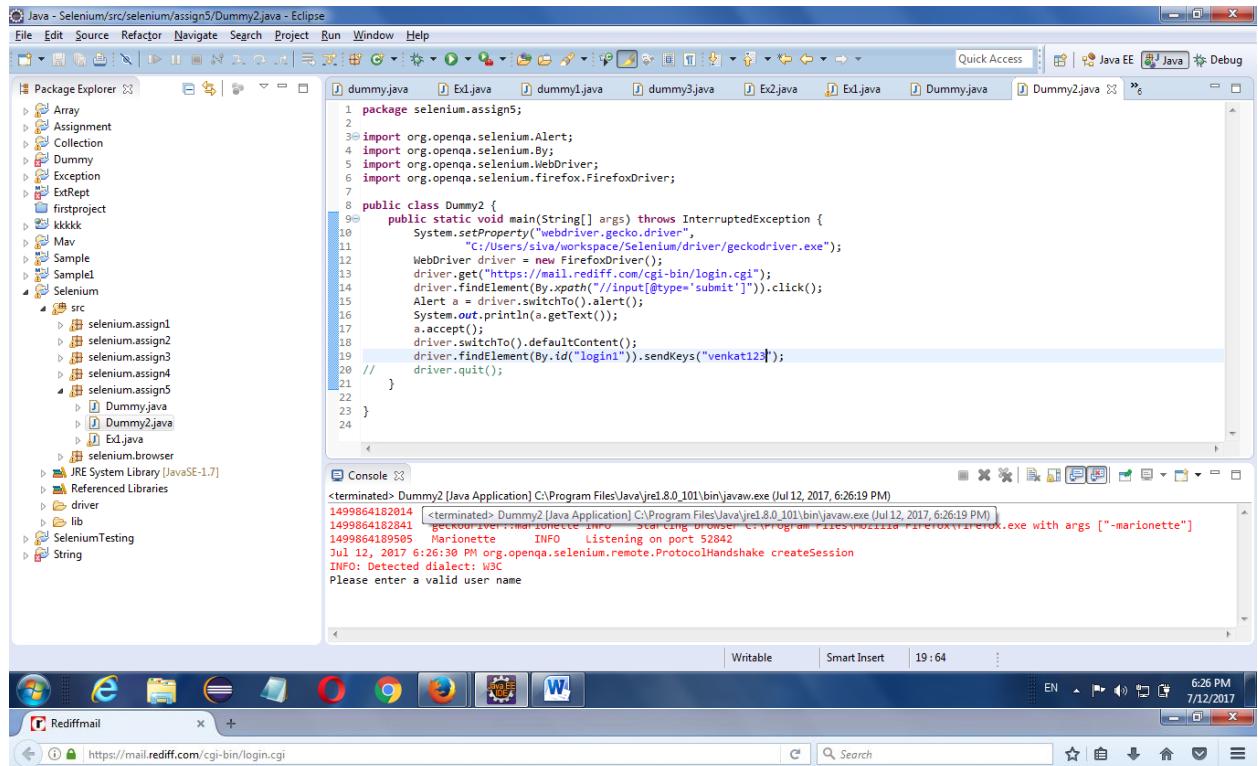
- In this method, we just click single ok button in the alert.

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:

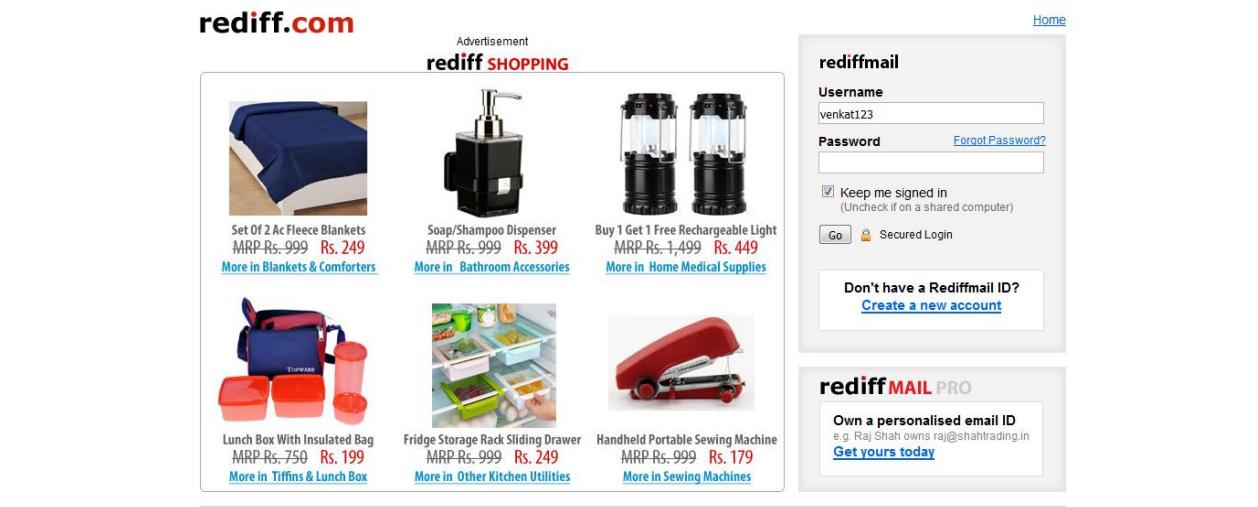


The screenshot shows the Eclipse IDE interface with a Java project named "selenium.assign5". The "dummy2.java" file is open in the editor, containing the following code:

```
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 Dummy2 {
9     public static void main(String[] args) throws InterruptedException {
10         System.setProperty("webdriver.gecko.driver",
11             "/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 }
24
```

The "Console" tab shows the output of the Java application:

```
<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\venv\marionette\geckodriver.exe: starting browser C:\Program Files\geckodriver\firefox\firefox.exe with args ["-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
```



The screenshot shows a web browser window displaying the Rediffmail login page. The URL is https://mail.rediff.com/cgi-bin/login.cgi. The page features a red "rediff.com" logo at the top left. On the right side, there is a "rediffmail" section with fields for "Username" (venkat123) and "Password". There is also a checkbox for "Keep me signed in" and a "Secured Login" button. Below this, there is a link "Create a new account". At the bottom of the page, there is a "rediff MAIL PRO" section with text about personalized email IDs.





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 top menu bar includes File, Edit, Source, Refactor, Navigate, Project, Run, Window, Help, Quick Access, Java EE, Java, and Debug. The left sidebar displays the Package Explorer with a tree view of Java packages and files. The central workspace shows several Java files: Ex1.java, dummy1.java, dummy3.java, Ex2.java, Ex1.java, Dummy.java, Dummy2.java, and Dummy3.java. The code for Dummy3.java is visible in the editor, showing the Java code provided above. Below the editor is a Console tab showing the terminal output of the Java application. The output includes log messages from the Selenium WebDriver and Marionette, indicating the browser was started, port 52221 was listening, and a Marionette session was created. It also shows the confirmation dialog message 'Confirm pop up with OK and Cancel button'.

```
Java - Selenium/src/selenium/assign5/Dummy3.java - Eclipse  
File Edit Source Refactor Navigate Project Run Window Help Quick Access Java EE Java Debug  
Package Explorer Ex1.java dummy1.java dummy3.java Ex2.java Ex1.java Dummy.java Dummy2.java "Dummy3.java"   
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         driver.quit();  
19     }  
20 }  
21  
Console  
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  
1499865272689 Geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]  
1499865280164 Marionette INFO Listening on port 52221  
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 screenshot shows a web browser window with the title "TOOLSQA | Free QA Automation". The URL in the address bar is "toolsqa.com/handling-alerts-using-selenium-webdriver/". The page content is titled "Simple Alert Pop up", "Confirm Alert box", and "Prompt Alert box". Each section contains an example of the alert type and its corresponding HTML code. The browser's taskbar at the bottom shows various application icons.

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:

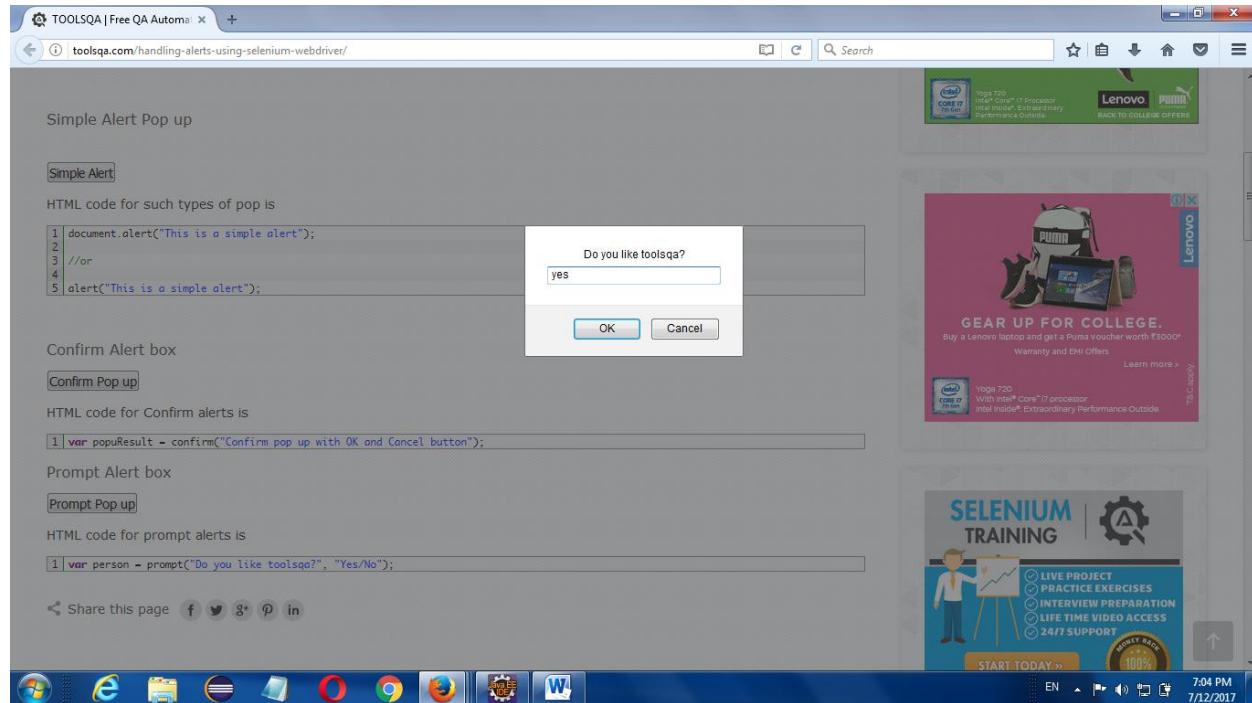
- Java - Selenium/src/selenium/assign5/Dummy4.java - Eclipse**: The active Java file contains the following code:

```
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 Dummy4 {
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()='Prompt Pop up']")).click();
15         Alert a = driver.switchTo().alert();
16         System.out.println(a.getText());
17         a.sendKeys("yes");
18         Thread.sleep(3000);
19         a.dismiss();
20         driver.quit();
21     }
22 }
23
24 }
25 }
```

- Console**: The terminal output shows the execution of the Java application and the interaction with a browser window.

```
<terminated> Dummy4 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 7:01:41 PM)
1498666304043 geckodriver INFO Listening on 127.0.0.1:11563
1498666304897 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1498666311693 Marionette INFO Listening on port 53691
Jul 12, 2017 7:01:52 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Do you like toolsqa?
```

- Screenshots**: A screenshot of a web browser window titled "Selenium - Mozilla Firefox" is visible at the bottom of the interface.





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/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[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[2]/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 Univrsity");
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[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();
}
```

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()



