

Selenium



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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`, `Selenium`, and `selenium.browser` containing files such as `FacebookAccount.java`, `GmailAccount.java`, `InternetExplore.java`, and `Operajava`.
- Java Editor:** Displays the Java code for `FacebookAccount` class, which sets up a Firefox driver, navigates to Facebook, and closes it.
- Console:** Shows the command-line output of the Java application running. It includes log messages from the geckodriver and Marionette, indicating the browser is starting at port 41052.
- Taskbar:** Shows various application icons including Windows, Internet Explorer, File Explorer, Task View, Firefox, Google Chrome, and Word.
- System Tray:** Shows the date and time as 6/21/2017 8:15 PM.



Program output:

The screenshot shows a Microsoft Windows desktop environment. A Firefox browser window is open, displaying the Facebook 'Create an account' page. The browser's title bar reads 'Facebook - log in or sign up'. The URL in the address bar is 'https://www.facebook.com'. The Facebook page itself has a blue header with the word 'facebook'. Below the header, there's a message: 'Facebook helps you connect and share with the people in your life.' followed by a world map with orange user icons connected by dashed lines. To the right, there's a form for creating an account, including fields for 'First name', 'Surname', 'Mobile number or email address', and 'New password'. There are also dropdowns for 'Birthday' (set to 21 Jun 1999) and gender selection ('Female' or 'Male'). A link '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. Below the browser window, the Windows taskbar is visible with various pinned icons. In the bottom right corner of the screen, there's a system tray showing the date and time as '6/21/2017 8:16 PM'.

- 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:

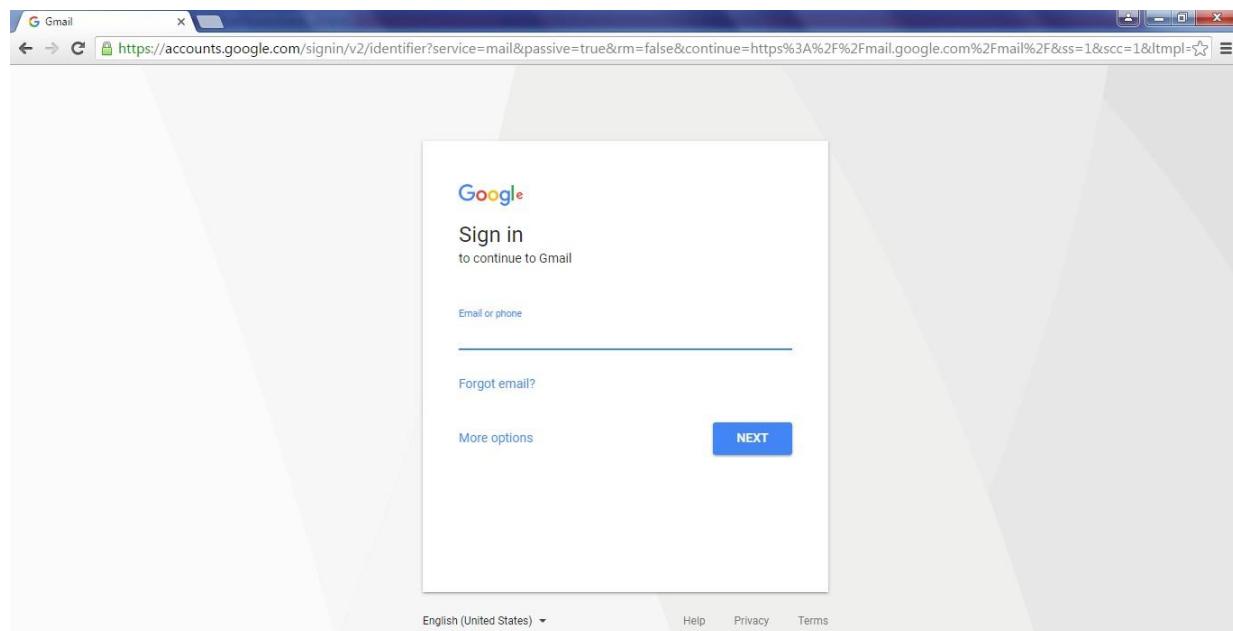
program running

The screenshot shows the Eclipse IDE interface. On the left, the Package Explorer displays a project structure with packages like Array, Assignment, Dummy, firstproject, kkkkk, Selenium, selenium.browser, String, and SeleniumTesting. Under Selenium, there are sub-packages src and selenium.browser containing files FacebookAccount.java, GmailAccount.java, InternetExplore.java, and Opera.java. The GmailAccount.java file is open in the editor, showing Java code for opening a Gmail account. The right side of the interface shows the Console window with the output of the program's execution. The output includes the command run, the Java version (jre1.8.0_101), the Java path (C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe), the date and time (Jun 21, 2017, 8:42:48 PM), the starting of ChromeDriver (Starting ChromeDriver 2.19.346978 (6f1f0cd889532d48ce8242342d0b84f94b114a1) on port 6145), and a note about local connections.

```
import org.openqa.selenium.WebDriver;  
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();  
    }  
}
```

```
GmailAccount [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jun 21, 2017, 8:42:48 PM)  
Starting ChromeDriver 2.19.346978 (6f1f0cd889532d48ce8242342d0b84f94b114a1) on port 6145  
Only local connections are allowed.
```

Output of the program:





IE Launching:

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

```
public class InternetExplore {  
    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 (left):** Shows the project structure with packages like "FacebookAcc...", "GmailAccoun...", "InternetExpl...", "Opera.java", "InternetLau...", "Bankjava", and "AxisBank.java". It also lists JRE System Library [JavaSE-1.7] and Referenced Libraries.
- Code Editor (center):** Displays the code for the `InternetExplore` class. The code initializes an Internet Explorer driver, navigates to Facebook, and maximizes the window.
- Console (bottom):** Shows the output of running the application, indicating the start of the Internet Explorer driver server, listening on port 30652, and performing a protocol handshake.
- Bottom Bar:** Includes icons for file operations, search, and various tools, along with status indicators for battery, signal, and system.



Output of the program

The screenshot shows a web browser window with the URL <https://www.facebook.com/>. The page is titled "facebook" and displays the "Create an account" form. The form includes fields for "First name", "Surname", "Mobile number or email address", and "New password". There are also dropdowns for "Birthday" (set to 21 Jun 1999) and gender ("Female" or "Male"). Below the form is a note about agreeing to terms and policies. At the bottom of the page is a "Create an account" button.

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/op  
eradriver.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. The left side displays the Package Explorer with a project named 'Java - Selenium' containing several Java files like FacebookAccount.java, GmailAccount.java, InternetExplore.java, and Opera.java. The right side shows the code editor with the contents of the Opera.java file:

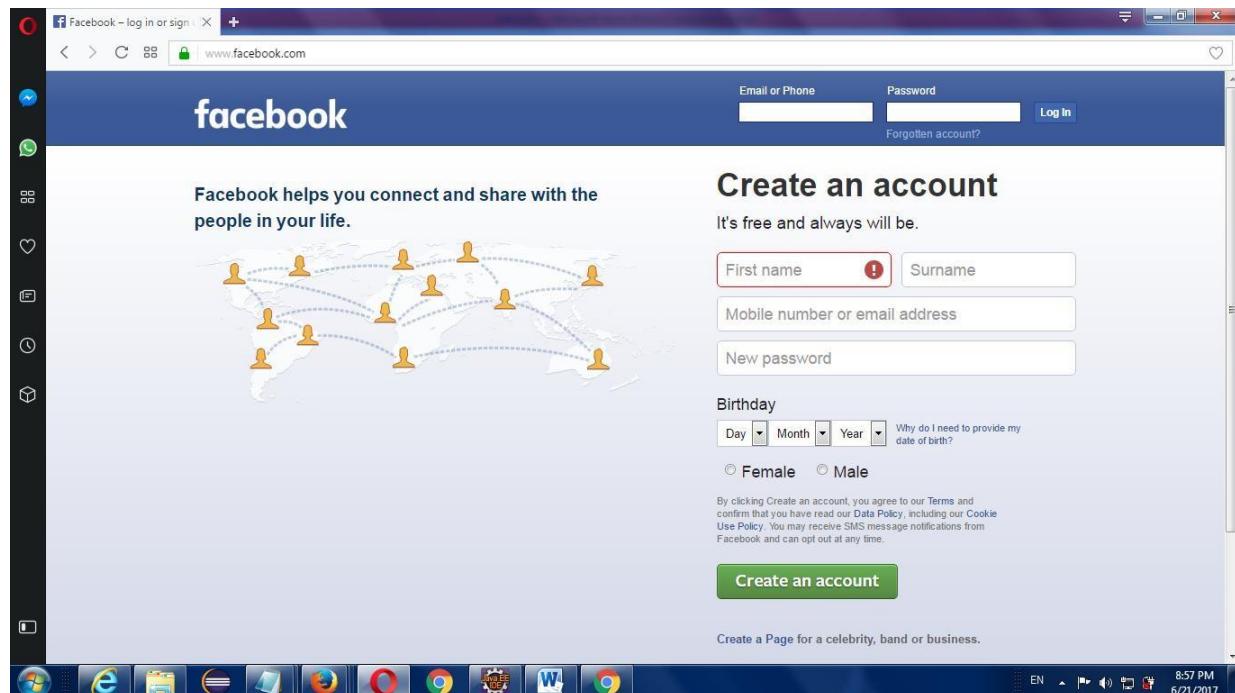
```
1 package selenium.browser;
2
3 import org.openqa.selenium.WebDriver;
4
5 public class Opera {
6
7     public static void main(String[] args) {
8         System.setProperty("webdriver.opera.driver","C:/Users/siva/workspace/Selenium/driver/operadriver.exe");
9
10        WebDriver driver = new OperaDriver();
11        driver.get("https://www.facebook.com/");
12        driver.manage().window().maximize();
13
14    }
15
16
17 }
18
19
20
```

The bottom right corner of the code editor shows the output from the console:

```
<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 (f610856e560d197467fd6d27c7fbdf7fea572fe8bd) 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
```

The taskbar at the bottom of the screen includes icons for various applications like File Explorer, Task View, and Start.

Output of the program





Object Identification / locators:

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

Firefox plug-ins to find locator:

1. Firebug
2. Firepath

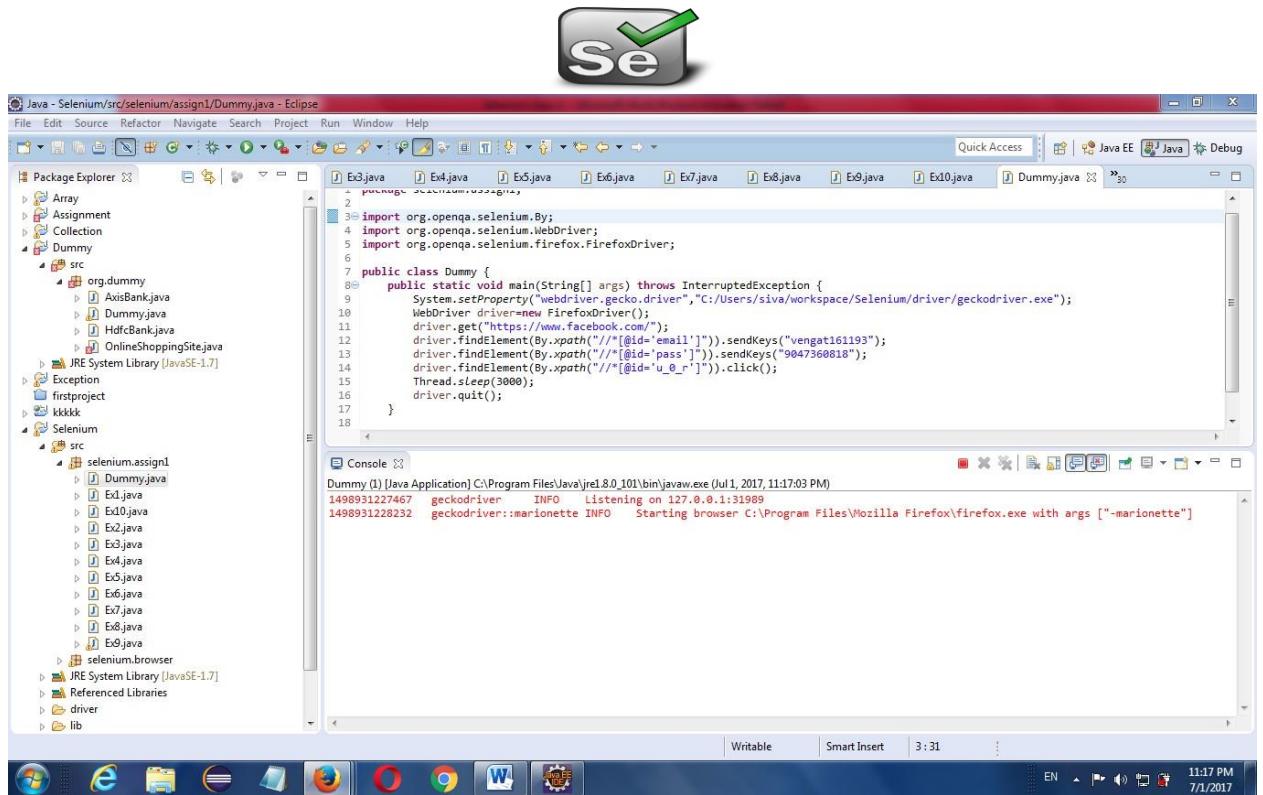
- Add these 2 plug-ins in firefox- To find the locators
 - In locators we can define 2 types (i.e.)
 - / → Absolute path (shows Full HTML DOM structure)
 - // → Relative path(shows particular locators or tag value)
 - In finding Xpath, matching node should be only one

Example program:

```
public class Dummy {  
    public static void main(String[] args) throws InterruptedException {  
  
        System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
        driver.get('https://www.facebook.com/');  
        driver.findElement(By.xpath("//*[@id='email']")).sendKeys("vengat161193");  
        // Here we can give Xpath or particular identification like id/class/ whatever shown in webelement  
  
        driver.findElement(By.xpath("//*[@id='pass']")).sendKeys("9047360818");  
        driver.findElement(By.xpath("//*[@id='u_0_r']")).click();  
        Thread.sleep(3000);  
        driver.quit();  
    }  
}
```

Output:

Step 1:
Run the program



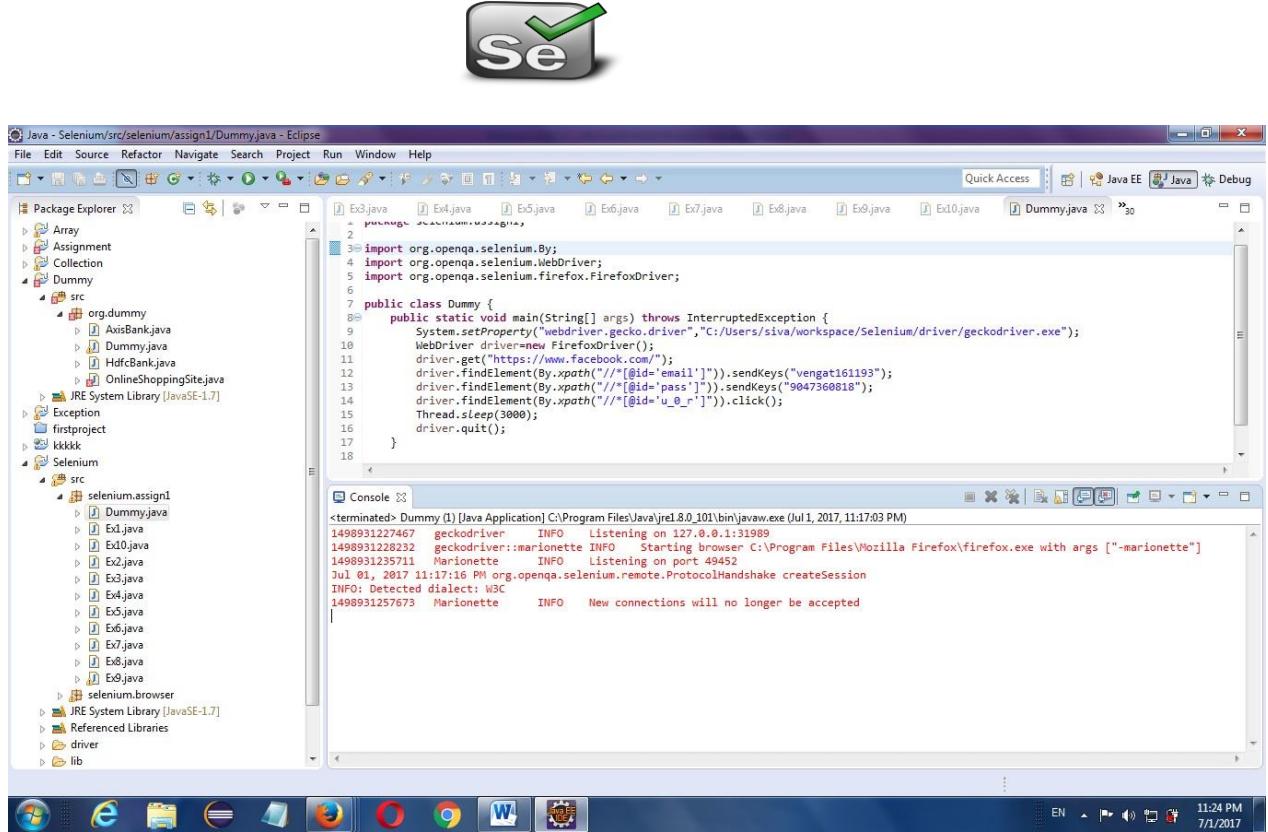
Step 2;

Automating the fb login page



Step 3:

Quit the browser because here we used quit() method



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

Browser Commands:

Some basic methods:

getTitle()

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

Example program:

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

        driver.findElement(By.xpath("//*[@id='pass']")).sendKeys("9047360818");
        String s = driver.getTitle();
```



```
System.out.println(s);
}
```

```
}
```

Output:

```
Java - Selenium/src/selenium/assign1/Dummy.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer Ex.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 ["-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:

- File Bar:** Java - Selenium/src/selenium/assign1/Ex4.java - Eclipse
- Toolbars:** Standard toolbar with icons for file operations, search, and project navigation.
- Quick Access:** A dropdown menu listing "Java EE", "Java", and "Debug".
- Left Sidebar (Package Explorer):**
 - Java Project: selenium.assign1 (selected)
 - Java Elements:
 - src
 - org.dummy (containing AxisBank.java, Dummy.java, HdfcBank.java, OnlineShoppingSite.java)
 - JRE System Library [JavaSE-1.7]
 - Exception
 - firstproject
 - kkkkk
 - Selenium
 - src
 - selenium.browser
 - JRE System Library [JavaSE-1.7]
 - Referenced Libraries
 - driver
 - lib
- Central Area (Code Editor):** The code for Ex4.java is displayed, demonstrating how to use Selenium WebDriver to interact with the Adactin website.
- Console View:** Shows the terminal output of the Java application execution.
- Bottom Status Bar:** Writable, Smart Insert, 16:13, EN, system icons, and a timestamp (11:48 PM, 7/1/2017).

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/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.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 "Selenium" with packages like "org.dummy" containing files such as "AxisBank.java", "Dummy.java", "HdfcBank.java", and "OnlineShoppingSite.java". It also lists JRE System Library [JavaSE-1.7] and Referenced Libraries.
- Code Editor:** Displays the Java code for "Ex5.java". The code sets up a WebDriver, navigates to a URL, finds elements by ID, and prints their attributes.
- Console:** Shows the terminal output of the Java application "Ex5". It includes log messages from geckodriver and Marionette, and command-line arguments for Java and Firefox.
- Bottom Bar:** Includes standard Windows-style icons for file operations and system status.