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**

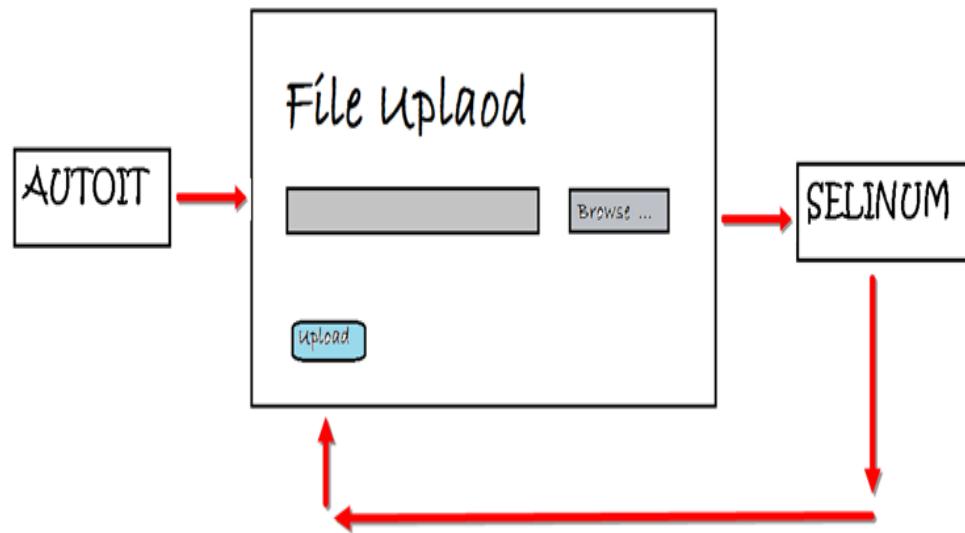
```
public static void uploadFiles(File path) {  
    try {  
        Robot robot = new Robot();  
        robot.setAutoDelay(3000);  
        StringSelection selection = new StringSelection(  
            path.getAbsolutePath());  
        Toolkit.getDefaultToolkit().getSystemClipboard()  
        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

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.

A screenshot of a web browser window. The address bar shows the URL <https://www.autoitscript.com/site/autoit/downloads/>. The page header features the AutoIT logo and navigation links for 'AutoIT', 'AutoIT Editor', and 'AutoIT Tools'. A red box highlights the 'AutoIT Tools' link. A large green arrow points upwards from the bottom of the page towards this link. The main content area is titled 'AutoIT Downloads' and contains text about downloading the package and related tools, along with a note about digital signing.

AutoIT Downloads - AutoIT X

https://www.autoitscript.com/site/autoit/downloads/

AUTOIT

AutoIT ▾ AutoIT Editor ▾ AutoIT Tools ▾

AutoIT Downloads

You can download the main AutoIT package and other related scripting tools from this page.

AutoIT has been designed to work on Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008/2008 R2, Windows 7, Windows 8 (desktop mode). With no annoying runtime libraries required!

AutoIT executables and setup programs have been digitally signed by "AutoIT Consulting Ltd".

Step 3) Click on 'AutoIT' Downloads option.

A screenshot of a dropdown menu from the 'AutoIT Tools' link in the top navigation. The menu items are 'Overview', 'Downloads' (which is highlighted with a red box), 'Graphics', 'Home', and 'Online Documentation'. A green arrow points from the left towards the 'Downloads' link.

AutoIT ▾ AutoIT Editor ▾ AutoIT Tools ▾

Overview

Downloads

Graphics

Home

Online Documentation



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 .

The screenshot shows the AutoIt website's main menu with options like 'AutoIt', 'AutoIt Editor', 'AutoIt Tools', and 'Code'. Below the menu, there's an 'Overview' section, a red-bordered 'Downloads' button, and an 'Online Documentation' section. A large green arrow points to the 'Downloads' button.

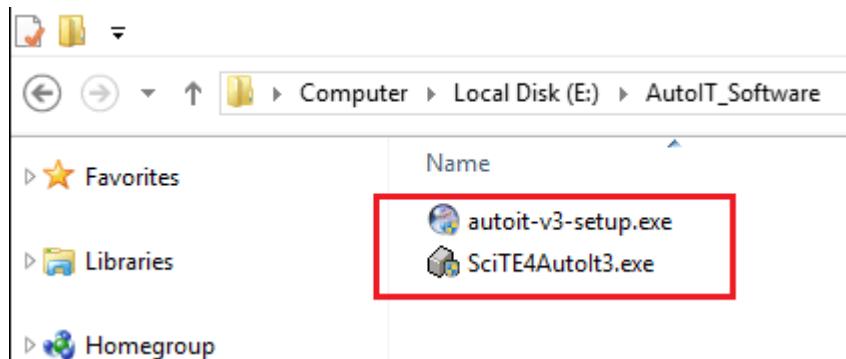
Step 6): Click on the link as shown below.

The screenshot shows a browser window with the URL <https://www.autoitscript.com/site/autoit-script-editor/downloads/>. The page title is 'AutoIt Script Editor Downloads'. It features a large 'AUTOIT' logo and a navigation bar with 'AutoIt', 'AutoIt Editor', 'AutoIt Tools', and 'Code'. Below this is a section titled 'Current Versions' containing a table with the following data:

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



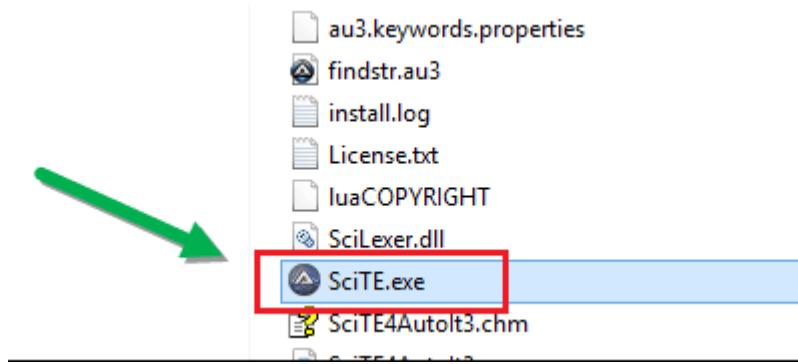
After download you will get two setup file as shown in below screen, first is **AutoIt version 3** setup and second is **Scitautoit3**.



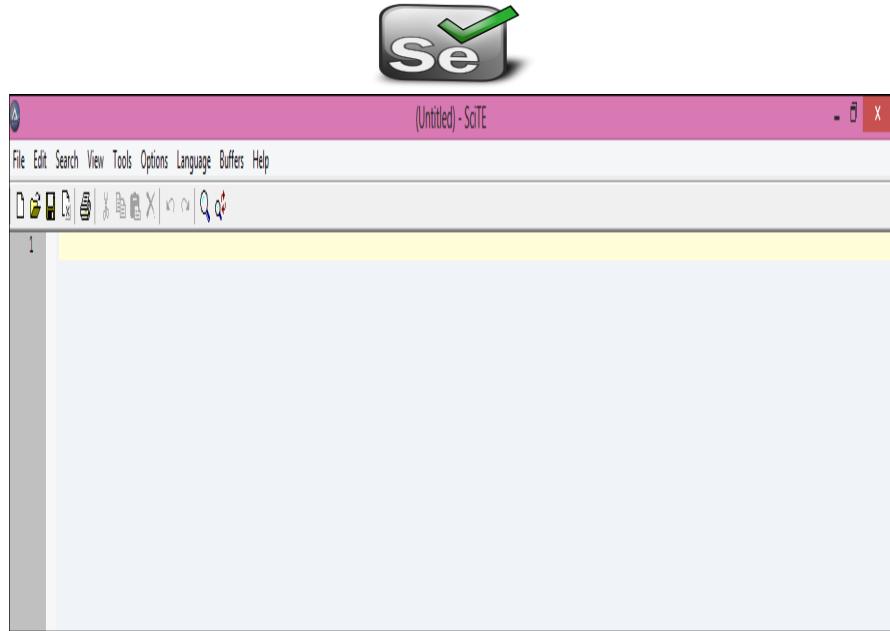
Step 6: For Installing AutoIT-Click on both AutoIT setup one by one.

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

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

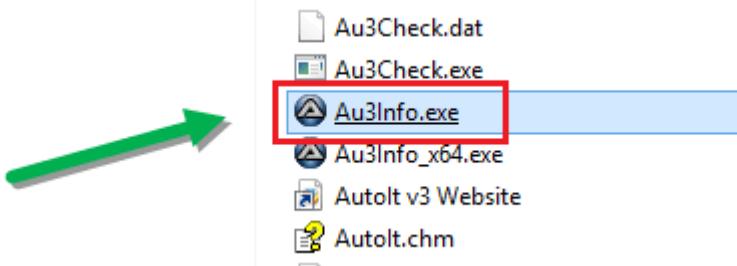


and click on 'SciTE.exe' file, the AutoIT editor opens as shown in below screen.

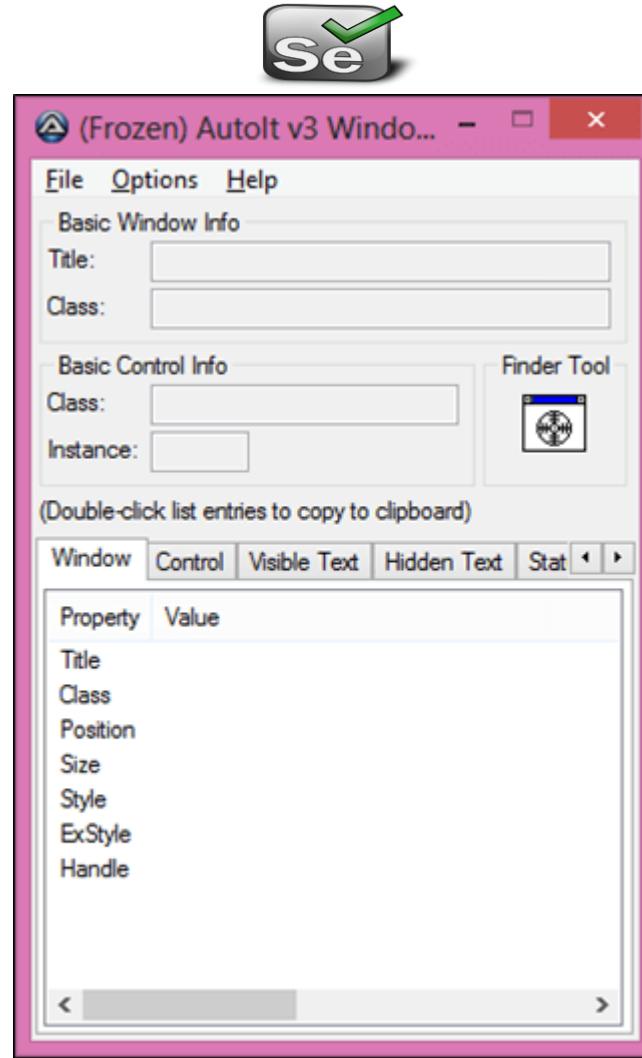


Step 8) : Now opens element Identifier .

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.

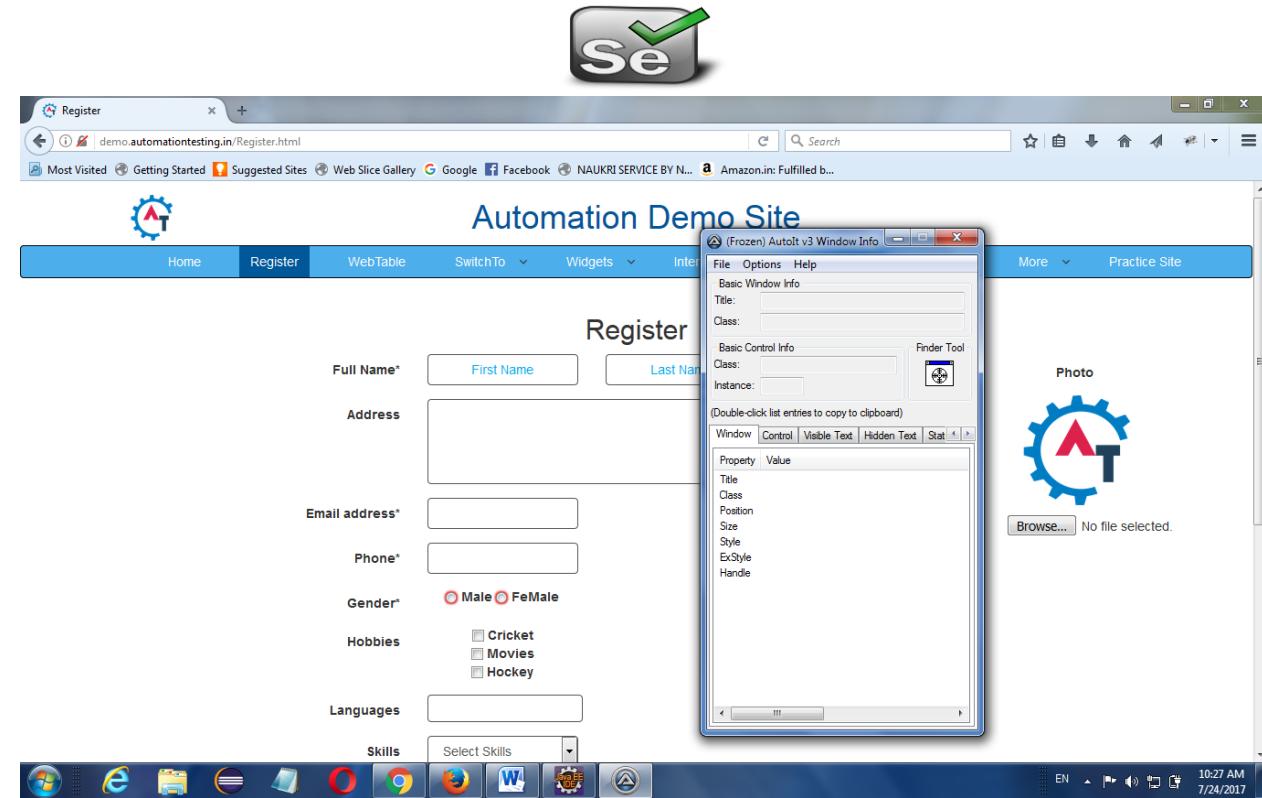


Runtime.getRuntime().exec("E:\\AutoIT\\FileUpload.exe");

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

The screenshot shows a web browser window with the title 'Register' and the URL 'demo.automationtesting.in/Register.html'. The page is titled 'Automation Demo Site'. The form has fields for 'Full Name*', 'Address', 'Email address*', 'Phone*', 'Gender' (radio buttons for Male and Female), 'Hobbies' (checkboxes for Cricket, Movies, and Hockey), 'Languages', and 'Skills' (a dropdown menu 'Select Skills'). There is also a 'Photo' section with a placeholder image of a gear with 'AT' on it and a 'Browse...' button. The browser's taskbar at the bottom shows icons for various Windows applications.

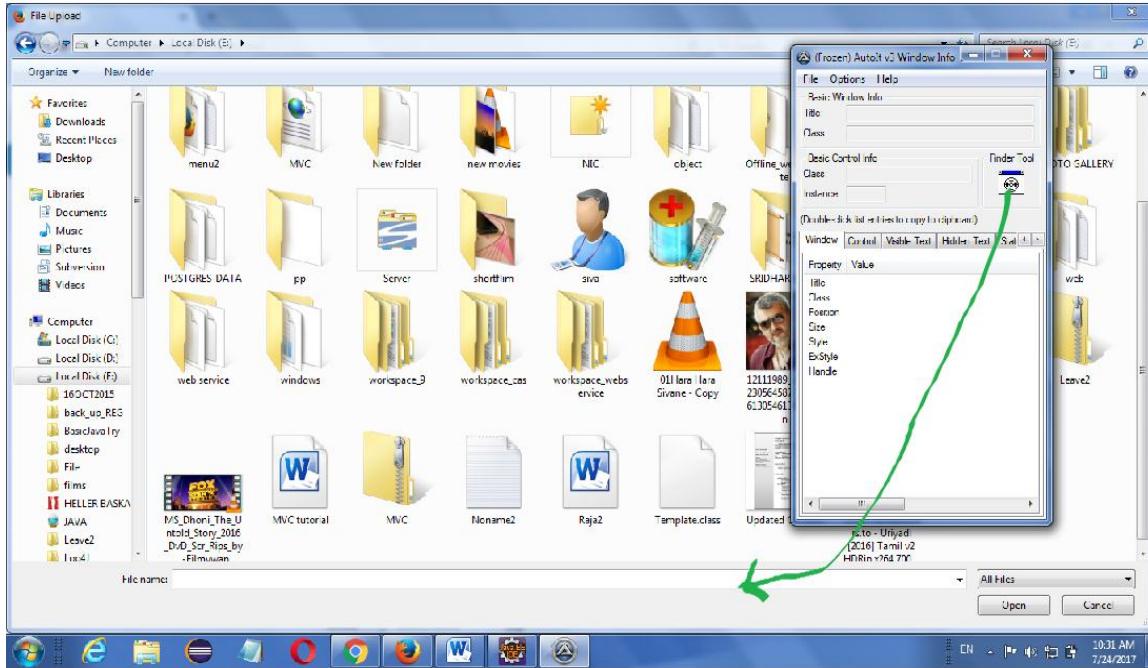
Step 1): Now open element Identifier- Go to 'C:\Program Files (x86)\AutoIt3' and click on 'Au3Info.exe' file, the element identifier window opens as shown in below screen.



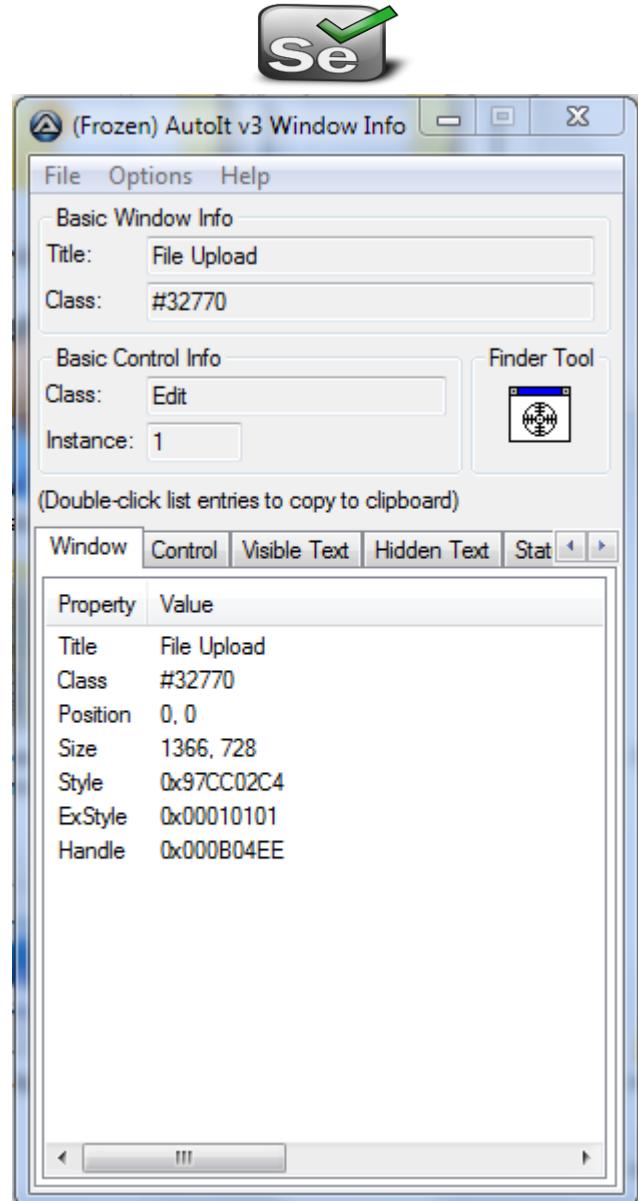
Step 2): Now open file uploader window by clicking on 'Choose File' which is windows activity.



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.

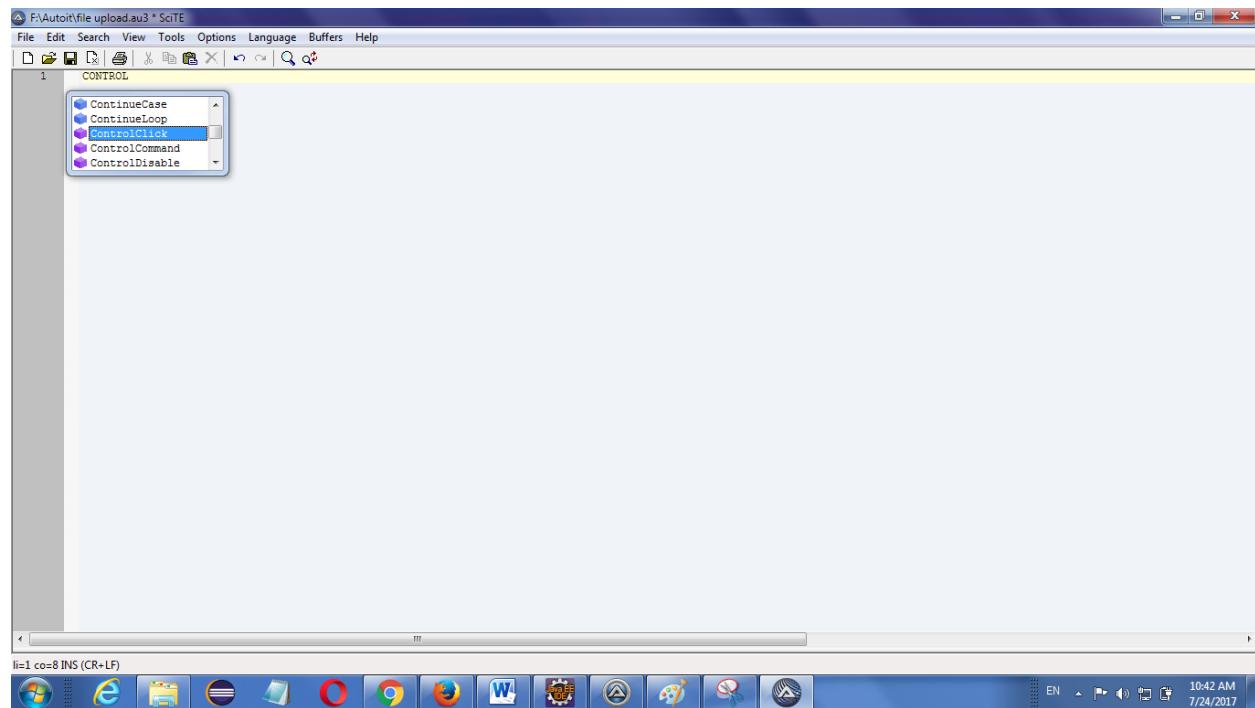
There are lots of method available which we can use in a script according to the requirement, but right now we will focus on the below methods as these methods are required for writing file upload script:

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:

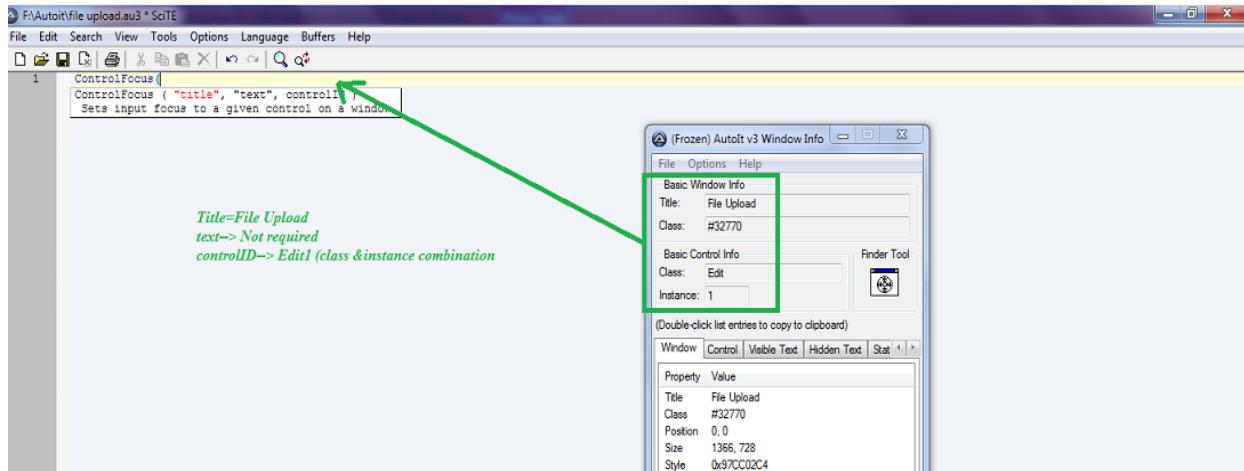
This method sets focus to the 'file name' text box of the file uploader window.

- 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.



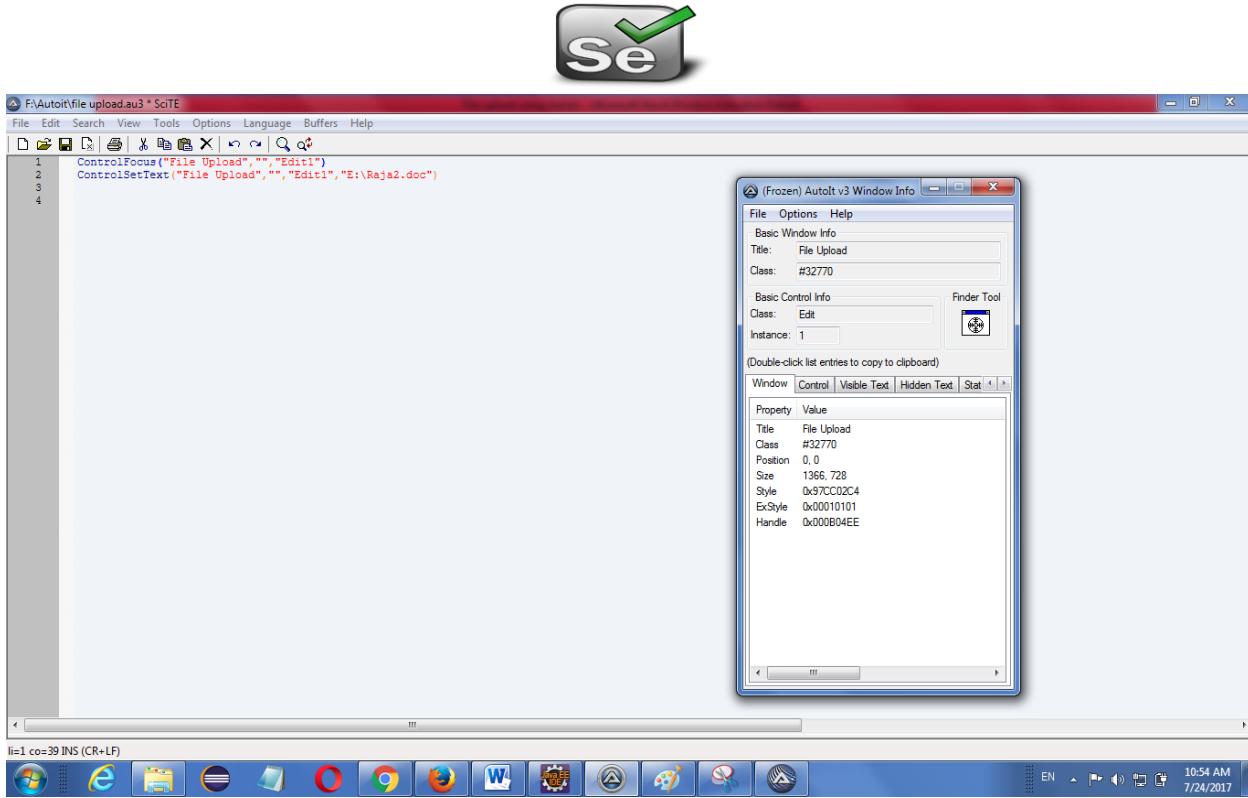
Parameter values for ControlSetText method :

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.

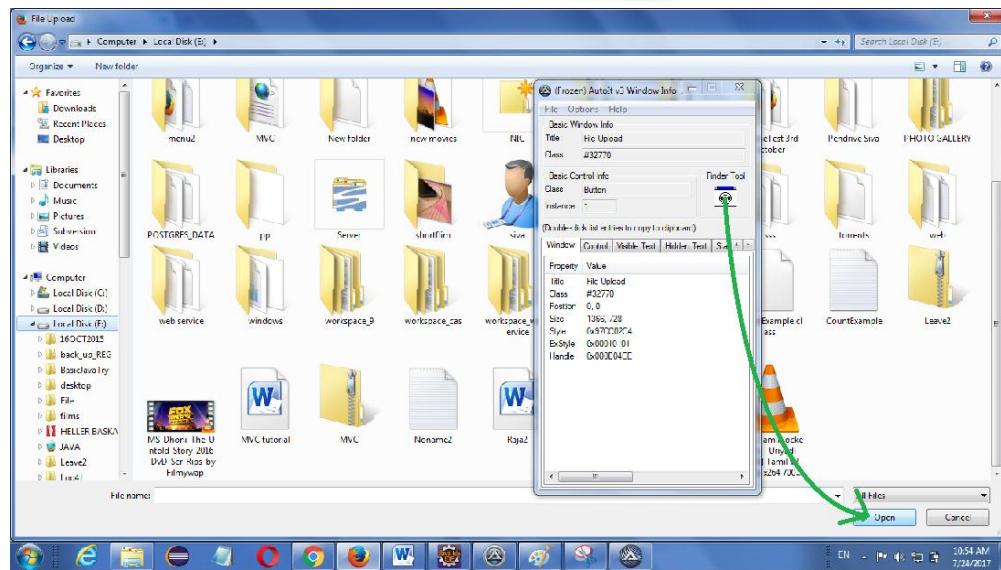
ControlSetText("File Upload","","","Edit1","E:\Raja.doc") // This method input file path of a control.



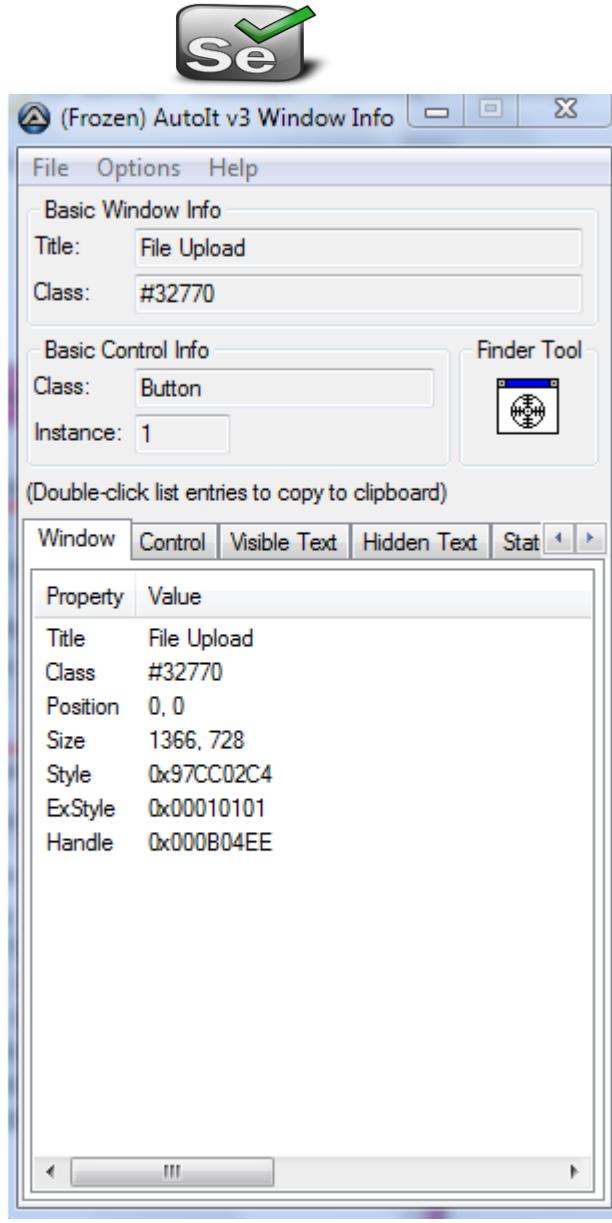
After following the above step, don't close the windows (editor and element identifier), keep it remain open. You again need to open file uploader window as to find attributes of 'Open' Button as shown in below step 5.

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.

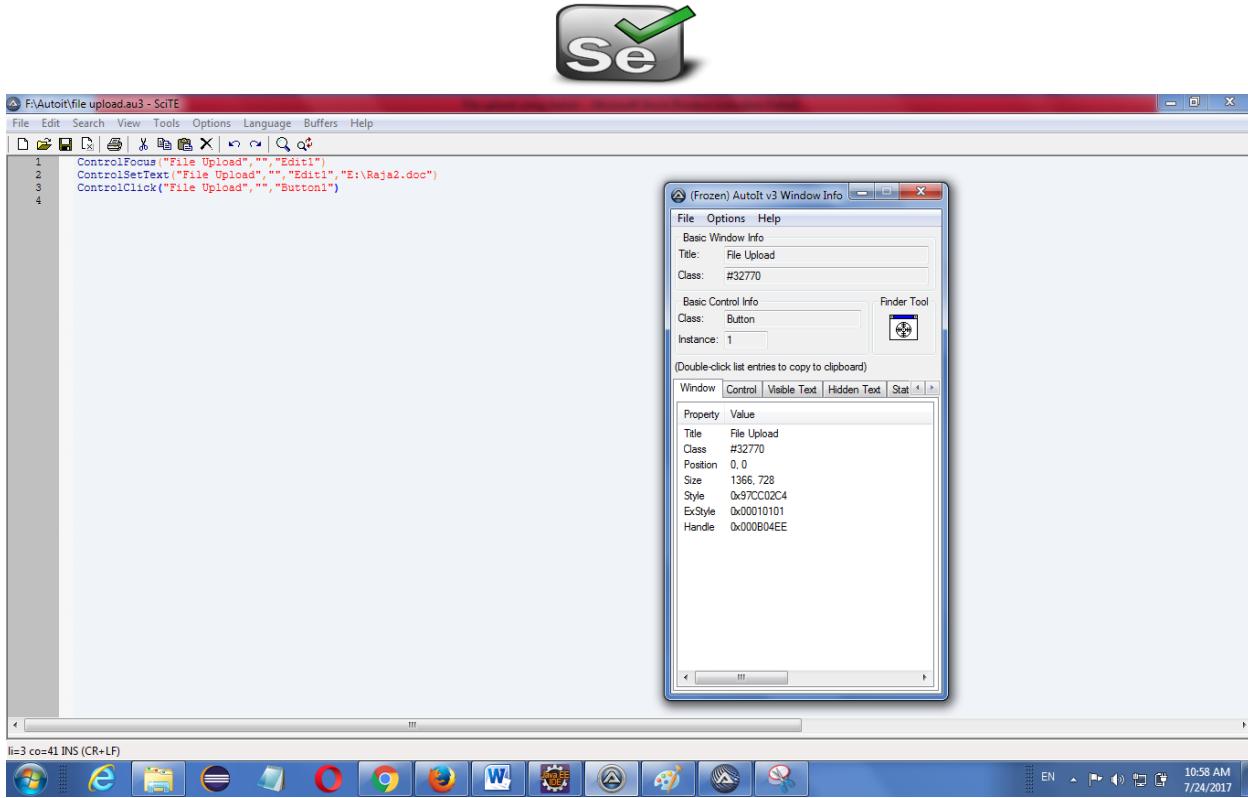


Parameter values for ControlClick method:

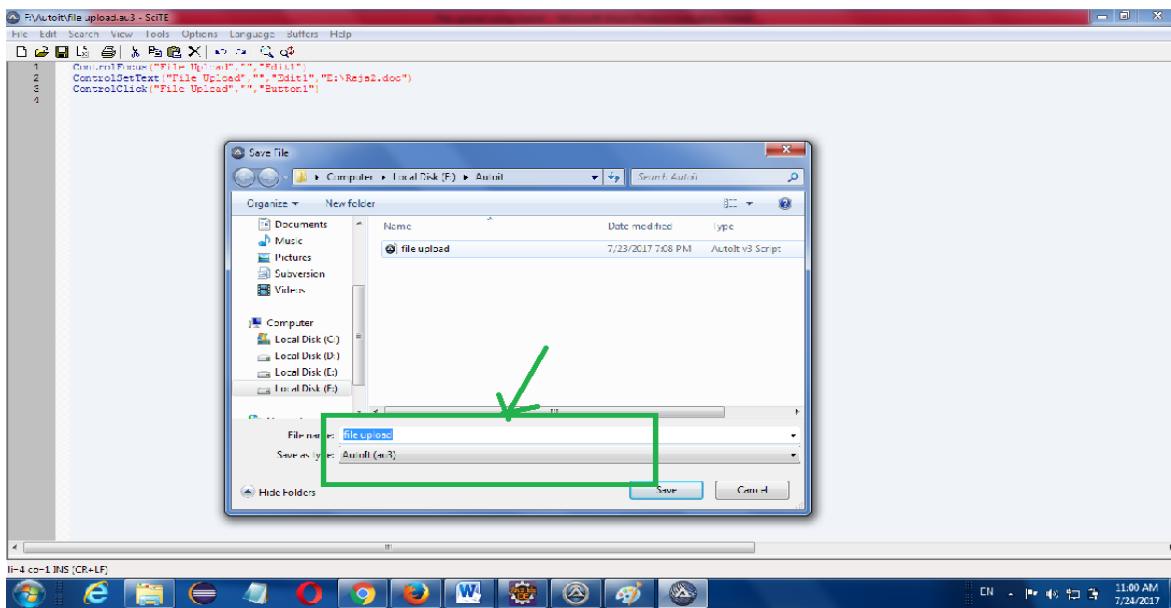
This method clicks on 'Open' button of the file uploader window.

- 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.



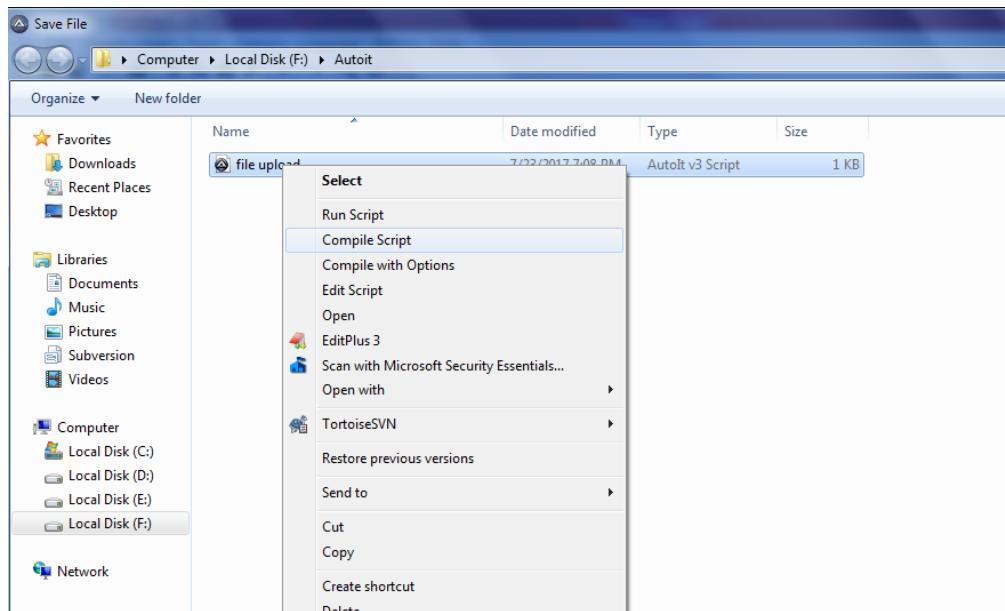
Step 6: You can see in below screen that AutoIT script is completed to handle file uploader. Now you can close the element identifier and save the script as " FileUpload " at the given location (E:\AutoIT).



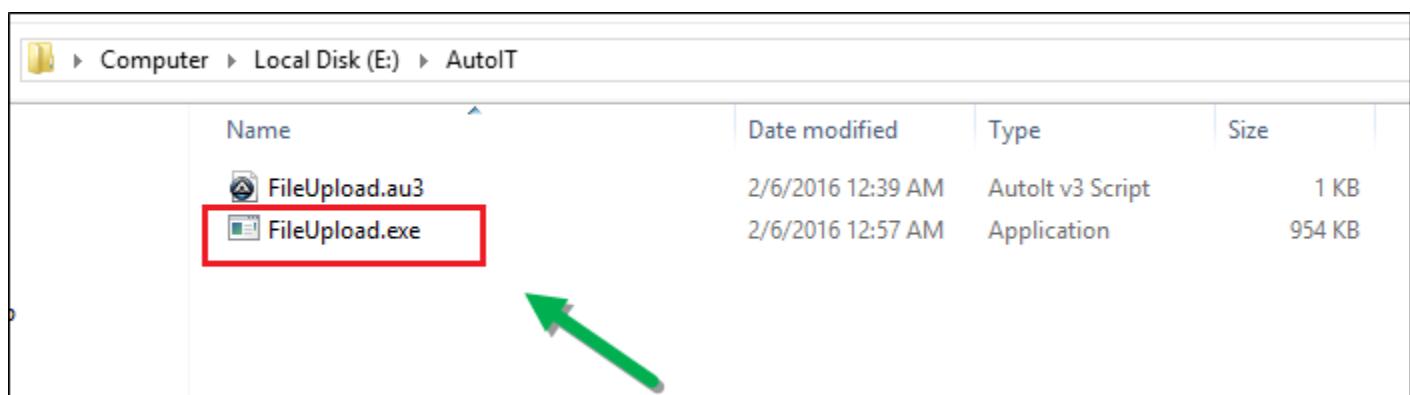


Now you can't execute this script directly, you need to compile this script.

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.



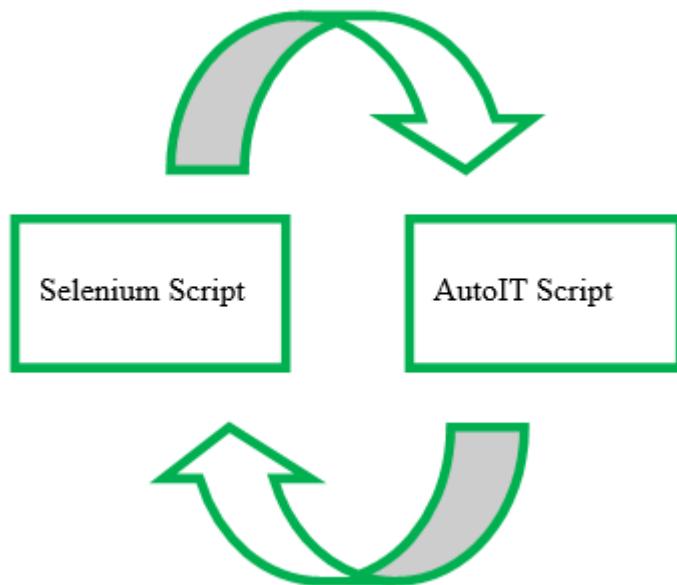
Now we will use this AutoIT script in Selenium web driver. Check below for output.



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

The screenshot shows a web browser window titled 'Register' from the URL 'demo.automationtesting.in/Register.html'. The page is titled 'Automation Demo Site' and has a navigation bar with links like Home, Register, WebTable, SwitchTo, Widgets, Interactions, Video, WYSIWYG, More, and Practice Site. The main content area is titled 'Register'. It contains several form fields: 'Full Name*' with 'First Name' and 'Last Name' sub-fields; 'Address'; 'Email address*'; 'Phone*'; 'Gender*' with radio buttons for 'Male' and 'Female' (Male is selected); 'Hobbies' with checkboxes for 'Cricket', 'Movies', and 'Hockey' (Cricket is checked); 'Languages' and 'Skills' dropdown menus. To the left of the form, there is a sidebar with two images of women's clothing. On the right, there is a 'Photo' section with a logo and a 'Browse...' button followed by the file path 'Raja2.doc'. The bottom of the screen shows the Windows taskbar with various icons and the system tray indicating the date and time.



IFRAME:

- IFrame is a web page which is embedded in another web page or an HTML document embedded inside another HTML document.
- iFrame is defined by an `<iframe></iframe>` tag in HTML. With this tag you can identify an iFrame while inspecting the HTML tree.
- Same HTML for IFrame,

```
<body>
  <div class="box">
    <iframe name="iframe1" id="IF1" height="600" width="400"
src="http://toolsqa.wpengine.com"></iframe>
  </div>
  <div class="box">
    <iframe name="iframe2" id="IF2" height="600" width="400" align="left"
src="http://demoqa.com"></iframe>
  </div>
</body>
</html>
```

Identifying IFrame:

- We cannot detect the frames by just seeing the page or by inspecting Firebug.
- Observe the below image, Advertisement being displayed is an Iframe, we cannot locate or recognize that by just inspecting using Firebug. So the question is how can you identify the iframe?
- Right click on the element, If you find the option like 'This Frame' then it is an iframe.(Please refer the above diagram)
- Right click on the page and click 'View Page Source' and Search with the 'iframe', if you can find any tag name with the 'iframe' then it is meaning to say the page consisting an iframe.



- We can find total number of IFrame by using below commands
int size = driver.findElements(By.tagName("iframe")).size();
- we can switch to frame by 3 ways
 - switch to frame by index
 - switch to frame by name or id
 - switch to frame by web element

1. Switch to frame by Index:

- **switchTo.frame(int frameNumber):** Pass the frame index and driver will switch to that frame.
- Index is one of the attributes for the Iframe through which we can switch to it.
- Index of the iframe starts with '0'.

Suppose if there are 100 frames in page, we can switch to the iframe by using index.

- `driver.switchTo().frame(0);`
- `driver.switchTo().frame(1);`

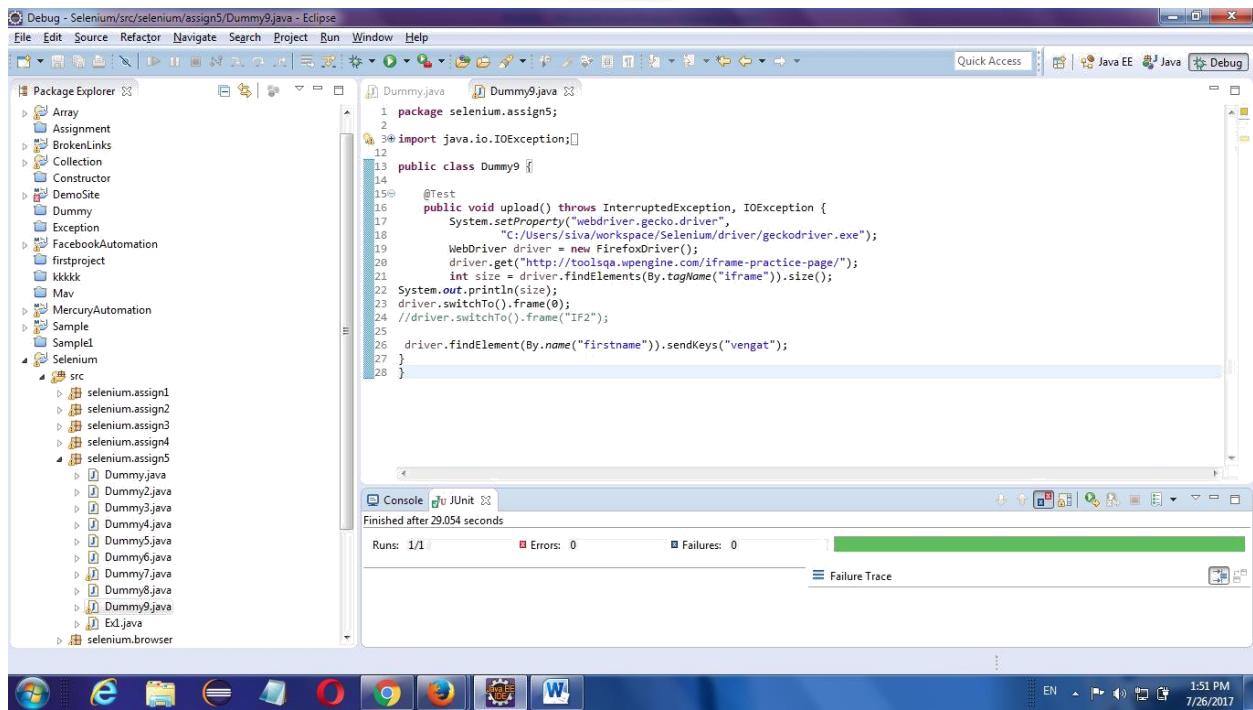


Example program:

```
public class Dummy9 {  
  
    @Test  
    public void upload() throws InterruptedException, IOException  
    { System.setProperty("webdriver.gecko.driver",  
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");  
        int size = driver.findElements(By.tagName("iframe")).size();  
        System.out.println(size);  
        driver.switchTo().frame(0);  
  
        driver.findElement(By.name("firstname")).sendKeys("vengat");  
    }  
}
```

Output:

The screenshot shows a browser window with two iframes. The left iframe contains a form titled 'Practice Automation Form' with fields for personal information, sex, years of experience, and profession. The right iframe shows the 'Home' page of the TOOLSQA website, featuring a large image of wood planks and a sidebar for 'SELENIUM TRAINING'.



2. Switch to frame by ID or Name:

We can switch to frame by Id or Name attribute

The screenshot shows a browser window displaying a page from toolsqa.com/iframe-practice-page/. The page contains two nested iframes. The outer iframe is labeled 'Frame 1' and the inner iframe is labeled 'Frame 2'. The developer tools are open, showing the DOM structure. Annotations with arrows point to specific elements: 'Frame 1 Id' points to the id attribute of the first iframe, 'Frame 1 Name' points to the name attribute of the first iframe, 'Frame 2 Id' points to the id attribute of the second iframe, and 'Frame 2 Name' points to the name attribute of the second iframe.



Using ID:

```
public class Dummy9 {  
  
    @Test  
    public void upload() throws InterruptedException, IOException {  
        System.setProperty("webdriver.gecko.driver",  
  
            "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");  
        int size = driver.findElements(By.tagName("iframe")).size();  
  
        System.out.println(size);  
        driver.switchTo().frame("IF1");  
  
        driver.findElement(By.name("firstname")).sendKeys("vengat");  
    }  
}
```

Using Name:

```
public class Dummy9 {  
  
    @Test  
    public void upload() throws InterruptedException, IOException {  
        System.setProperty("webdriver.gecko.driver",  
  
            "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");  
        int size = driver.findElements(By.tagName("iframe")).size();  
  
        System.out.println(size);  
        driver.switchTo().frame("iframe1");  
  
        driver.findElement(By.name("firstname")).sendKeys("vengat");  
    }  
}
```

3. Switch to frame by web element:

```
public class Dummy9 {  
  
    @Test  
    public void upload() throws InterruptedException, IOException {  
        System.setProperty("webdriver.gecko.driver",
```



```
"C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
    WebDriver driver = new FirefoxDriver();
    driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");
    int size = driver.findElements(By.tagName("iframe")).size();
    System.out.println(size);

    WebElement web = driver.findElement(By.id("IF2"));
    driver.switchTo().frame(web);

    driver.findElement(By.name("firstname")).sendKeys("vengat");
}

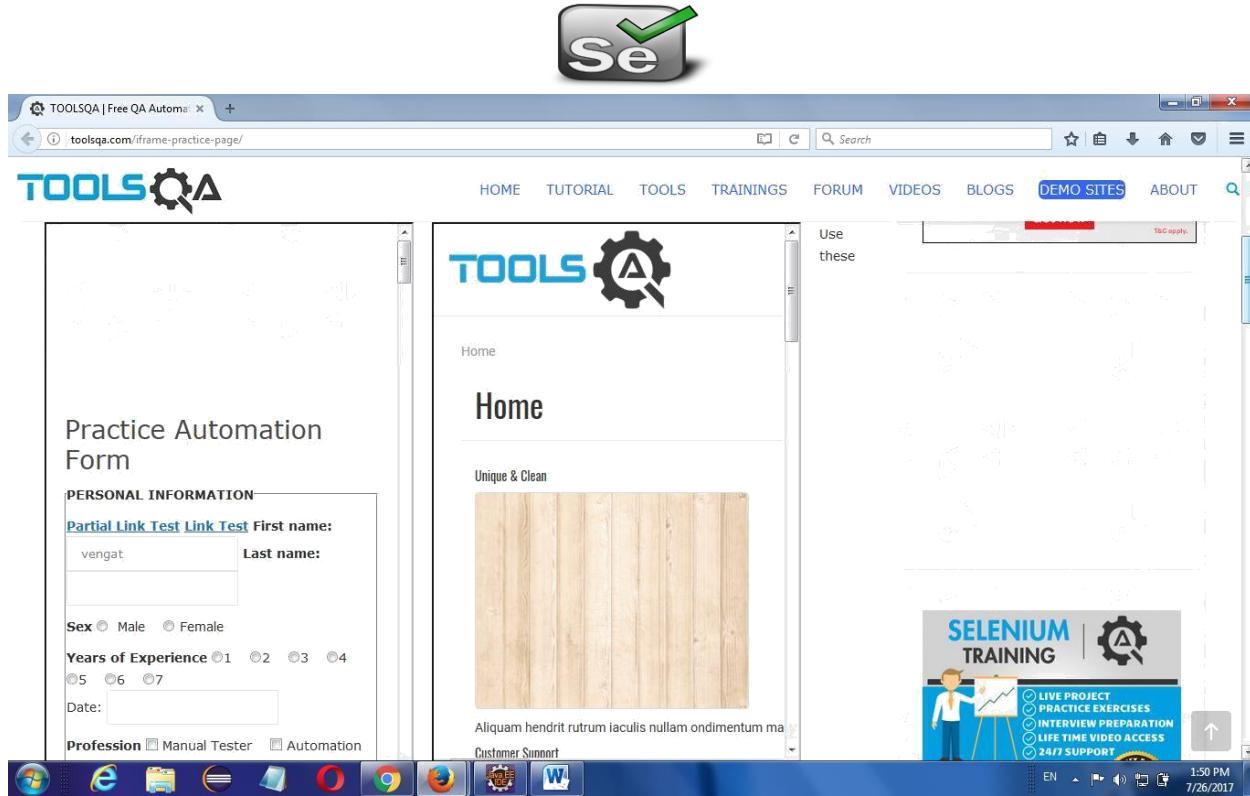
}
```

Output :

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

- Project Explorer:** Shows multiple Java projects under the "Selenium" package.
- Editor:** Displays the content of the `Dummy.java` file.
- Console:** Shows the output of the test run, stating "Finished after 29.054 seconds".
- JUnit View:** Shows the results of the run: 1/1 tests passed, 0 errors, and 0 failures.
- Bottom Status Bar:** Shows the date and time as 7/26/2017 2:13 PM.

```
1 package selenium.assign5;
2
3 import java.io.IOException;
4
5 public class Dummy9 {
6     @Test
7     public void upload() throws InterruptedException, IOException {
8         System.setProperty("webdriver.gecko.driver",
9             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
10        WebDriver driver = new FirefoxDriver();
11        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");
12        int size = driver.findElements(By.tagName("iframe")).size();
13        System.out.println(size);
14        // driver.switchTo().frame(0);
15        WebElement web = driver.findElement(By.id("IF2"));
16        driver.switchTo().frame(web);
17
18        driver.findElement(By.name("firstname")).sendKeys("vengat");
19    }
20 }
```



Switch back to main page:

```

public class Dummy9 {

    @Test
    public void upload() throws InterruptedException, IOException {
        System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");
        int size = driver.findElements(By.tagName("iframe")).size();
        System.out.println(size);
        // driver.switchTo().frame(0);
        WebElement web = driver.findElement(By.id("IF2"));
        driver.switchTo().frame(web);

        driver.findElement(By.name("firstname")).sendKeys("vengat");
        driver.switchTo().defaultContent();
    }
}