```

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);
    }
}

```

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/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. The left pane displays the Package Explorer with several Java files under the 'selenium.assign1' package. The right pane shows the code editor with the following Java code:

```
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");
    }
}
```

The 'Console' tab at the bottom shows the output of the program:

```
<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
1498963278380 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
1498963285861 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 top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help, Quick Access, Java EE, Java, and Debug. The left sidebar displays the Package Explorer with a tree structure of Java packages and files. The central workspace shows a Java code editor with the following code:

```
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");
    }
}
```

The right side of the interface shows the Console view, which displays the terminal output of the application's execution. The output shows the application starting up, connecting to a Firefox browser, and then printing the message "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:

- Project Explorer:** Shows files like Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Ex10.java.
- Code Editor:** Displays the Java code for the `Dummy` class.
- Console Output:** Shows the execution of the application. It includes log messages from the geckodriver and Marionette, indicating the browser was started and listening on port 51001. It also shows the detected dialect as W3C and the printed values "Female" and "Male".
- System Tray:** Shows standard Windows icons for network, power, and system status.



Eclipse Debugging steps:

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

Finding Xpath using different ways:

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

EXERCISE 1:

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

Program:

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



Output

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

Program:

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



Output

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

- Project Explorer:** Shows files like Ex2.java, Ex3.java, Ex4.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Ex10.java.
- Code Editor:** Displays the Java code for Ex4.java, which prints "u r in adactin website".
- Console:** Shows the terminal output of the Java application's execution, including logs for geckodriver and Marionette, and the printed message "u r in adactin website".
- Taskbar:** Shows standard Windows taskbar icons.
- System Tray:** Shows system status icons.

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. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help, Quick Access, Java EE, Java, and Debug. The left sidebar displays the Package Explorer with project structure and files like Ex2.java through Ex10.java. The central workspace shows the Java code for Ex5.java. The right side features a Console tab showing the execution output of the program, which includes logs from the geckodriver and Marionette, and the printed values 'vengat16' and 'Karthick'. The bottom status bar shows the date and time.

```
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);
    }
}
```

```
<terminated> Ex5 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:23:48 PM)
14090902038958  geckodriver::INFO Listening on 127.0.0.1:33175
14090902031756  geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
14090902039775  Marionette::INFO Listening on port 51439
Jul 02, 2017 1:24:00 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
vengat16
Karthick
```

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/g
eckodriver.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:

```
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");
        }
    }
}
```



Output

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

- File Bar:** File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help.
- Quick Access:** Java EE, Java, Debug.
- Package Explorer:** Shows a project structure with packages like Array, Assignment, Collection, Dummy, Exception, firstproject, kkkkk, Selenium, and src. Under src, there are files: Dummy.java, Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, Ex10.java, and String.
- Editor:** Displays the Java code for Ex6.java, which uses Selenium to check if a logo is displayed on a Facebook page.
- Console:** Shows the terminal output of the Java application. It includes logs from geckodriver, geckodriver::marionette, and Marionette, and a message indicating the logo is available.
- Bottom:** Shows the Windows taskbar with various icons and the system tray.

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

The screenshot shows the Adactin Hotel Reservation website. At the top, there's a banner with the Adactin logo and the tagline "Innovation in Testing". Below the banner, the main header says "Welcome to AdactIn Group of Hotels". There are several thumbnail images of hotel interiors and exteriors. On the right side, there's a "Existing User Login - Build 1" form with fields for "Username" and "Password", a "Forgot Password?" link, and a "Login" button. Below the login form, there's a link "New User Register Here". Underneath the login area, there's a section titled "Important Note:" with a bullet point about build 1 having known defects. At the bottom right of the window, there's a status bar showing the time as 1:37 PM and the date as 7/2/2017.

The screenshot shows the Eclipse IDE interface. The left sidebar is the "Package Explorer" showing a project structure with packages like "Array", "Assignment", "Collection", "Dummy", "Exception", "firstproject", "kkkkk", "Selenium", and a "src" folder containing files such as "Dummy.java", "Ex1.java", "Ex10.java", "Ex2.java", "Ex3.java", "Ex4.java", "Ex5.java", "Ex6.java", "Ex7.java", "Ex8.java", and "Ex9.java". The central workspace shows the code for "Ex2.java". The code is as follows:

```

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 }
30

```

Below the code editor is the "Console" view, which shows the output of the Java application. It includes log entries from the browser and the Selenium framework, indicating the browser was started and the session was created. The bottom of the screen shows the Windows taskbar with various icons and the system tray.

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 workspace shows the Java code for 'Ex7.java'. The bottom right corner displays the Eclipse status bar with the date and time.

```
import org.openqa.selenium.By;
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");
        }
    }
}
```

<terminated> Ex7 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 2, 2017, 1:39:26 PM)
1498962971773 geckodriver INFO Listening on 127.0.1:4036
1498962972803 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args [-marionette]
1498962986974 Marionette INFO Listening on port 5188
Jul 02, 2017 1:39:58 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
logo is available

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

Program:

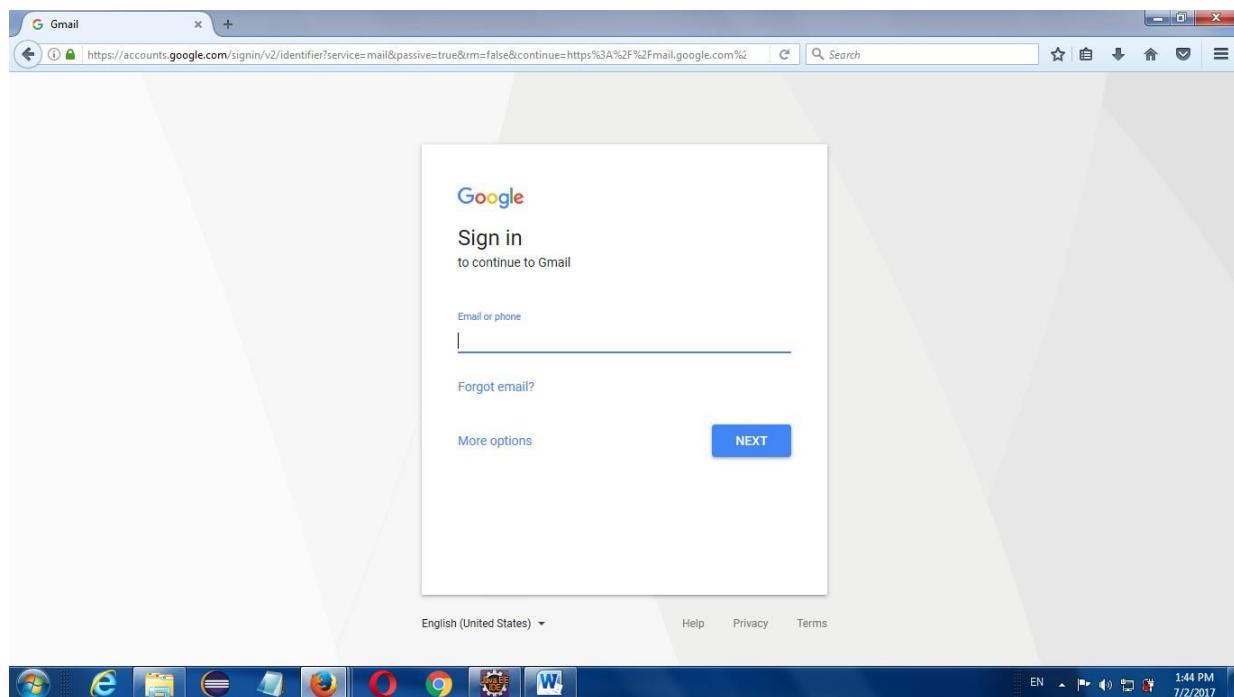
```
public class Ex8 {
    public static void main(String[] args) {
        System.setProperty("webdriver.gecko.driver",
                "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
        WebDriver driver = new FirefoxDriver();
        driver.get("https://www.google.co.in/");
      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

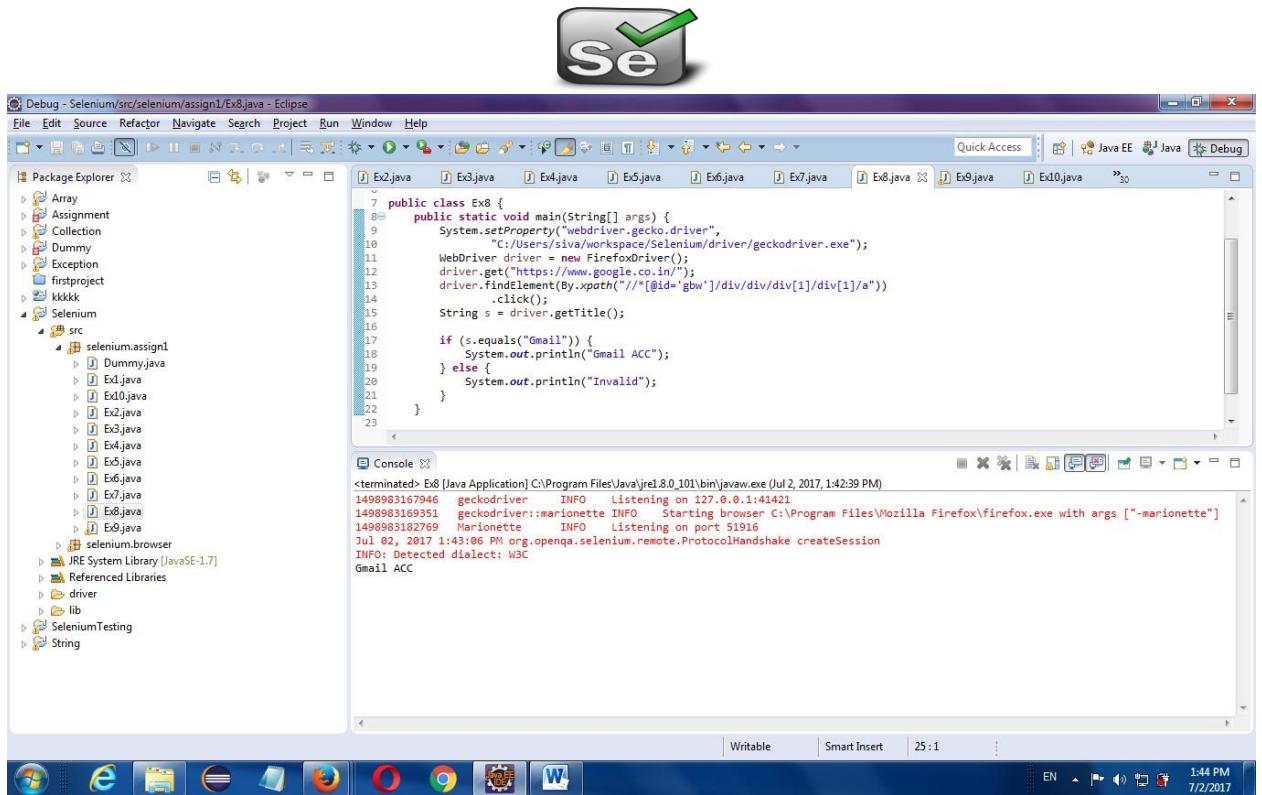