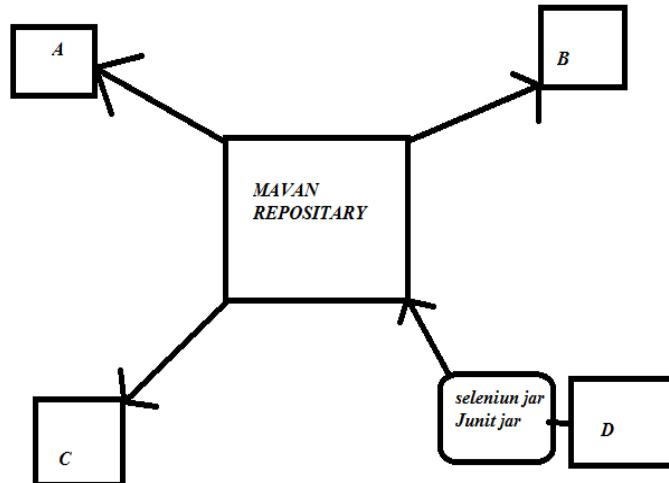
```



TOOLS:

MAVEN:

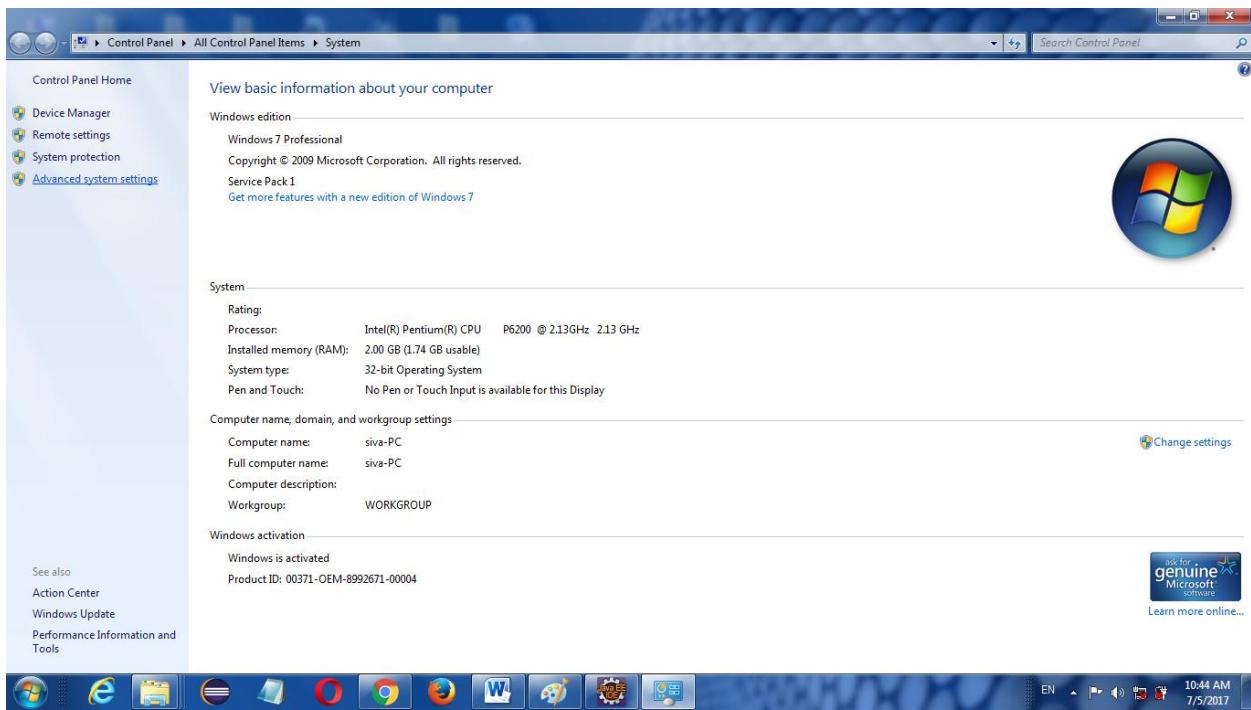
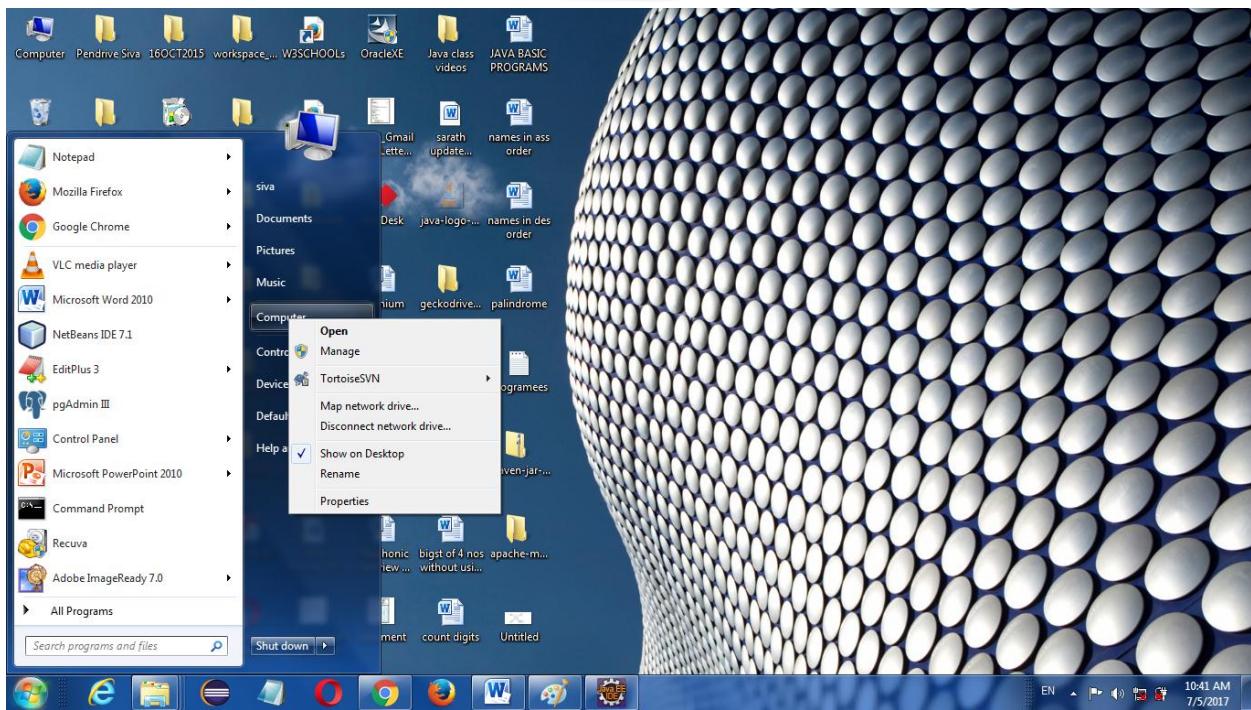
- Project build tool

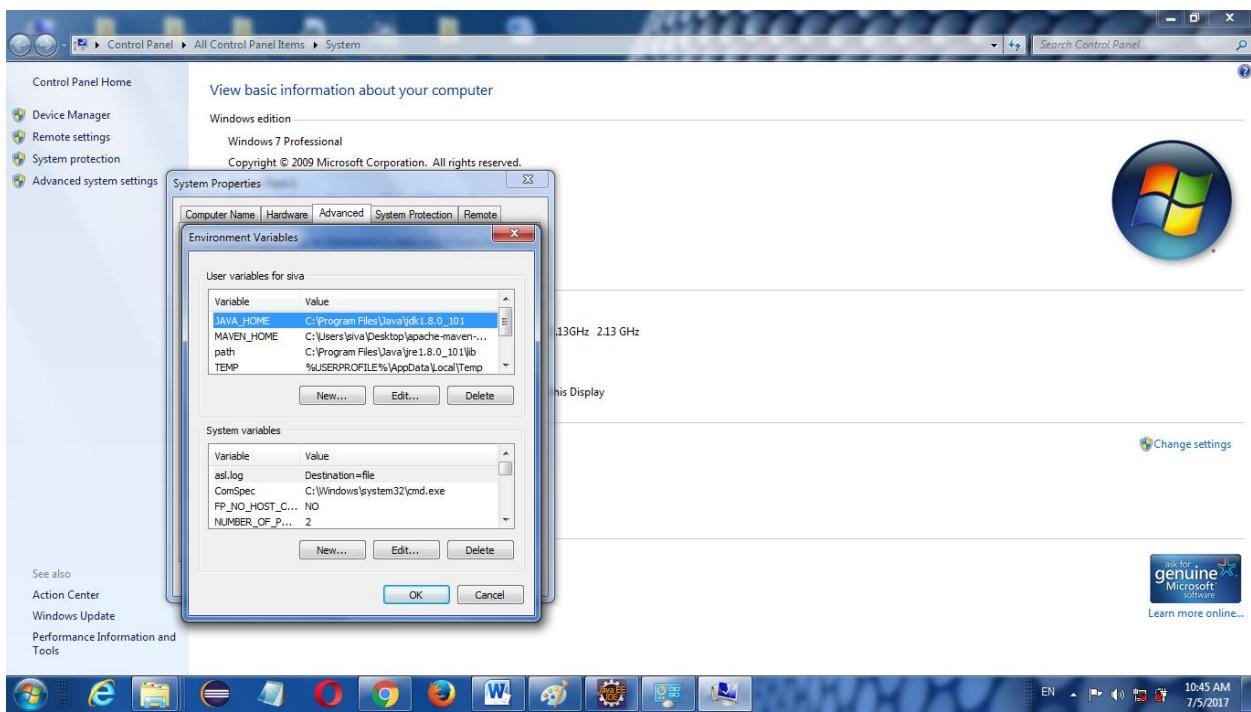
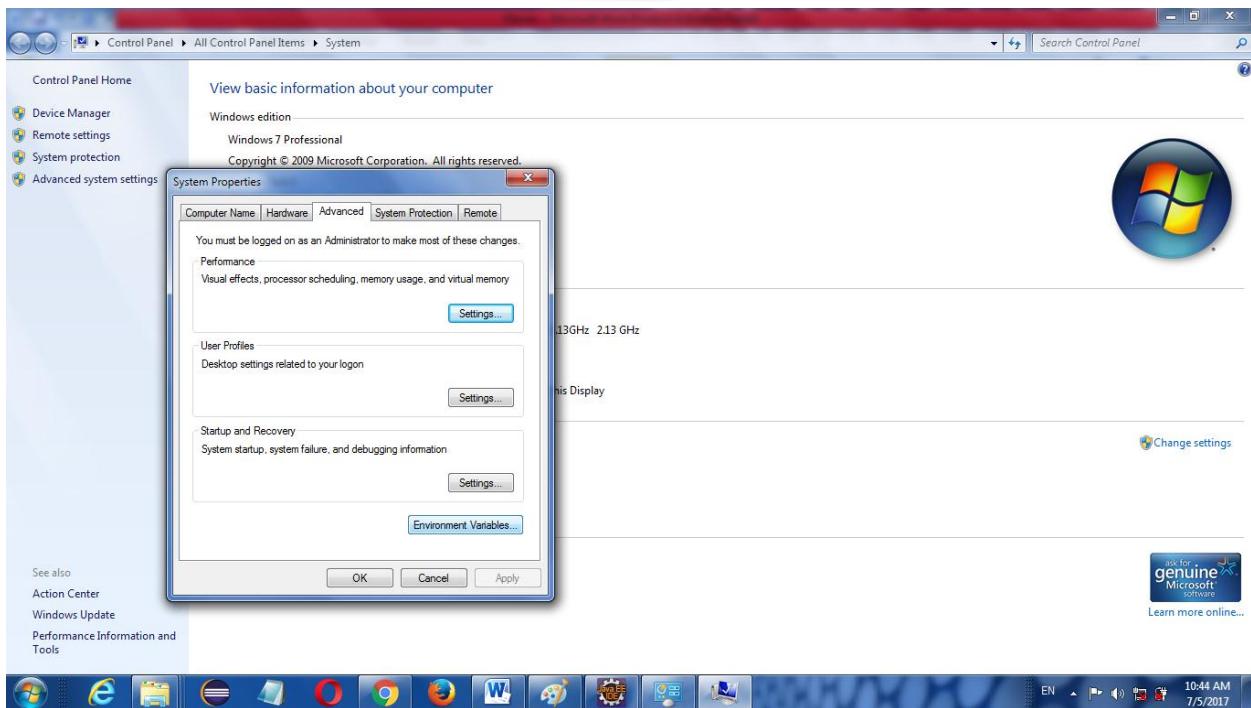


-
- If one person (D) download jar file, it will automatically updated in maven repository. Then anyone can use

Maven configuration steps

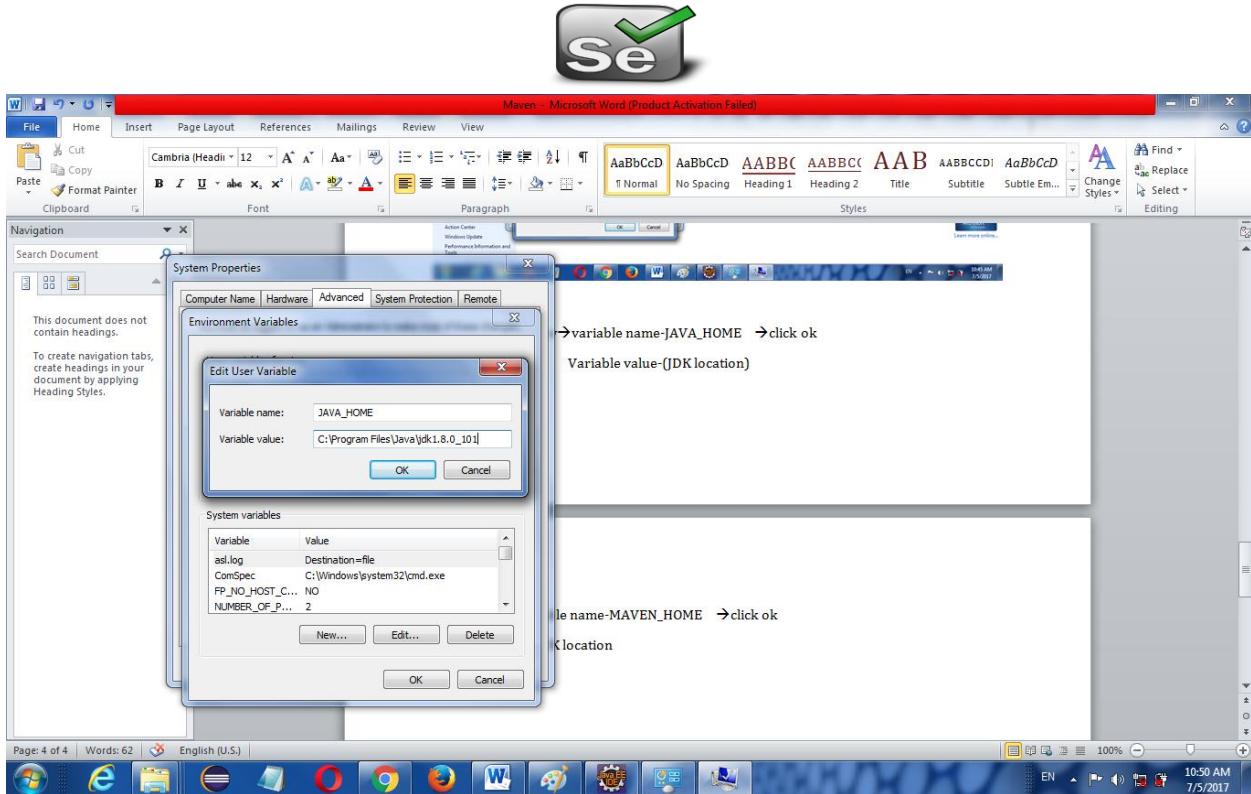
- Download maven jar file.(Apache- maven 3.50)
- Configure maven jar file in Environment variable
- Computer→right click→properties→advance system setting→environment variable





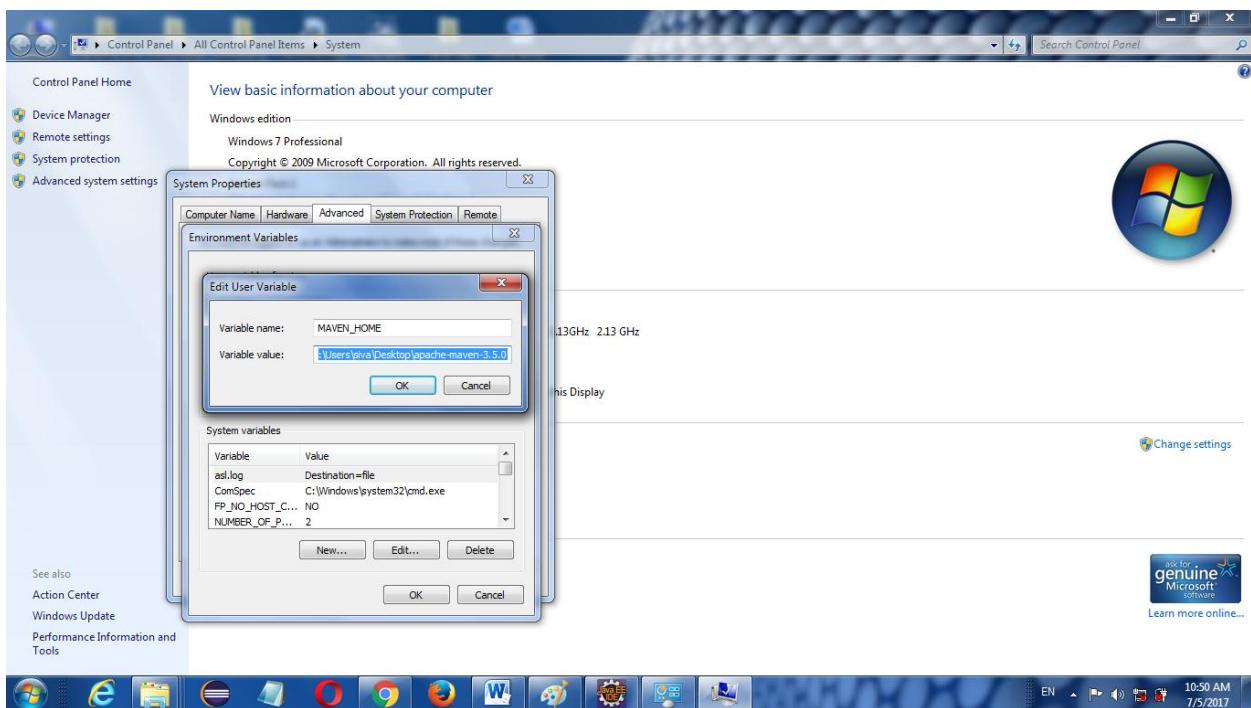
➤ User variable → new → variable name-JAVA_HOME → click ok

Variable value-(JDK location)

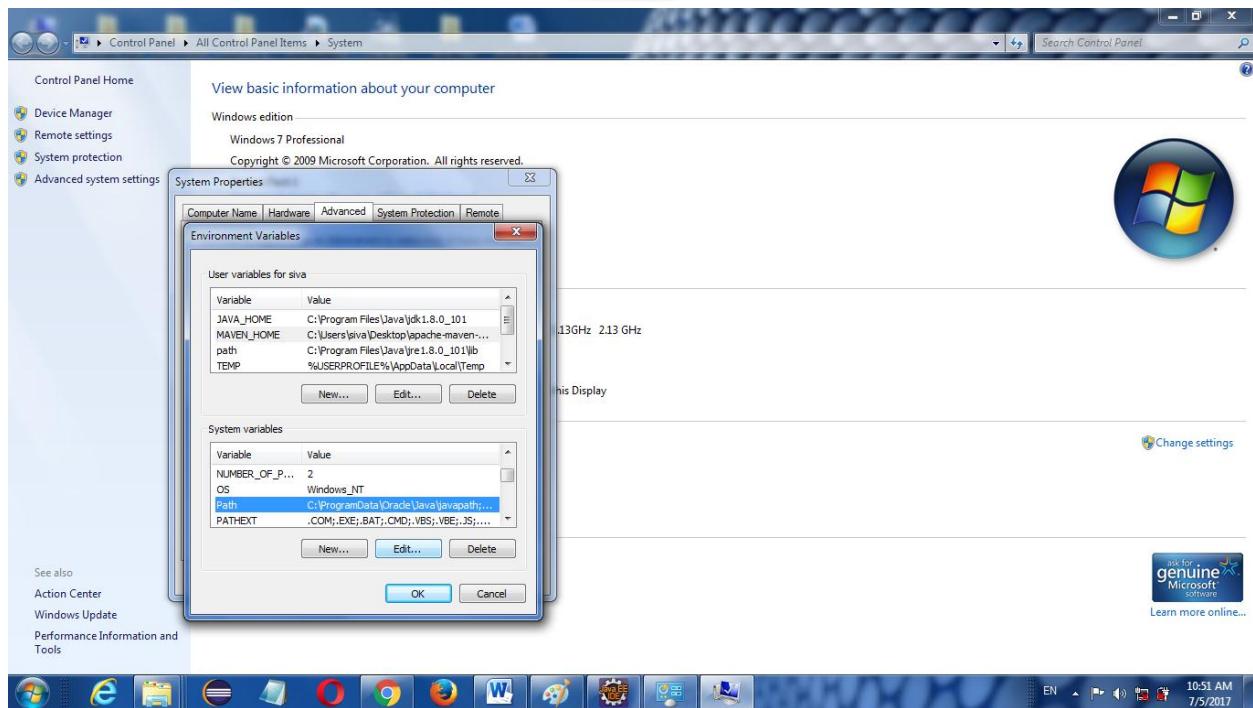


➤ Again new → variable name-MAVEN_HOME → click ok

Variable value-(JDK location)



➤ System variables → click path → Edit

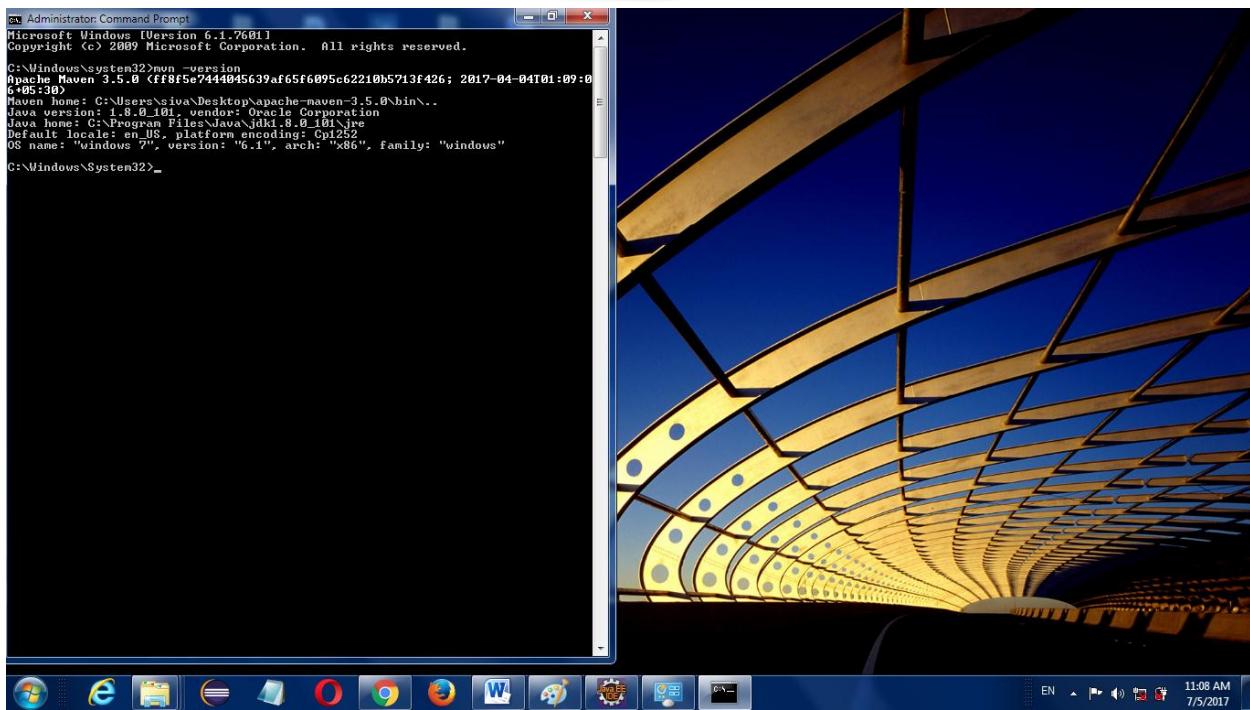


- Add JDK location and maven location

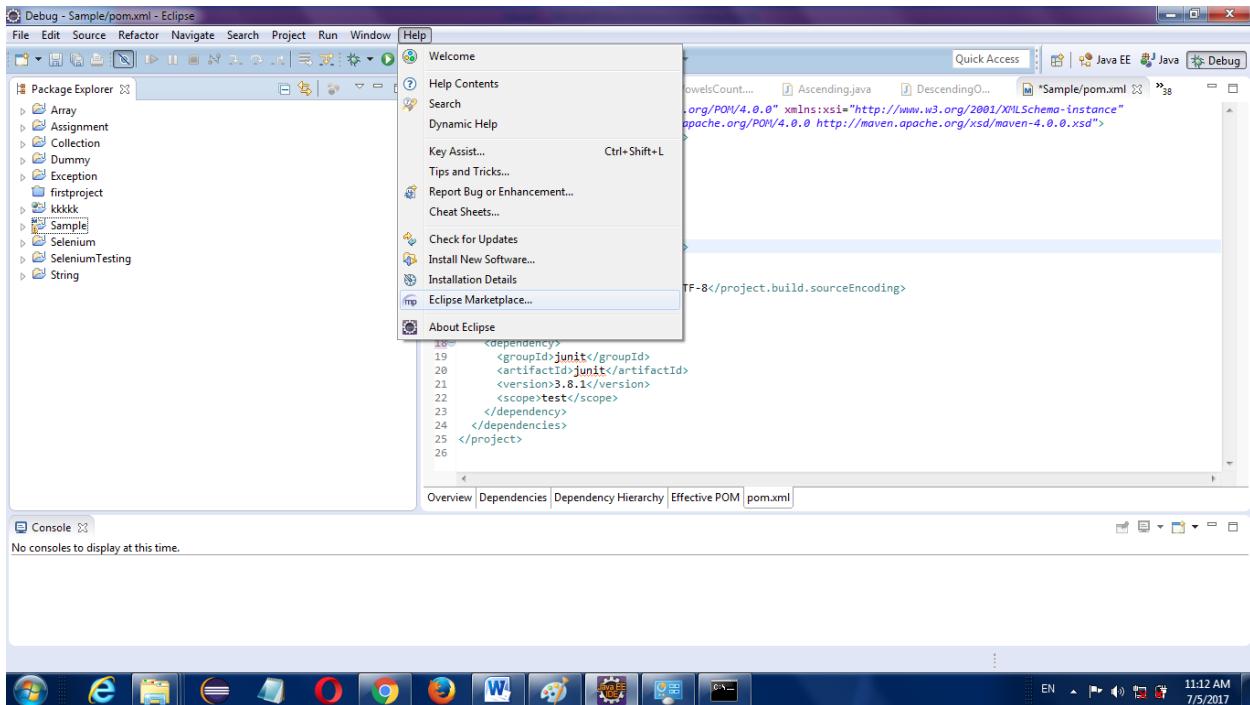
C:\ProgramData\Oracle\Java\javapath;C:\Program Files\Java\jre1.8.0_101\lib;C:\Program Files\Java\jdk1.8.0_101\bin;C:\Users\siva\Desktop\apache-maven-3.5.0\bin

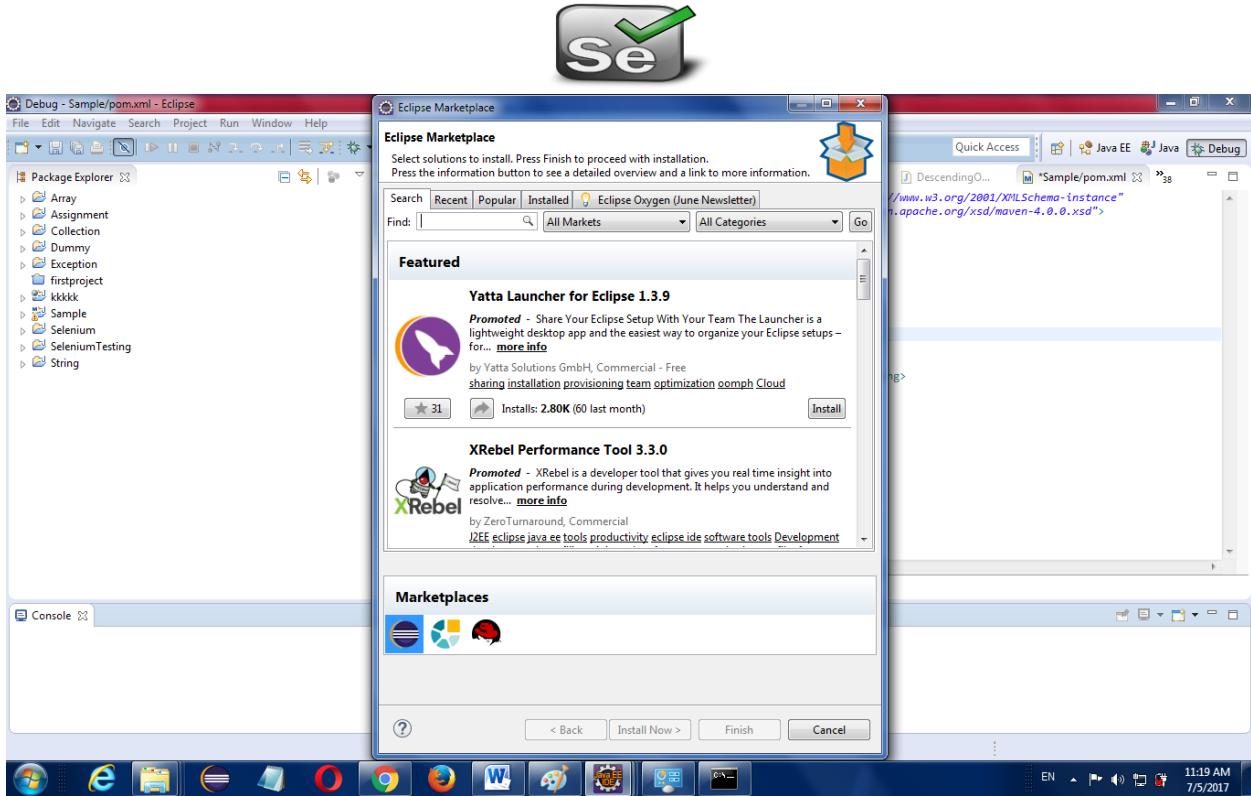
- → **Default location**
- → **JDK location**
- → **Maven location**

- 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

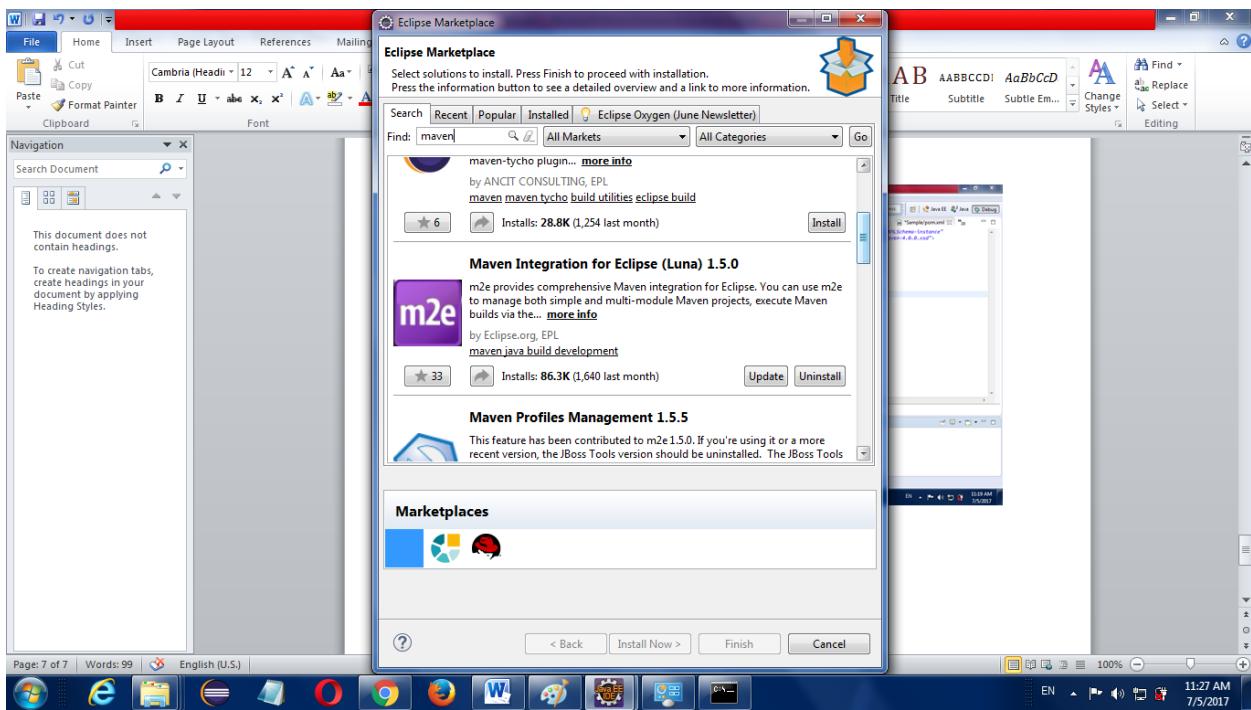


- Open Eclipse:
- Help→Eclipse Market Place





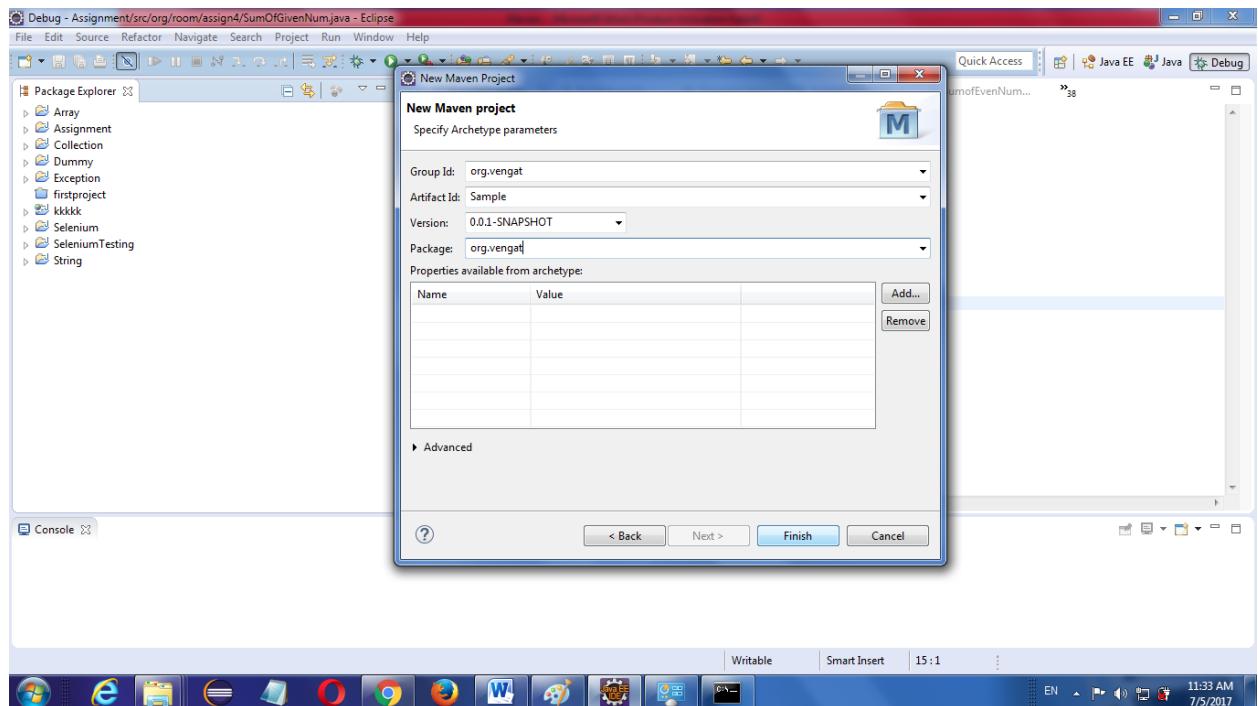
➤ Search→maven→enter

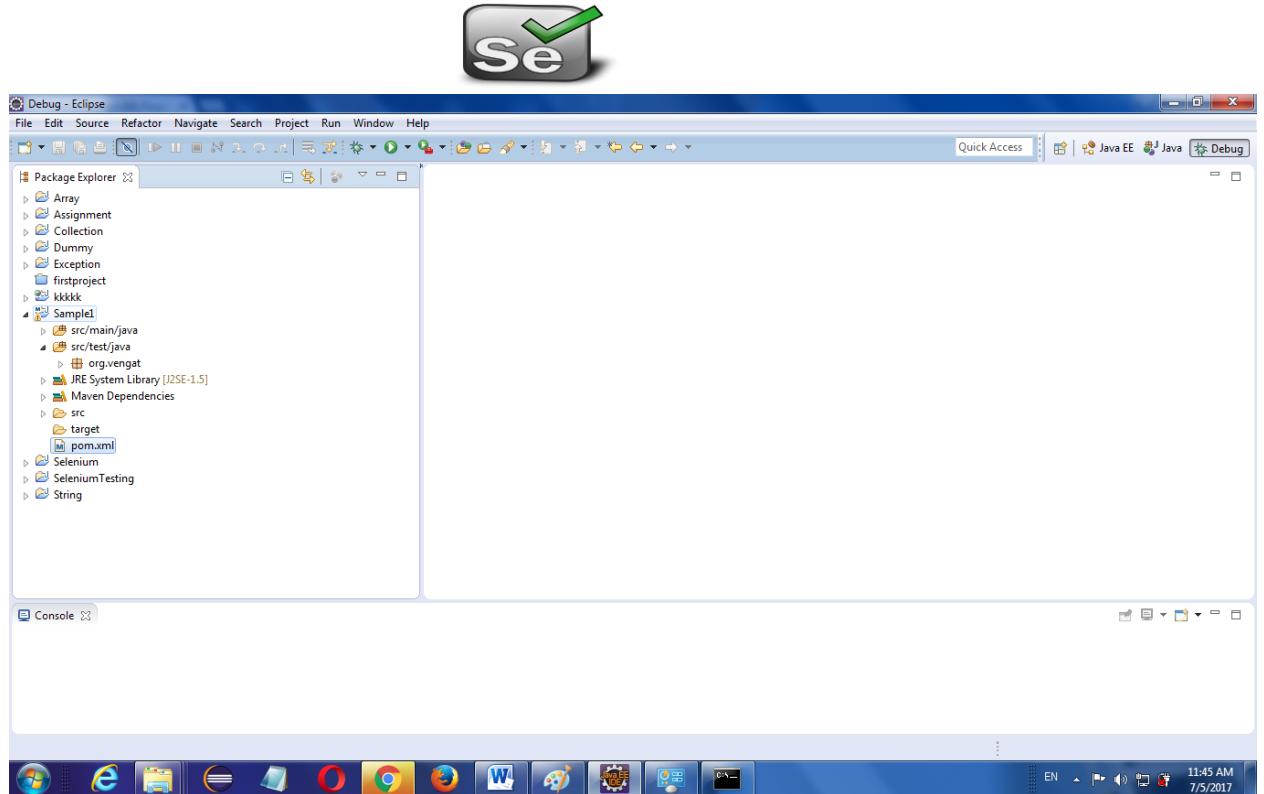


➤ Install mavan integration for eclipse → finish

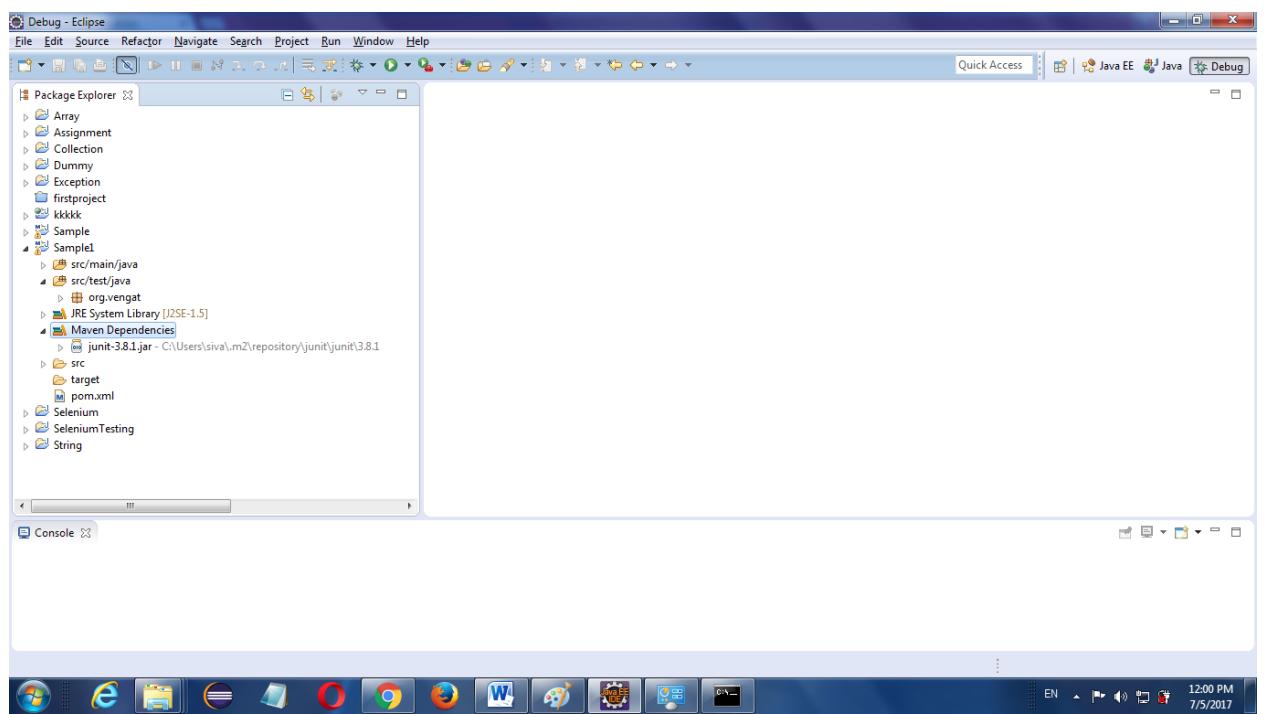


- Create maven project
- New → project → maven project → Next → Next → Group id(package name) → finish
Artifact id(project name)





- Maven dependencies → have jall 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>
```