```
.click();
String s = driver.getTitle();

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

Output





Program 9: Gmail Account Login

Program:

```

public class Ex2 {
public static void main(String[] args) throws InterruptedException {
    System.setProperty("webdriver.gecko.driver",
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
    WebDriver driver = new FirefoxDriver();

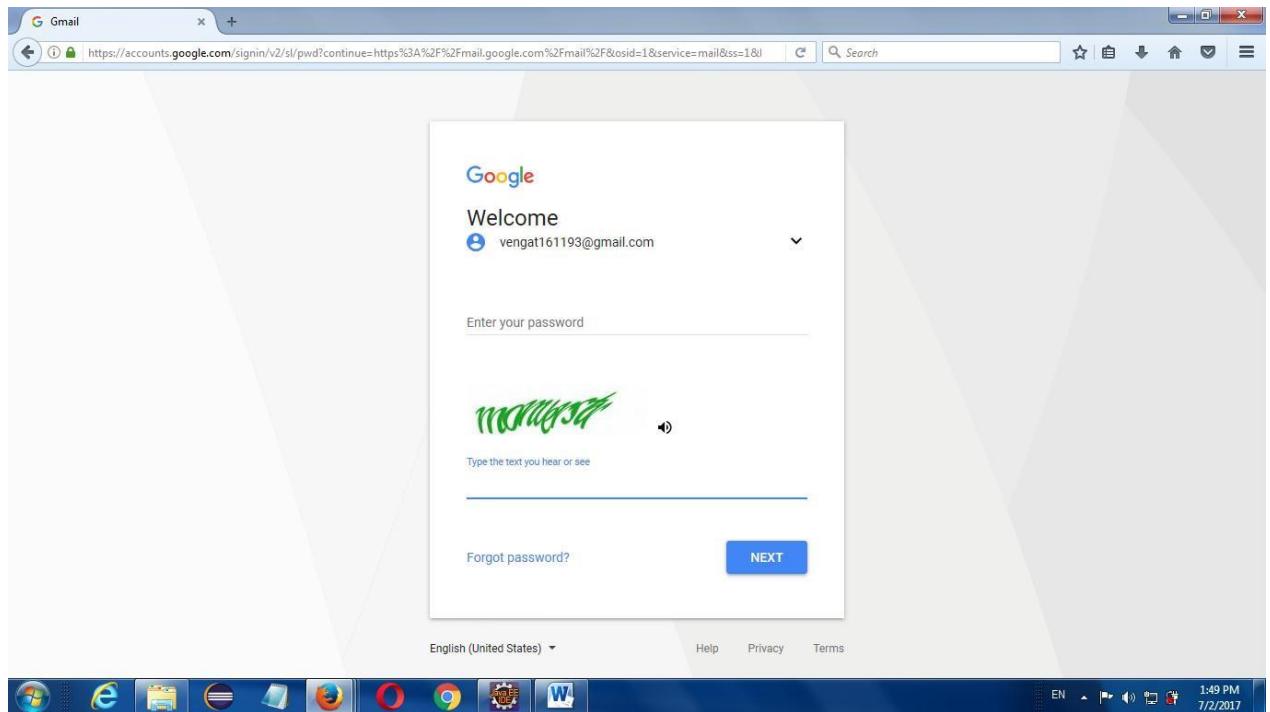
    driver.get("https://accounts.google.com/ServiceLogin/identifier?service=mail&passive=true&rm=false&continue=https%3A%2F%2Fmail.google.com%2Fmail%2F&ss=1&scc=1&ltmpl=default&ltmplcache=2&emr=1&osid=1&flowName=GlifWebSignIn&flowEntry=ServiceLogin");
    driver.findElement(By.xpath("//*[@id='identifierId']")).sendKeys(
        "vengat161193");
    driver.findElement(By.xpath("//*[@id='identifierNext']/content/span"))
        .click();
    Thread.sleep(3000);
    driver.findElement(
        By.xpath("//*[@id='password']/div[1]/div/div[1]/input"))
        .sendKeys("123456");
    driver.findElement(By.xpath("//*[@id='passwordNext']/content")).click();
}

}

```



Output



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

Program:

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



Output

Facebook | Can't Log In? https://www.facebook.com/login/identify?ctx=recover&lwv=110

facebook

Email or Phone Password Log In

Forgotten account?

Find Your Account

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

vengat16

Search Cancel

English (UK) તમિંદું એમાર કસ્ટો જુદી હિન્દી મળવાનું કેવા પેનાં વાગ ગુજરાતી +

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

https://www.facebook.com/recover/initiate?lwv=301

EN 2:09 PM 7/2/2017

Forgotten Password | Can't L https://www.facebook.com/recover/initiate?data=AWdkdqqqVuOsDoqUW0w0eKjxcfAiZgPHo770NfhZxh-oQTwf1OgQrqXGYm0aB7SSrJLX

facebook

Email or Phone Password Log In

Forgotten account?

Reset Your Password

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

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

Send code via SMS
+*****72

Vengat16

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) તમિંદું એમાર કસ્ટો જુદી હિન્દી મળવાનું કેવા પેનાં વાગ ગુજરાતી +

Sign Up Log In Mobile Find Friends Pages Help

EN 2:07 PM 7/2/2017

CHECK BOX:

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



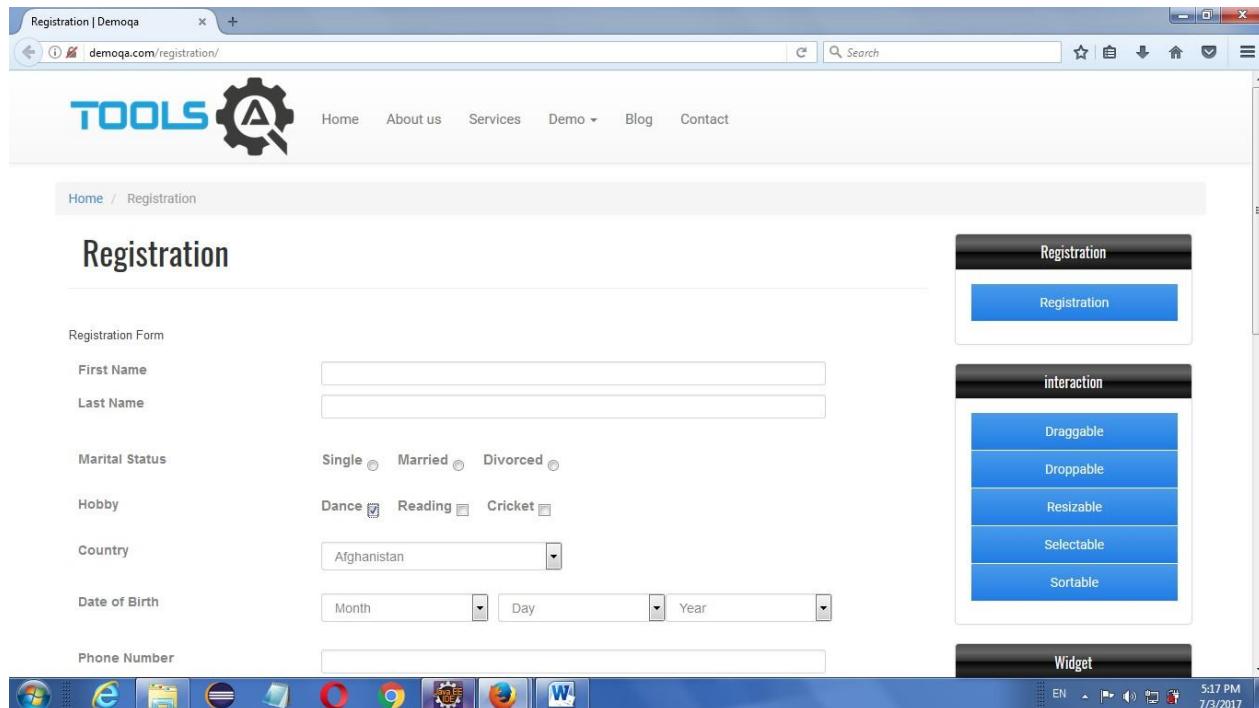
Select one value:

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/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){
if(x.getAttribute("value").equals("dance")||x.getAttribute("value").equals("cricket")){
    x.click();
}
}
}
```

Output:

Registration | Demoqa

demoqa.com/registration/

Home About us Services Demo Blog Contact

Home / Registration

Registration

Registration Form

First Name

Last Name

Marital Status

Single Married Divorced

Hobby

Dance Reading Cricket

Country

Afghanistan

Date of Birth

Month Day Year

Phone Number

Registration

interaction

Draggable

Droppable

Resizable

Selectable

Sortable

Widget

EN 5:41 PM 7/3/2017

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:

```

10 public class Dummy {
11     public static void main(String[] args) {
12         System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
13         WebDriver driver=new FirefoxDriver();
14         driver.get("http://demoqa.com/registration/");
15         List<WebElement> w = driver.findElements(By.xpath("//input[@type='checkbox']"));
16         for(int i=0;i<w.size();i++){
17             if(w.get(i).getAttribute("value").equals("dance")||w.get(i).getAttribute("value").equals("cricket")){
18                 w.get(i).click();
19             }
20             if(w.get(i).isSelected()){
21                 System.out.println(w.get(i).getAttribute("value"));
22             }
23         }
24     }
25 }
26

```

<terminated> Dummy [2] [Java Application] C:\Program Files\Java\jre8.0.101\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:

The screenshot shows a web browser window titled "Registration | Demoqa" with the URL "demoqa.com/registration/". The page displays a "Registration Form" with fields for First Name, Last Name, Marital Status (radio buttons for Single, Married, Divorced), Hobby (checkboxes for Dance, Reading, Cricket), Country (dropdown menu set to Afghanistan), Date of Birth (dropdown menus for Month, Day, Year), and Phone Number. To the right, a sidebar titled "Registration" contains a single button. Below it, a section titled "interaction" lists "Draggable", "Droppable", "Resizable", "Selectable", and "Sortable". At the bottom, a "Widget" section is shown with various icons. The status bar at the bottom of the browser window indicates "EN", "559 PM", and the date "7/3/2017".

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:** Displays a Java project structure with packages like Collection, Dummy, Exception, firstproject, kkkkk, and Selenium, containing files such as Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, Ex10.java, and Dummy.java.
- Code Editor:** Shows the Java code for the `Dummy` class. The code uses Selenium WebDriver to open a dropdown menu and print the available options.
- Console Output:** Displays the terminal output of the Java application. It includes log messages from the geckodriver and Marionette, and the printed text "black", "cream", "sugar", "regular", and "crisp".
- Taskbar:** Shows various application icons including Windows, Internet Explorer, Firefox, and others.

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 files Ex1.java, Ex2.java, Ex3.java, Ex4.java, Ex5.java, Ex6.java, Ex7.java, Ex8.java, Ex9.java, and Ex10.java.
- Code Editor:** Displays Java code for a class named Dummy. The code uses Selenium WebDriver to interact with a dropdown menu on a specific URL. It prints the text of each option in the dropdown.
- Console Output:** Shows the execution results:


```
<terminated> Dummy [2] [Java Application] C:\Program Files\Java\jre8.0_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, Internet Explorer, File Explorer, Task View, Taskbar settings, Google Chrome, Mozilla Firefox, and Word.
- System Tray:** Shows the date and time as 6:21 PM on 7/3/2017.

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 Microsoft Internet Explorer window displaying a dropdown menu example from ironspider.ca. The left sidebar contains navigation 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' sections. The main content area shows a job listing for 'Software Programmer' with 'Jobs - Loc: Chennai, Exp: 4-10 Yrs'. Below it, there's a snippet of HTML code explaining dropdown menus and a 'With cream & sugar ▾' dropdown menu. At the bottom, there's a 'SOURCE CODE' button and a status bar showing 'EN', '6:35 PM', and '7/3/2017'.



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:

```
Debug - Selenium/src/selenium/assign2/Dummy.java - Eclipse
File Edit Source Refactor Navigate Project Run Window Help
Package Explorer Ex1.java Ex2.java Ex3.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java Dummy.java
5 import org.openqa.selenium.By;
6 import org.openqa.selenium.WebDriver;
7 import org.openqa.selenium.WebElement;
8 import org.openqa.selenium.firefox.FirefoxDriver;
9 import org.openqa.selenium.support.ui.Select;
10
11 public class Dummy {
12     public static void main(String[] args) {
13         System.setProperty("webdriver.gecko.driver",
14             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
15         WebDriver driver = new FirefoxDriver();
16         driver.get("http://ironspider.ca/forms/dropdowns.htm");
17         WebElement w = driver.findElement(By.name("coffee"));
18         Select s=new Select(w);
19         List<WebElement> web = s.getAllSelectedOptions();
20         for(WebElement x:web){
21             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 127.0.0.1:5539
1499087807963 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499087815162 Marionette INFO Listening on port 52382
Jul 03, 2017 6:46:56 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
With cream
```

2. MULTIPLE VALUE

isMultiple():

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

Example program:

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



Output:

```
Debug - Selenium/src/selenium/assign2/Dummy.java - Eclipse
File Edit Source Refactor Navigate Project Run Window Help
Package Explorer Ex1.java Ex2.java Ex3.java Ex4.java Ex5.java Ex6.java Ex7.java Ex8.java Ex9.java Ex10.java Dummy.java
import org.openqa.selenium.*;
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("coffee2"));
        Select s=new Select(w);
        boolean b = s.isMultiple();
        System.out.println(b);
    }
}

<terminated> Dummy [2] Java Application C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 3, 2017, 6:55:10 PM)
1499088318182 geckodriver INFO Listening on 127.0.0.1:23289
1499088319153 geckodriver::marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499088329159 Marionette INFO Listening on port 52573
Jul 03, 2017 6:55:30 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
true
```

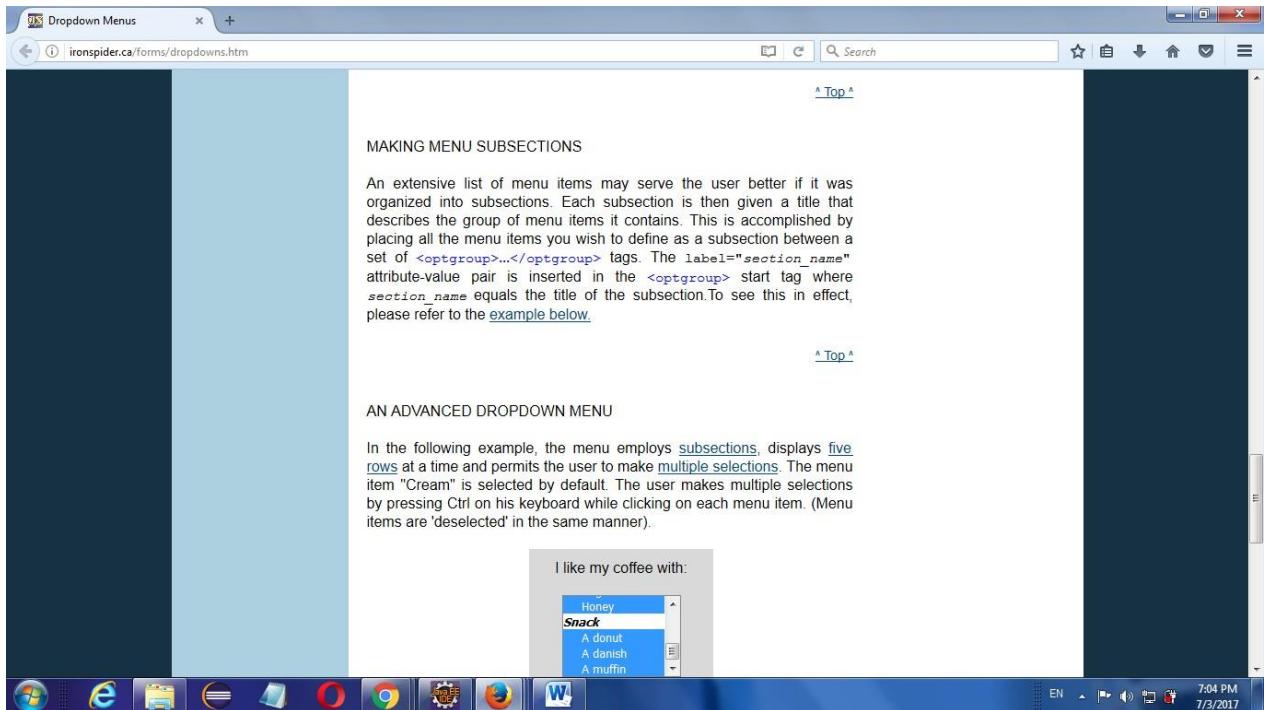
SelectByIndex:

Example program:

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



Output:



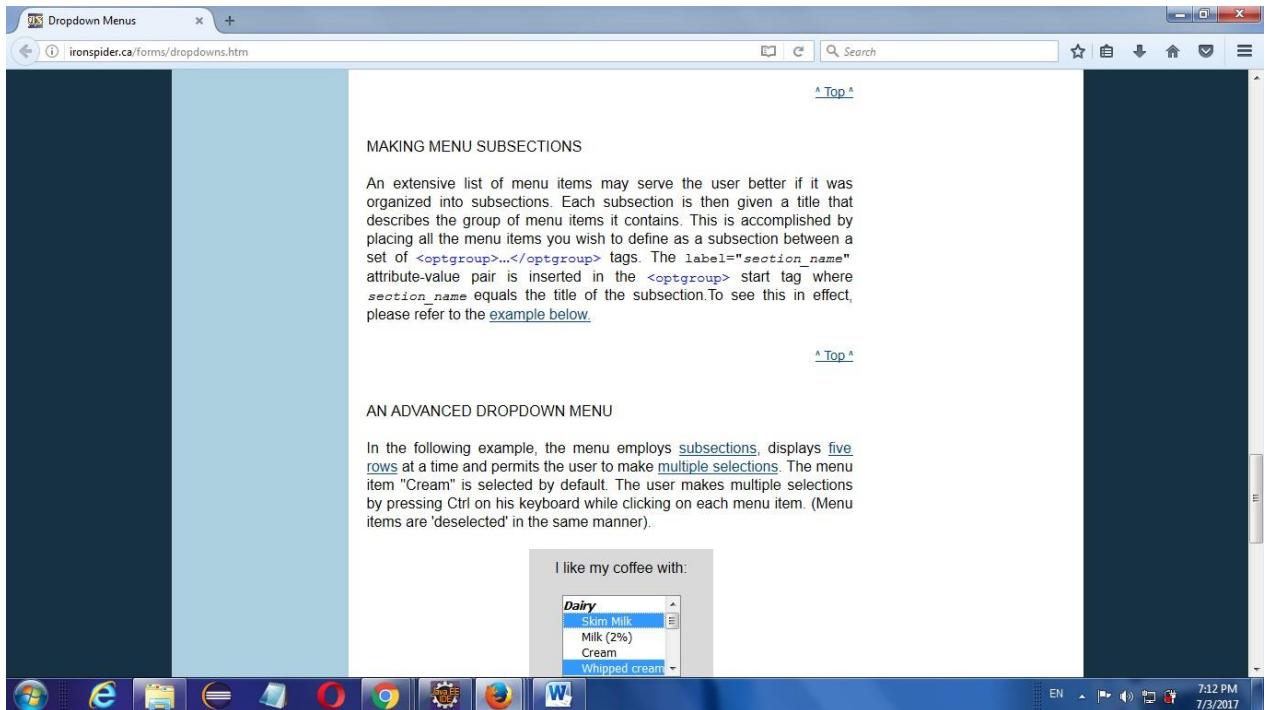
2.selectByValue

Example Program:

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



Output:



EXERCISE 2:

Program 1: Gmail registration

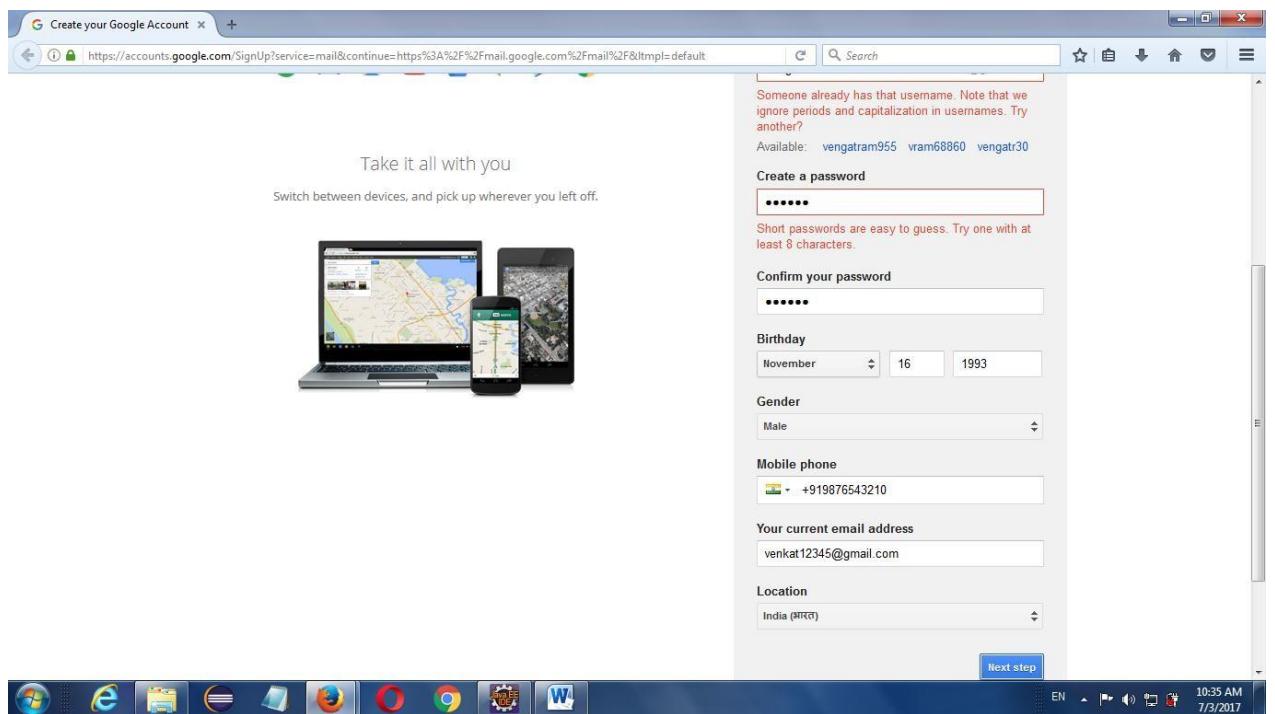
Program:

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



```
driver.findElement(By.xpath("//div[contains(text(),'November')]")).click();
driver.findElement(By.xpath("//input[@id='BirthDay']")).sendKeys("16");
driver.findElement(By.xpath("//input[@id='BirthYear']")).sendKeys("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_1']")).sendKeys(
    "9876543210");
driver.findElement(By.xpath("//input[@name='reg_passwd_1']")).sendKeys(
    "123456");
WebElement w1 = driver.findElement(By.xpath("//*[@id='day']"));
Select s1 = new Select(w1);
s1.selectByValue("16");
WebElement w2 = driver.findElement(By.xpath("//*[@id='month']"));
Select s2 = new Select(w2);
s2.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:

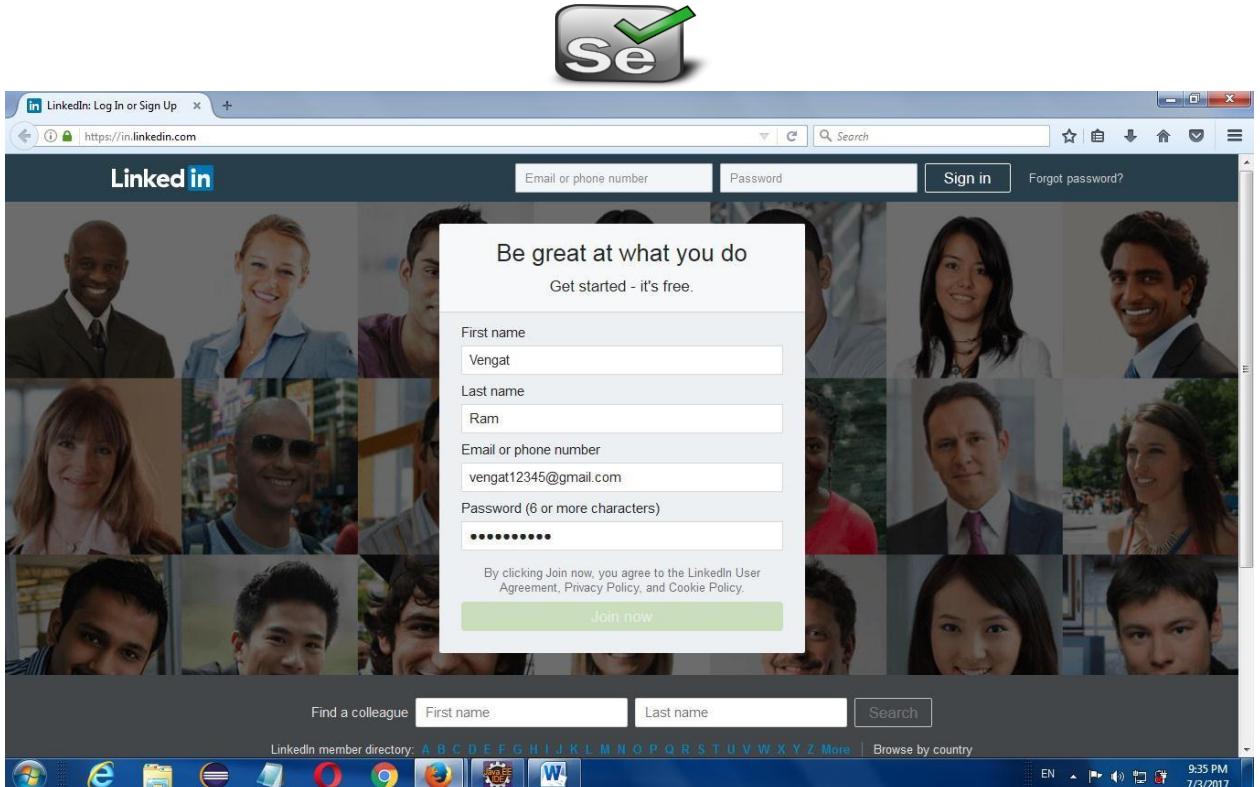
The screenshot shows a Firefox browser window with the Yahoo! sign-up page loaded. The URL in the address bar is <https://login.yahoo.com/account/create?specId=yidReg&altreg=0&intl=in&.done=http://in.mail.yahoo.com>. The form has 'Vengat' in the first name field and 'Ram' in the last name field. The email field contains 'vengat12344444@yahoo.com' and shows suggestions: 'vengatr', 'vengat.ram', 'ram.vengat', 'r.vengat', and 'vengatram973'. The gender is set to 'Male'. A blue 'Continue' button is at the bottom. Below the form, there's a link 'Already have an account? [Sign in](#)'.

Program 4: Linkedin login

Program:

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

Output:



Program 5: Twitter registration

Program:

```

public class Ex4 {
public static void main(String[] args) throws InterruptedException {

    System.setProperty("webdriver.gecko.driver","C:/Users/siva/workspace/Selenium/driver/g
                      eckodriver.exe");
    WebDriver driver=new FirefoxDriver();
    driver.get("https://twitter.com/signup?lang=en");
    driver.findElement(By.xpath("//*[ @id='full-name']")).sendKeys("vengat");