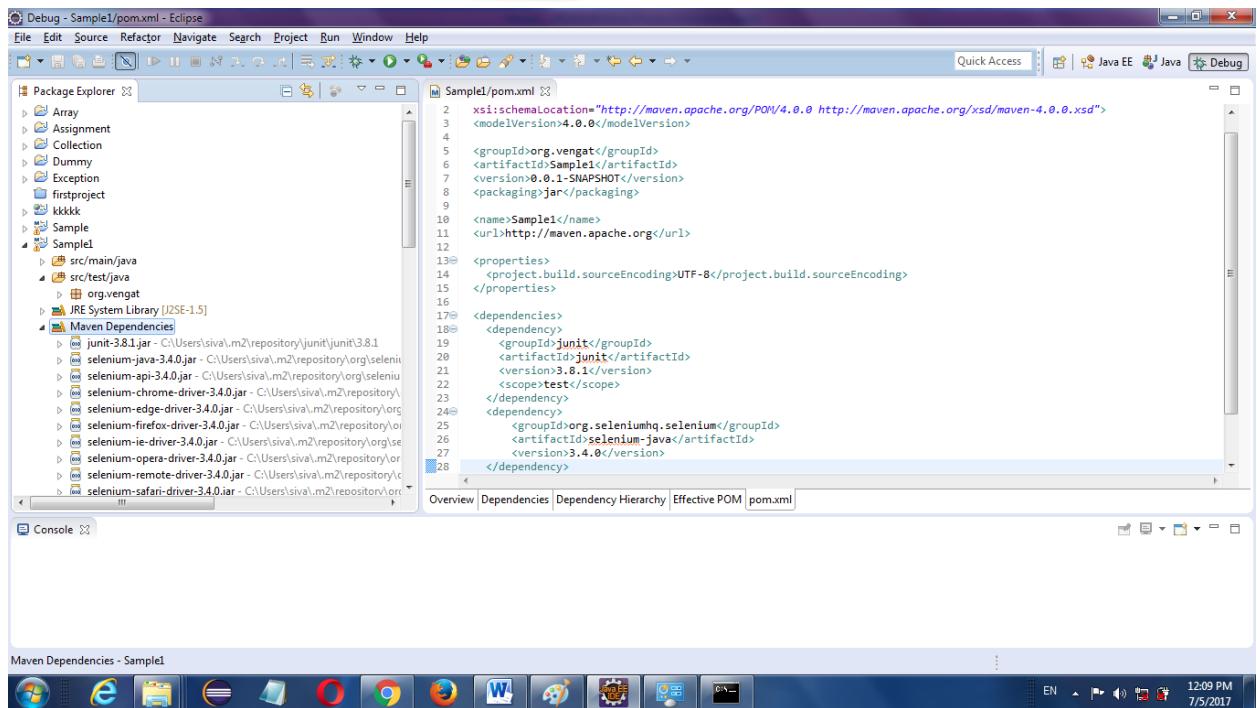
- Just add this jar in pom.xml.
- Click pom.xml→pom.xml→add selenium dependencies code→save

The screenshot shows the Eclipse IDE interface with the "Debug - Sample1/pom.xml - Eclipse" window active. The "Package Explorer" view on the left shows the project structure with a "Sample1" folder containing "src/main/java", "src/test/java", "org.vengat", and "JRE System Library [J2SE-1.5]". The "Maven Dependencies" section contains a "junit-3.8.1.jar" entry pointing to the local Maven repository. The "pom.xml" file is open in the central editor, displaying XML code. A red box highlights the following dependency block:

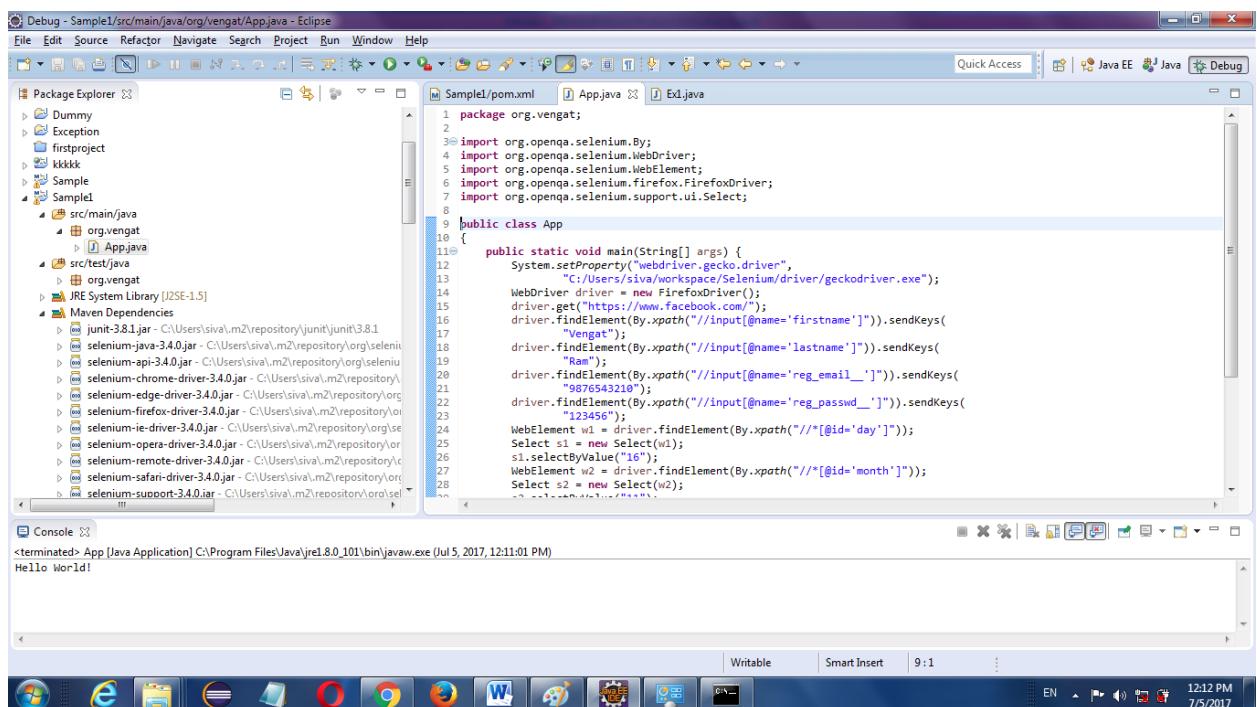
```
<dependency>
<groupId>org.seleniumhq.selenium</groupId>
<artifactId>selenium-java</artifactId>
<version>3.4.0</version>
</dependency>
```

An orange arrow points from this highlighted code to the text "selenium jar" located on the right side of the editor area.

- After selenium jar added automatically in maven dependencies



➤ Run a program in maven project:





➤ Output:

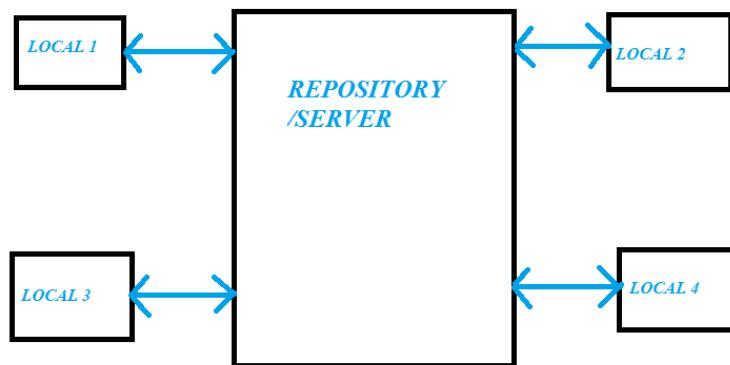


- In case we getting error in program, go to dependencies location → m2 → (delete .last update files)
- Then in project → right click → run as → maven install
- Then maven update



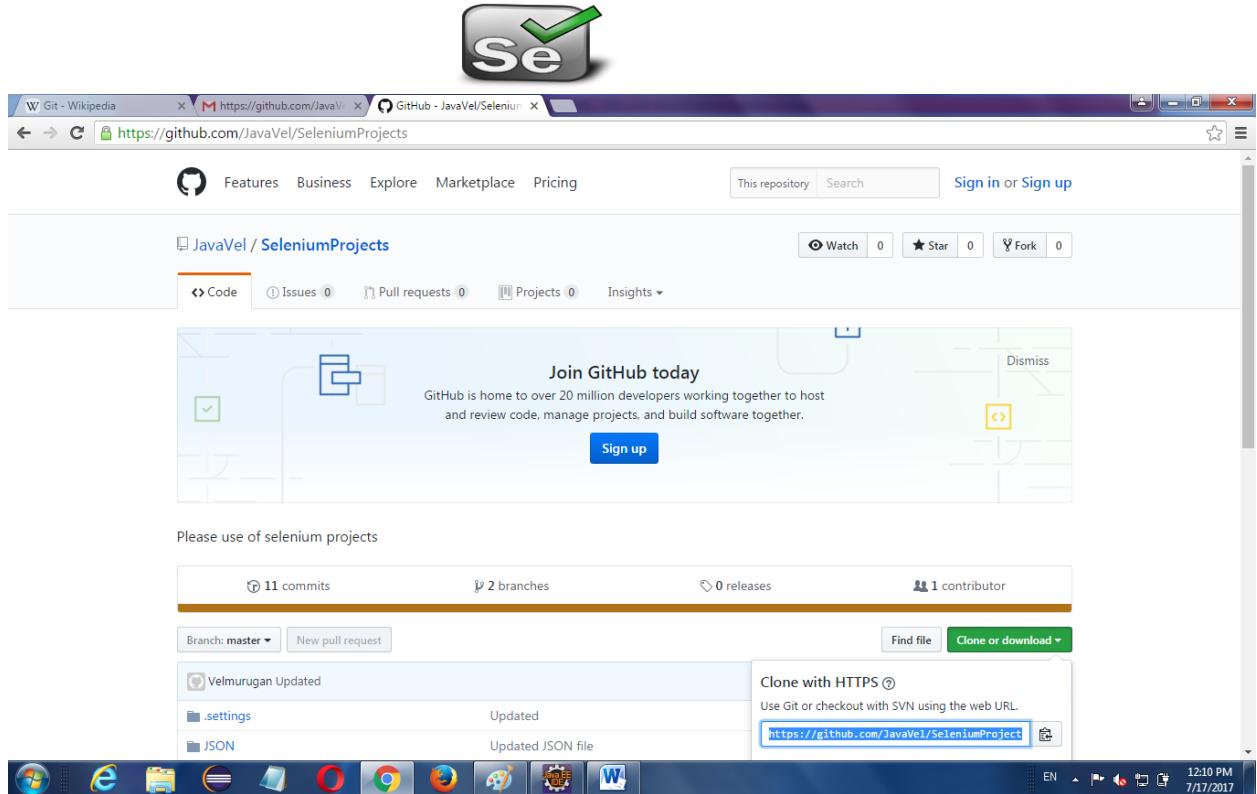
GIT:

- 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.