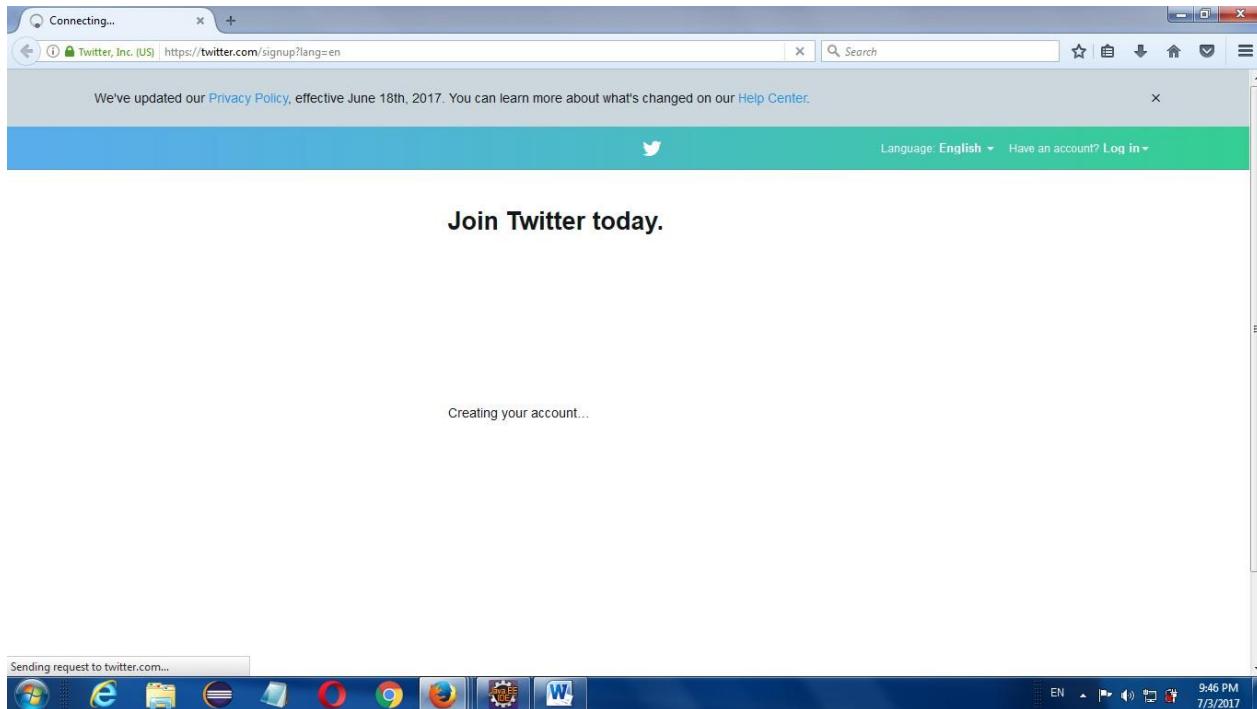
    driver.findElement(By.xpath("//*[ @id='email']")).sendKeys("venkat1234500@gmail.com"
                                                               );
    Thread.sleep(3000);

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

```



Output:

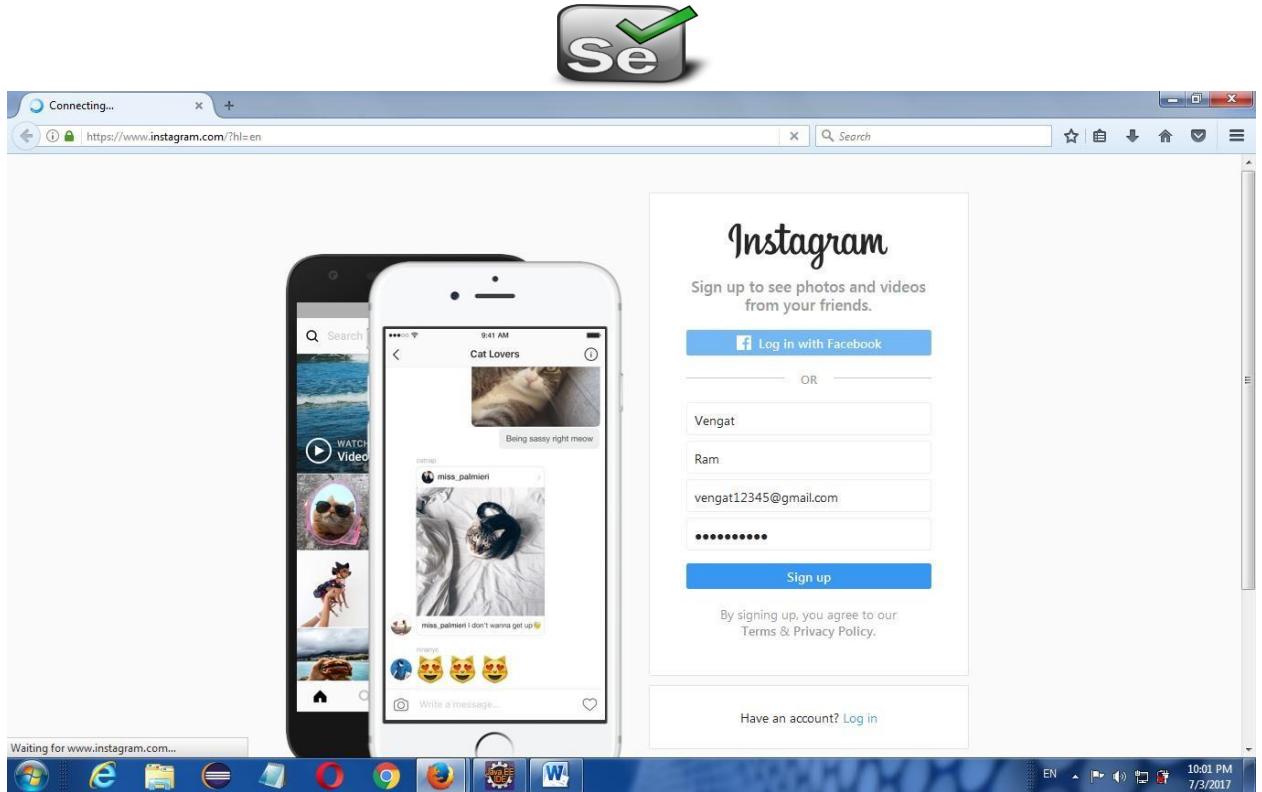


Program 6: Instagram registration

Program:

```
public class Ex7 {  
    public static void main(String[] args) {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.instagram.com/?hl=en");  
        driver.findElement(By.xpath("//input[@name='emailOrPhone']")).sendKeys(  
                           "Vengat");  
        driver.findElement(By.xpath("//input[@name='fullName']")).sendKeys(  
                           "Ram");  
        driver.findElement(By.xpath("//input[@name='username']")).sendKeys(  
                           "vengat12345@gmail.com");  
        driver.findElement(By.xpath("//input[@name='password']")).sendKeys(  
                           "9876543210");  
        driver.findElement(By.xpath("//*[@id='react-root']/section/main/article/div[2]/div[1]/div/form/div[6]/span/button")).click();  
    }  
}
```

Output:



Program 7: Skype registration

Program:

```

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

    driver.get("https://signup.live.com/signup?lcid=1033&wa=wsignin1.0&rpsnv=13&ct=1499
100057&rver=6.7.6626.0&wp=MBI_SSL&wreply=https%3a%2f%2flw.skype.com%2flogin%2fo
auth%2fproxy%3fform%3dmicrosoft_registration%26site_name%3dlw.skype.com%26fl%3dphon
e2&lc=1033&id=293290&mkt=en-
IN&uaid=41725f7d178ae3acfc20174e1190cd1b&psi=skype&lw=1&cobrandid=90010&client_fli
ght=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:

A screenshot of a Microsoft account sign-up page for Skype. The URL in the address bar is https://signup.live.com/signup?cid=1033&wa=wsignin1.0&rpsnv=13&ct=1499100057&rver=6.7.6626.0&wp=MBL_SSL&wreply=https://lk.skype.com/login/auth/proxy/?form=microsoft_registration&site_name=lk.skype.com&fl=phone2&c=1033&id=1033. The page title is "Microsoft account". The main content area has a blue header with the text "Enter code". Below it, a message says "We just sent a code to 9876543221". There is a text input field with the placeholder "Enter code" containing the number 9876543221. At the bottom are two buttons: "Back" and "Next". A note at the bottom states "Skype cannot be used for emergency calling." with a small icon of a phone.



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 Windows desktop environment. A browser window titled "Dropdown Menus" is open, displaying a page from "ironspider.ca/forms/dropdowns.htm". The page contains two sections: "MAKING MENU SUBSECTIONS" and "AN ADVANCED DROPDOWN MENU". The "AN ADVANCED DROPDOWN MENU" section shows a dropdown menu with the following options:
I like my coffee with:
Honey
Snack
A donut
A danish
A muffin



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 Firefox browser window with the URL ironspider.ca/forms/dropdowns.htm. The page content discusses menu subsections and features an advanced dropdown menu. A dropdown menu is open in the bottom right corner, titled 'I like my coffee with:'. It contains the following options:

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



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 :

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](#).

AN ADVANCED DROPDOWN 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:

- Cream
- Whipped cream
- Sweetener**
- Sugar
- Honey



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 the project structure with files like Sample1, pom.xml, Dummy.java, and Ex.java.
- Editor:** Displays the Java code for the `Dummy` class, which uses Selenium WebDriver to interact with a web table.
- Console:** Shows the terminal output of the Java application running. It includes log messages from Marionette and org.openqa.selenium.remote.ProtocolHandshake, indicating the session creation and dialect detection.
- Bottom Bar:** Shows various icons for file operations, including a Windows taskbar-like view with icons for Start, Task View, File Explorer, Task Manager, and others.