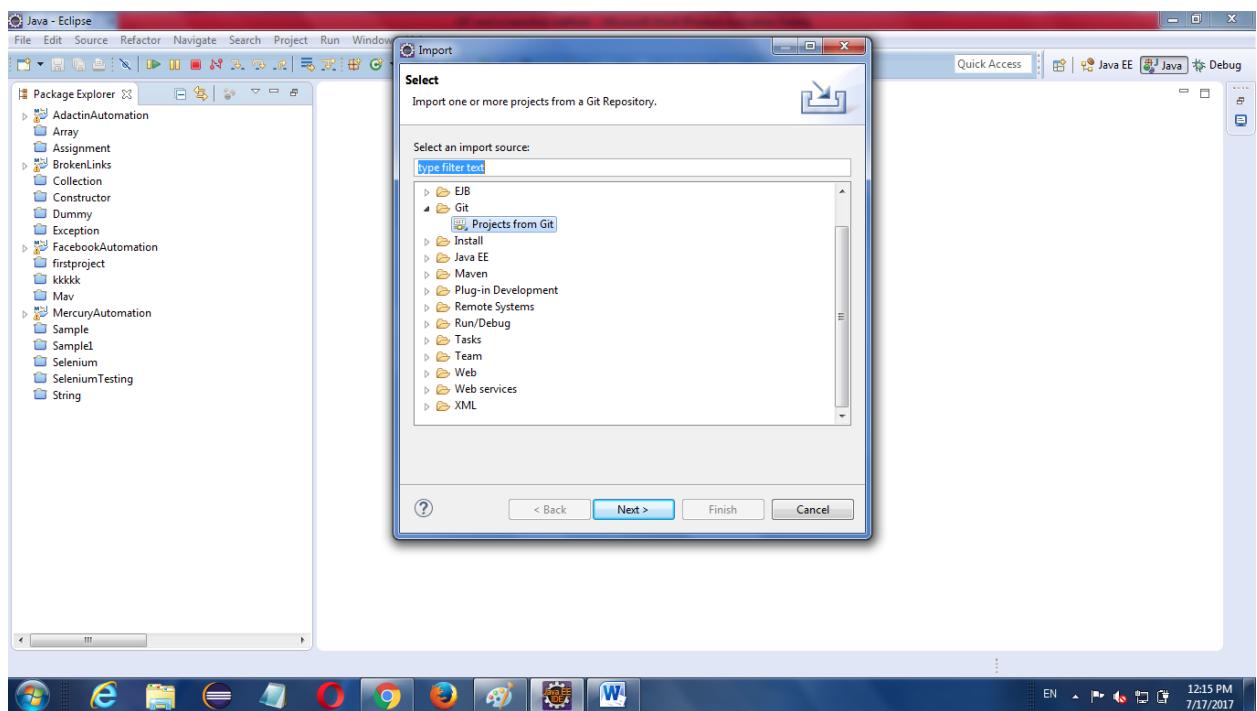


STEPS:

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

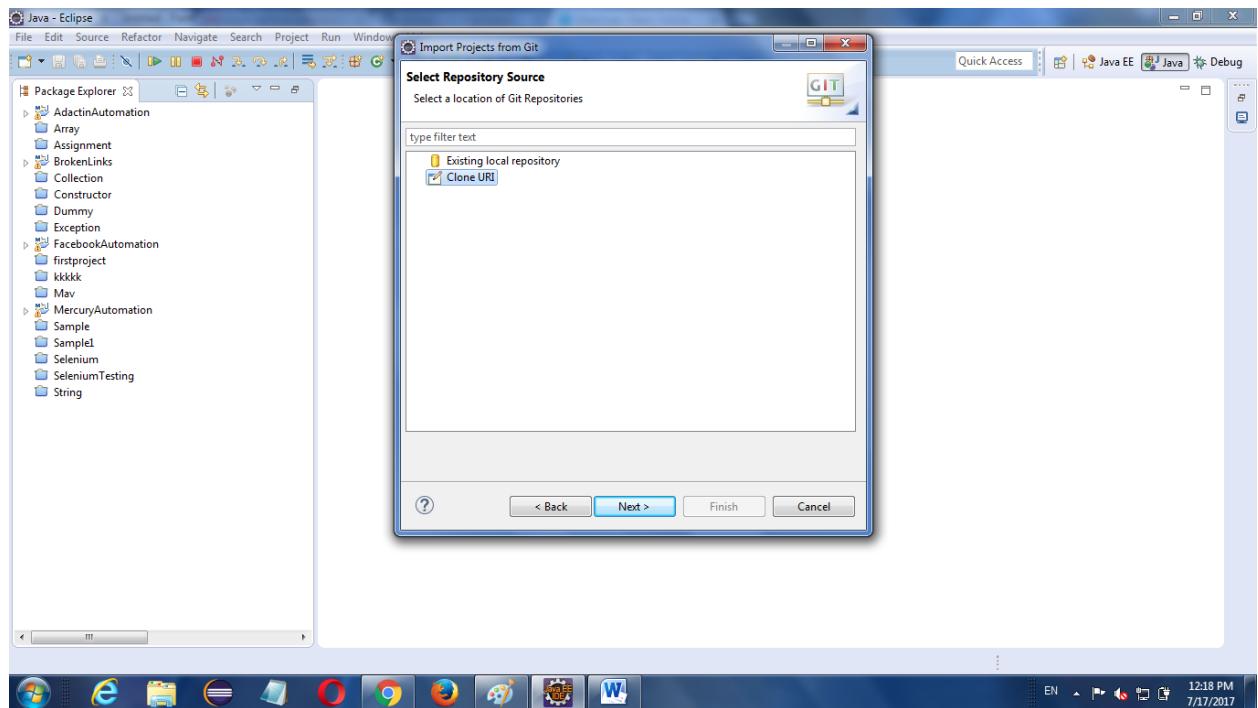


3. Copy the url from clone.
4. Open eclipse
5. In project explore, right click → import → Git → click project from Git

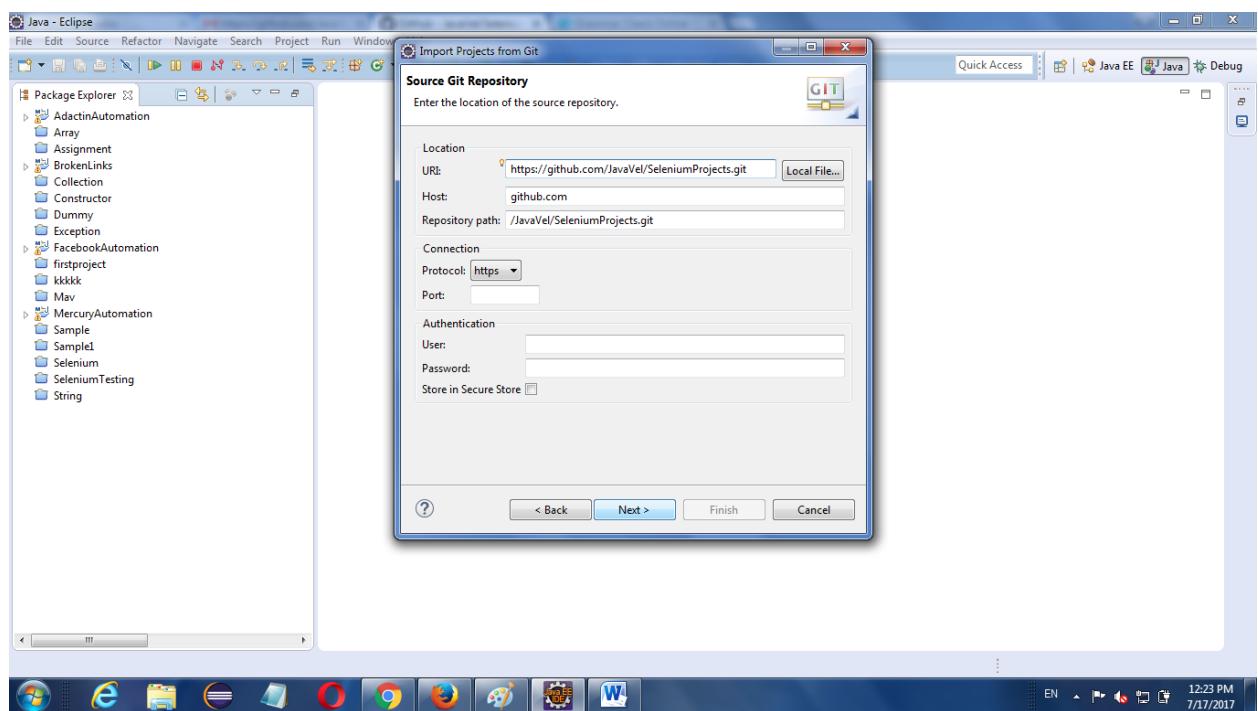




6. Click Next → clone URI → Next

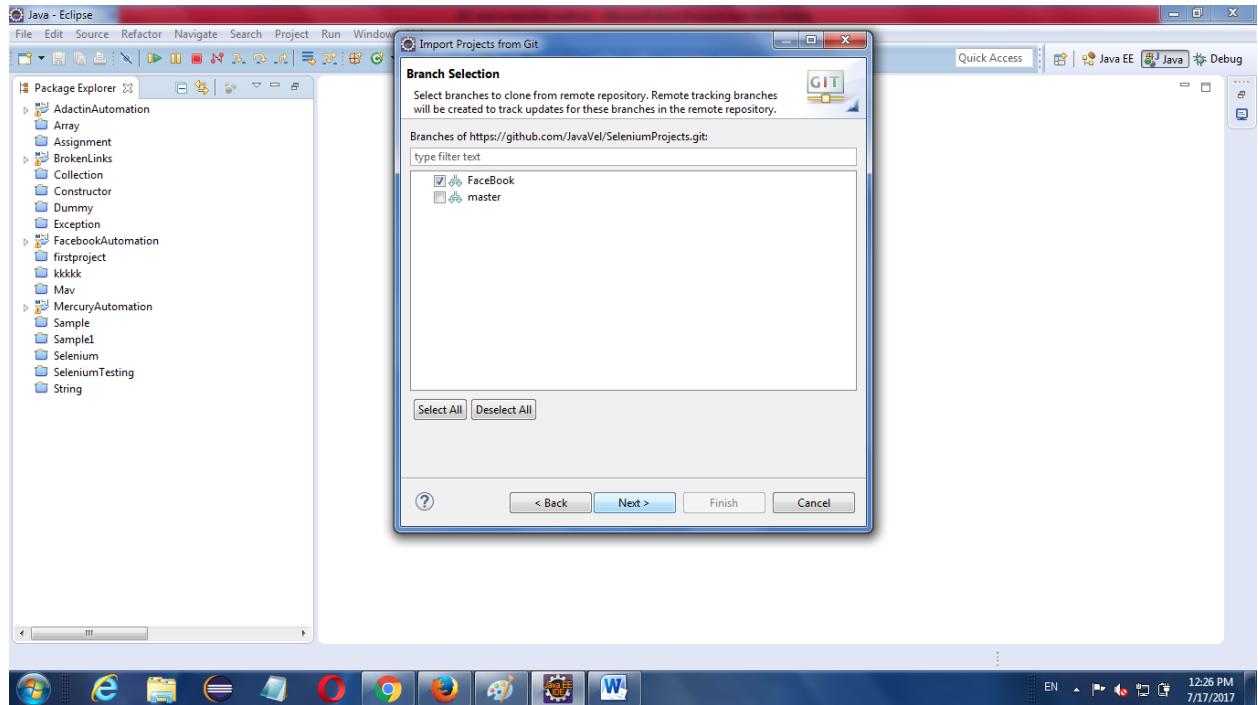


7. Paste the url in a URI → click Next

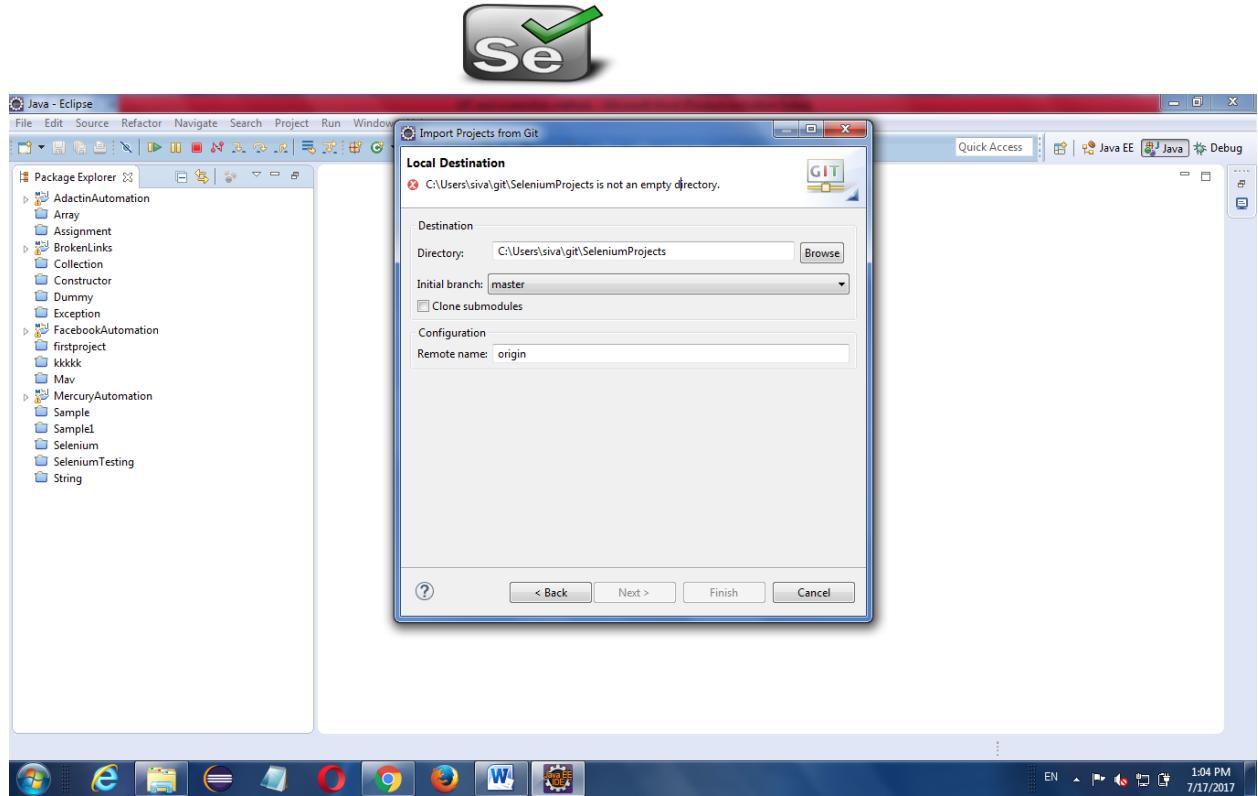




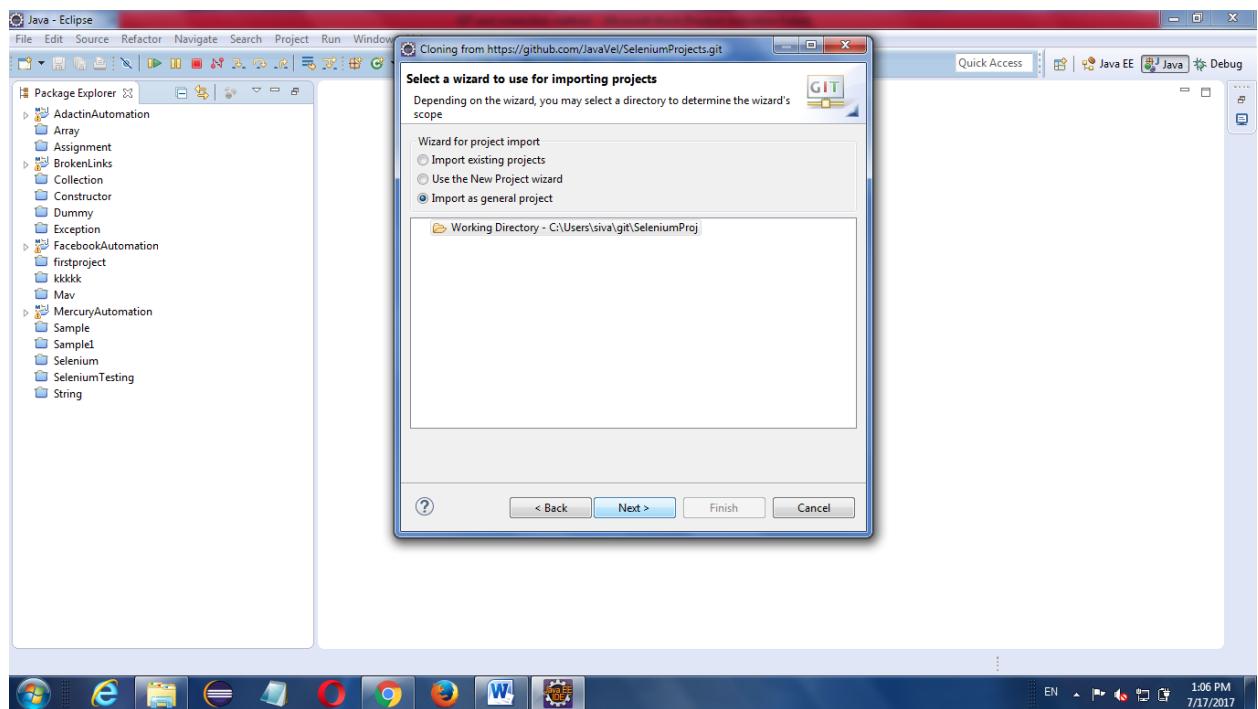
8. Select branch → click Next



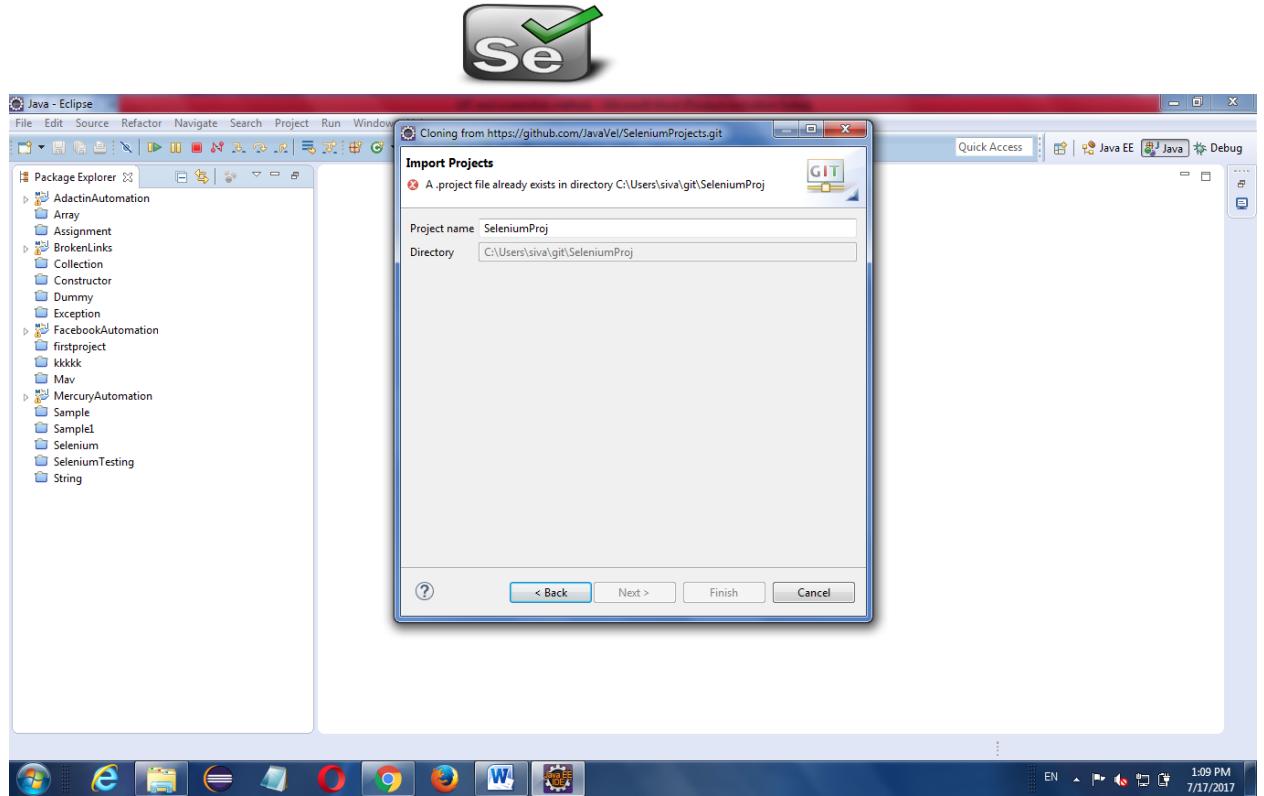
9. If we have that project we get an error message then we have to change the name and click next



10. Select import as general project and click next

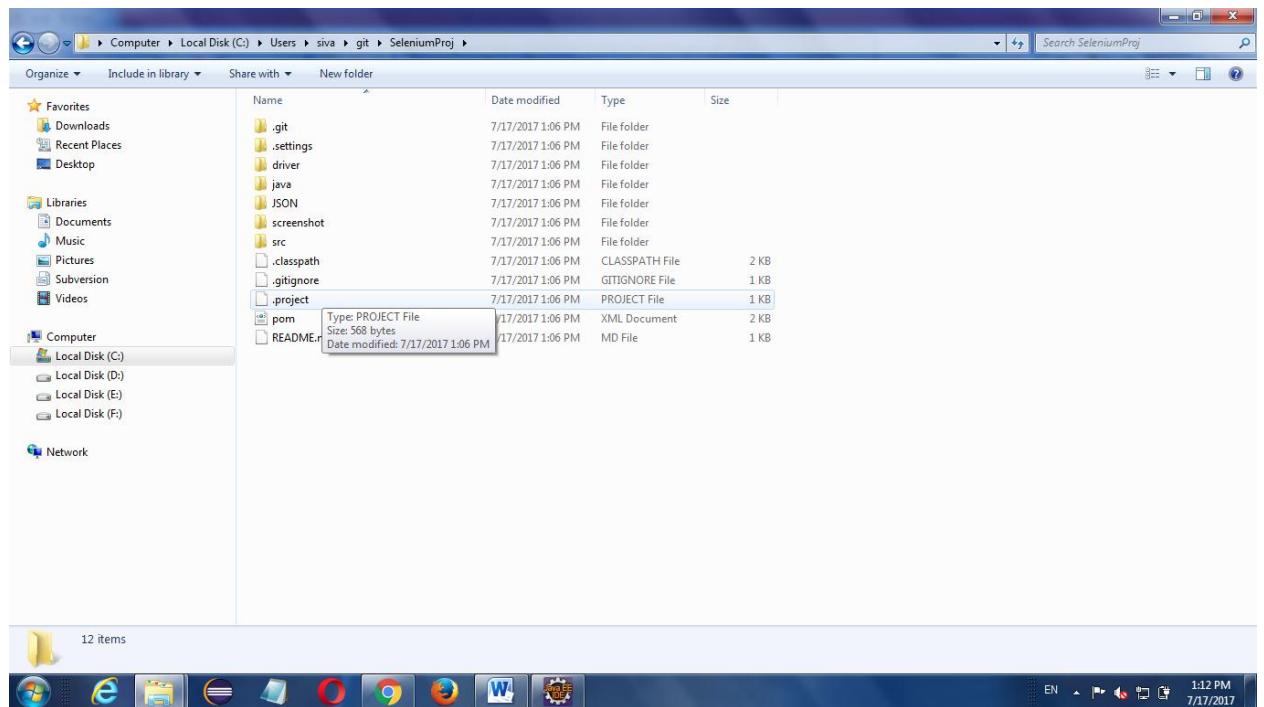


11. We get one error message (i.e.) a **.project** file is already exist. So we have to delete it from that location.



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

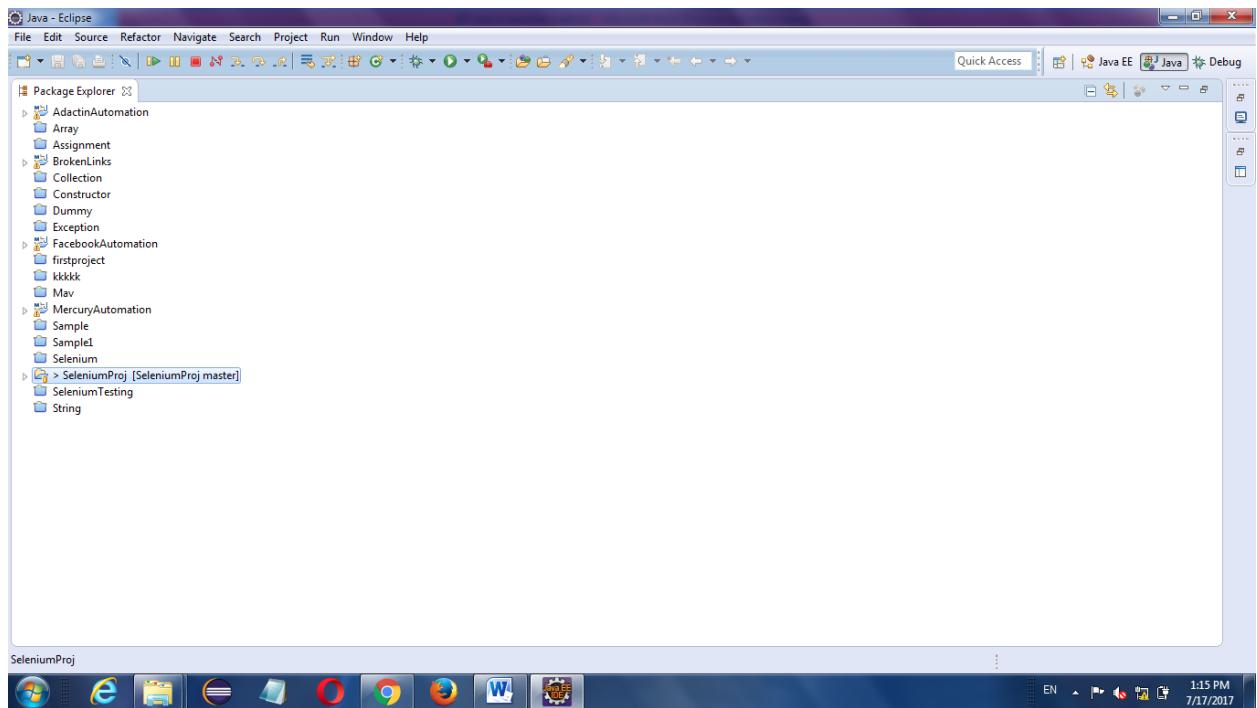
13. Delete .project file



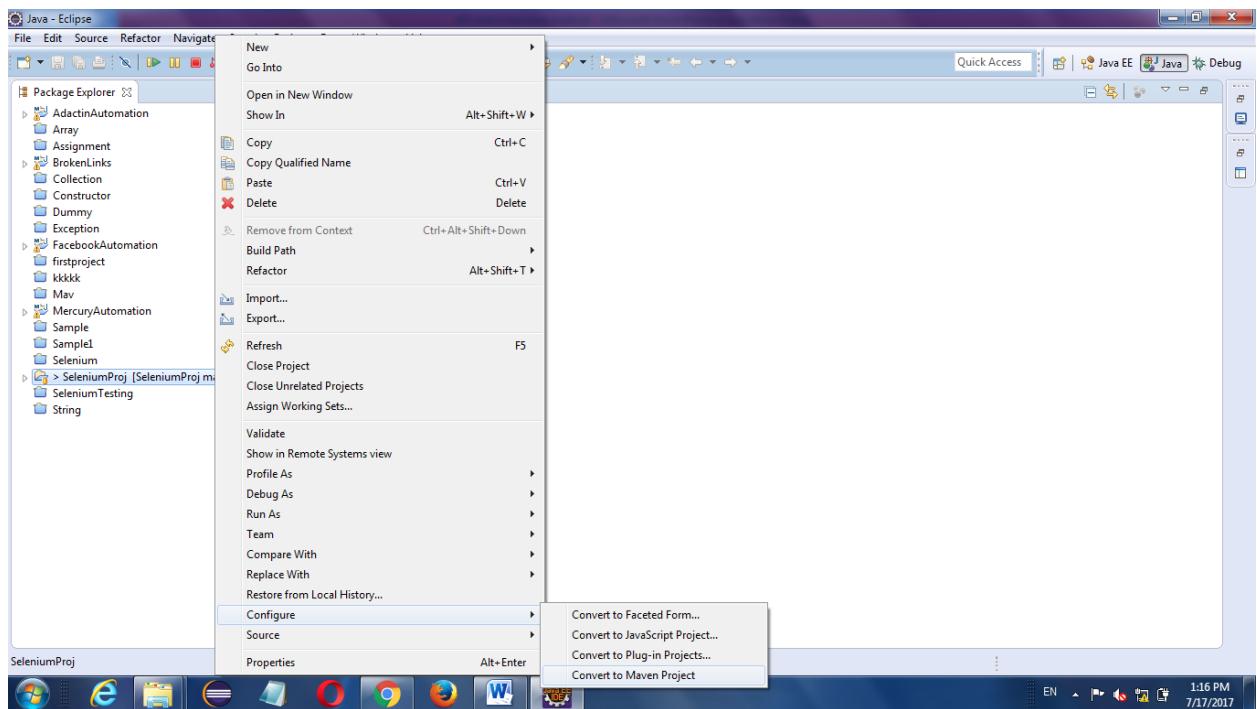
14. Go to eclipse click next → next → finish



15. Git project will be created in eclipse



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

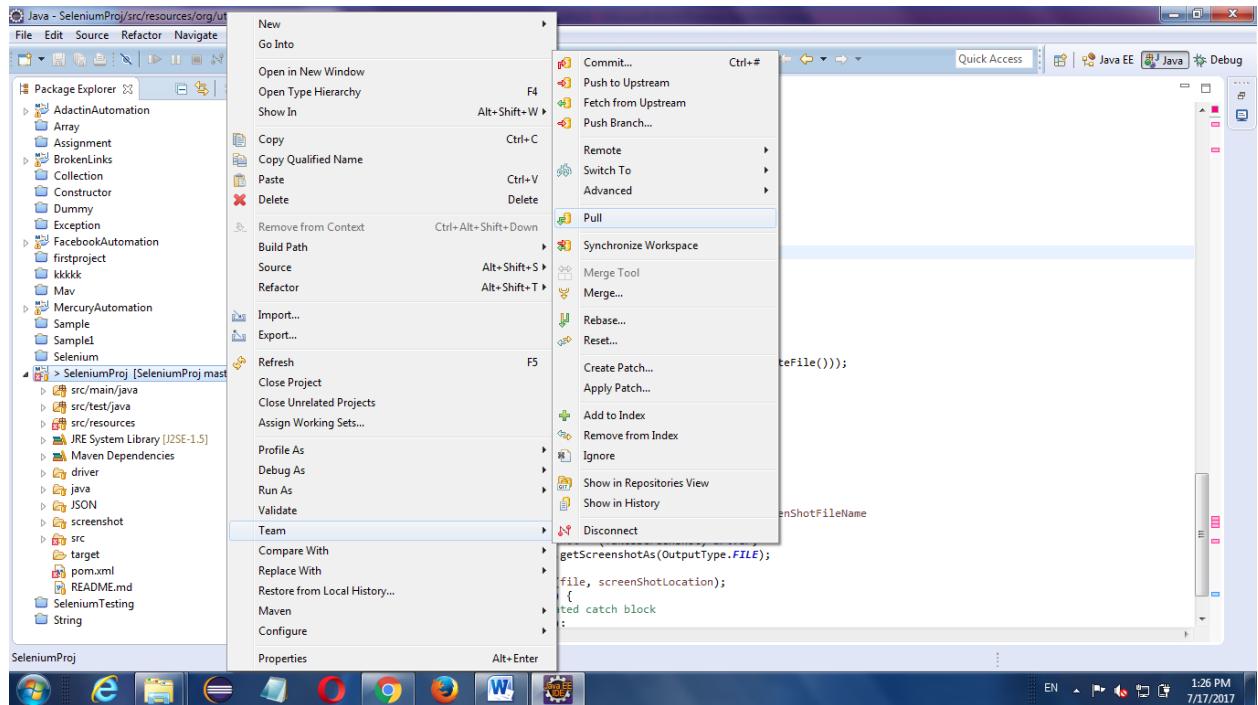


17. Then it will convert to maven project



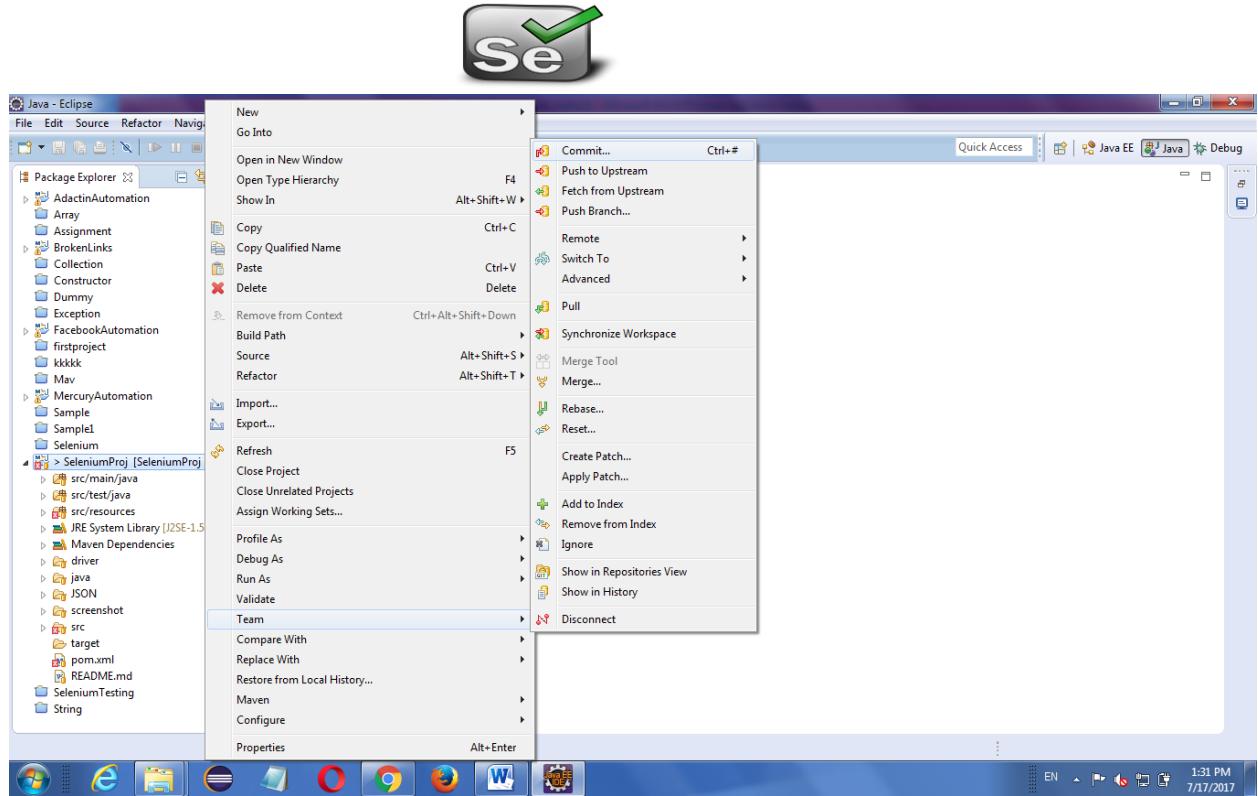
PULL:

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

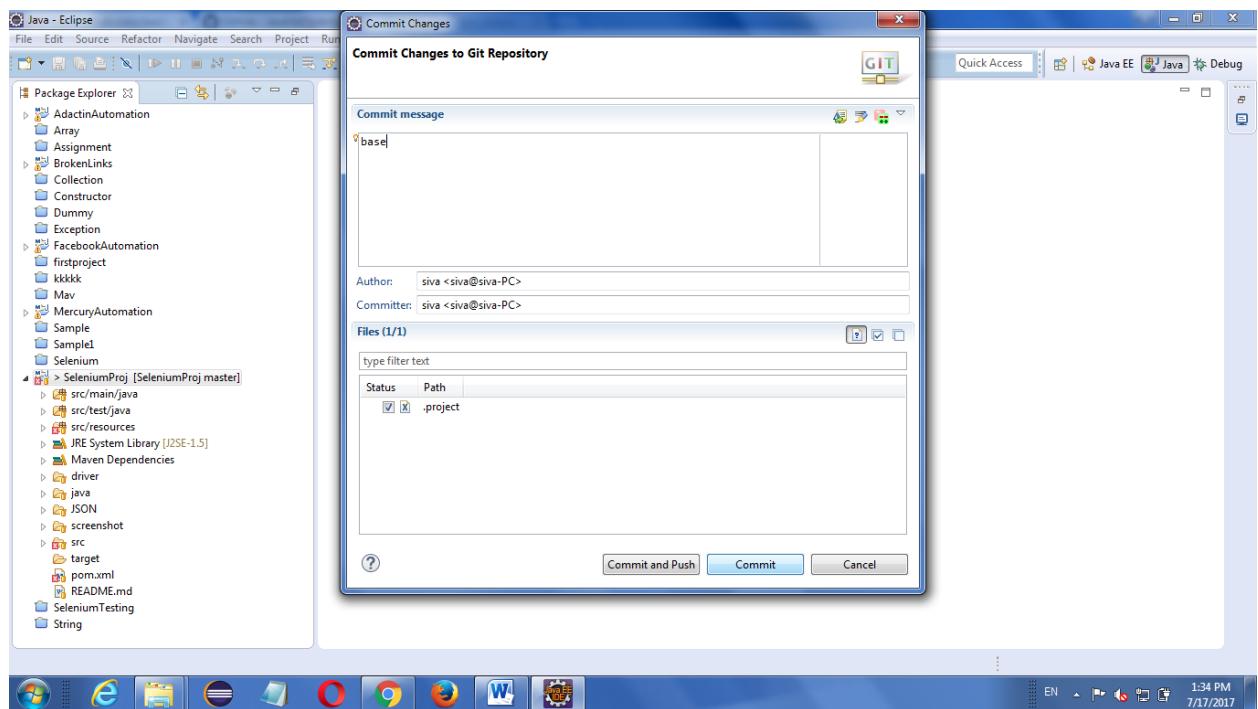


PUSH:

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

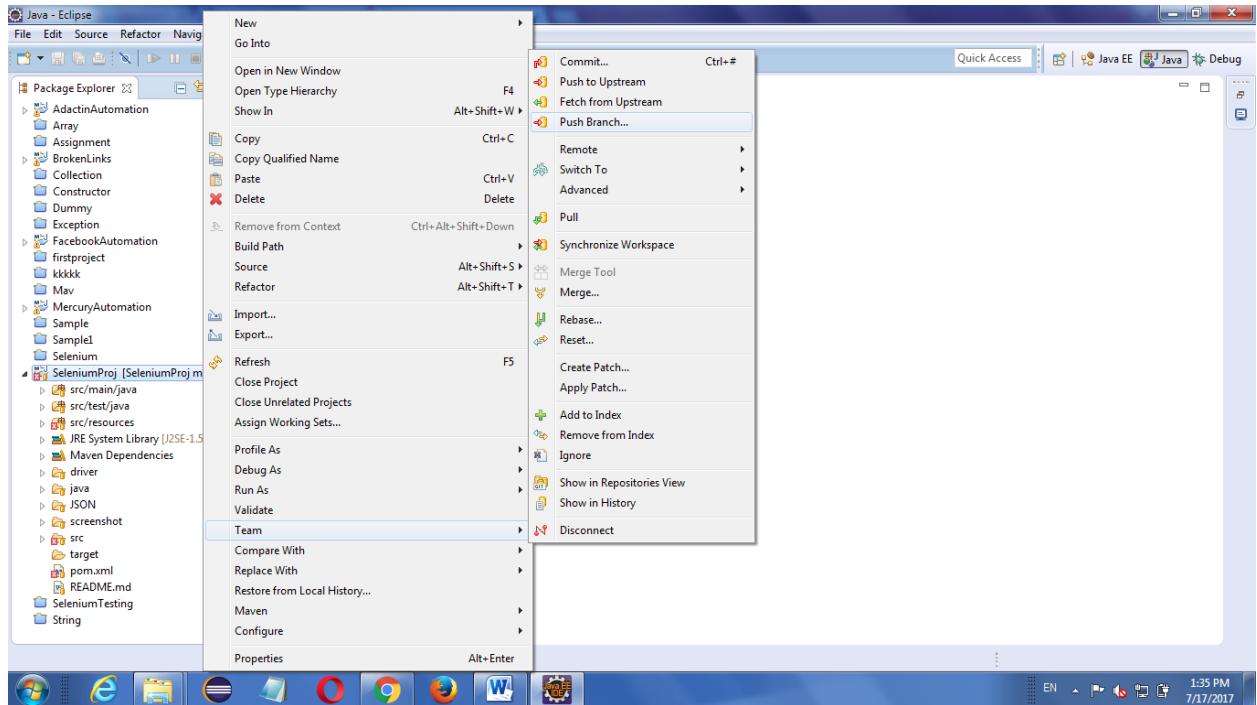


- Enter commit message and click enter





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



- Click next and give username and password and click finish