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:

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 the output of the Java application. The output consists of three distinct sections of data, each preceded by the word "details".

```
<terminated> Dummy (3) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 5, 2017, 5:09:26 PM)  
Taipei  
599m  
2004  
3  
details  
China  
Shanghai  
492m  
2008  
4  
details  
4 buildings  
UAE  
Dubai  
829m  
2010  
1  
details  
Saudi Arabia  
Mecca  
601m  
2012  
2  
details  
Taiwan  
Taipei  
599m  
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:

```
Debug - Sample1/src/main/java/org/vengat/Dummy.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
File Edit Source Refactor Navigate Search Project Run Window Help Quick Access Java EE Java Debug
Console [x]
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
1499256636606 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
```

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 Selenium project structure and code execution output.

Project Structure:

- Sample1/pom.xml
- Dummy.java
- Ex1.java
- Dummy.java

```
1 package selenium.assign3;
2
3 import org.openqa.selenium.JavascriptExecutor;
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) {
9         System.setProperty("webdriver.gecko.driver",
10                             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
11         WebDriver driver = new FirefoxDriver();
12         driver.get("https://www.facebook.com/");
13         JavascriptExecutor js=(JavascriptExecutor) driver;
14         js.executeScript("document.getElementById('email').setAttribute('value','Hello')");
15         Object s = js.executeScript("return document.getElementById('email').getAttribute('value')");
16         System.out.println(s);
17         js.executeScript("return document.getElementById('u_0_r').click()");
18     }
19 }
```

Console Output:

```
<terminated> Dummy (4) [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 10, 2017, 2:01:00 PM)
1499675471416 Marionette      INFO  Listening on port 49849
Jul 10, 2017 2:01:11 PM org.openqa.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Hello
```

Facebook Login Page Screenshot:

The screenshot shows the Facebook login page with an error message: "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&lww=110.



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:

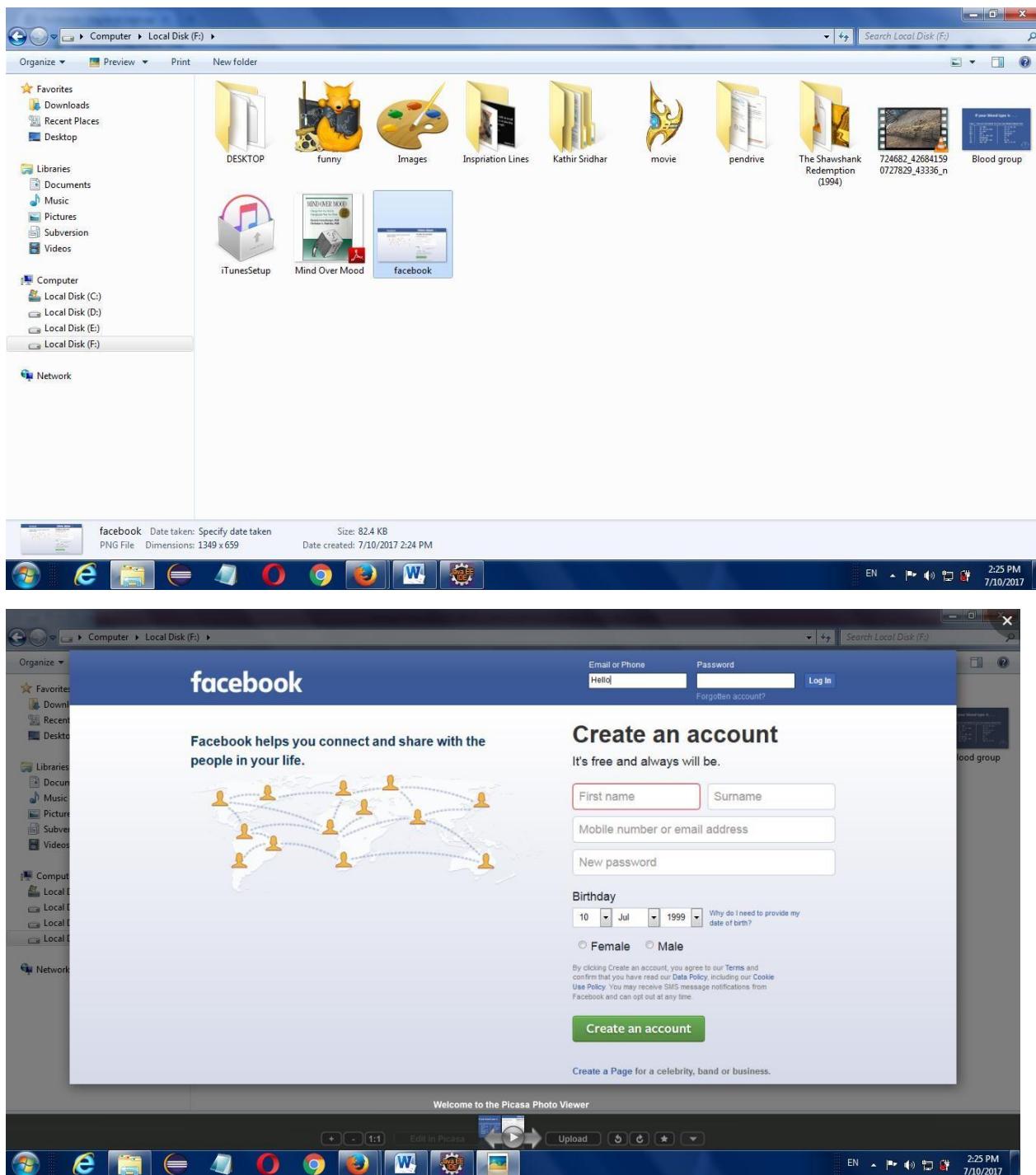
TakesScreenshot → interface

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 web browser window titled 'iPhones | ONLINE STORE'. The address bar contains the URL 'store.demoqa.com/products-page/product-category/iphones/'. The main content area displays a product listing for 'Magic Mouse'. The product image is a white mouse. Below the image, the product name 'Magic Mouse' is displayed. A brief description follows: '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 information is listed as follows: IN: \$12,000.00, \$200.00, \$150.00. A note indicates a savings of '\$50.00!' An 'Add To Cart' button is visible at the bottom of the product card. At the top of the page, there's a navigation menu with links for Home, Product Category, #0 (no title), All Product, and a search bar labeled 'Search Products'. On the right side, there's a 'My Account' section with links for Register and Log in. The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.



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)

Sort By: Popularity | Price – Low to High | Price – High to Low | Newest First

HIGH-QUALITY
Ultra-clear soft flexible case

Product	Rating	Price	Offer	Color
Flipkart SmartBuy Back Cover for Motorola Moto G5 Plus	4.5 ★ (67) Assured	₹424 ₹499 15% off	Offers No Cost EMI	Metallic Black, Shock Proof
Flipkart SmartBuy Back Cover for Mi Redmi Note 4	4.4 ★ (767) Assured	₹424 ₹499 15% off	Offers No Cost EMI	Metallic Black, Shock Proof
Noise Back Cover for Mi Redmi Note 4	3.4 ★ (767) Assured	₹249 ₹999 75% off	Offers No Cost EMI	Transparent
Flipkart SmartBuy Back Cover for Mi Redmi Note 4	3.8 ★ (14) Assured	₹269 ₹999 32% off		Black

```

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_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 fil=new File("F:/flipkart mobile case.png");
        FileUtils.copyFile(f,fil );
    }
}

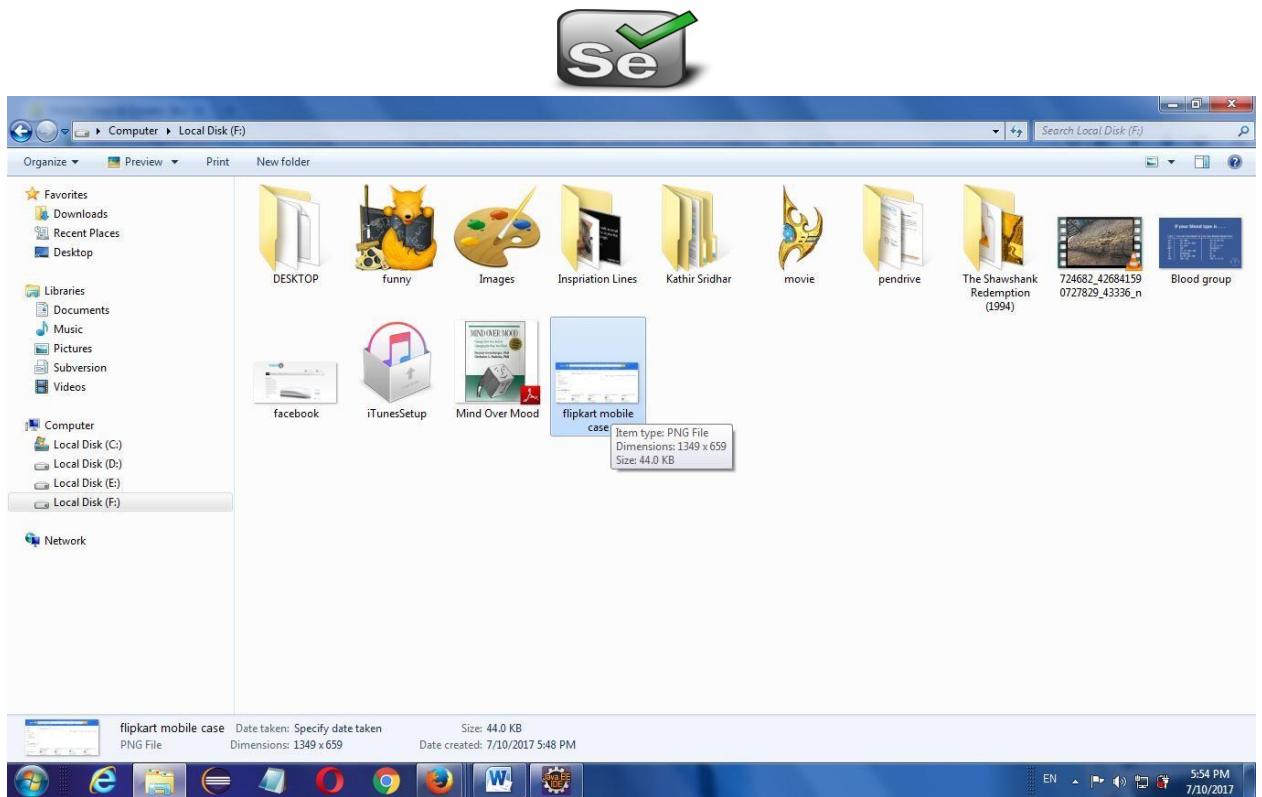
```

Console

```

terminated> Ex2 (2) [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

```



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flipkart mobile case.png (1349 x 659)

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. The main content area 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	

The sidebar on the right contains the following sections:

- Sample TestCases**: A link to download sample test cases.
- HotelApp Web Services**: Information about the web services available.
- Known Defects**: A link to download a list of known defects.
- Book on Selenium Webdriver**: A thumbnail image of a book titled "Test Automation using Selenium WebDriver with Java" by Neeraj Garg.



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=GlfWebSignIn&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://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=GlfWebSignIn&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);  
  
    } }  
}
```



```
"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 Firefox browser window with the title bar "dhtmlxTree Samples". The address bar contains the URL "https://dhtmlx.com/docs/products/dhtmlxTree/samples/index.html". The page content includes a navigation menu with links for Products, License, Services, Support, Company, and Download. A sidebar on the left lists various components under "All components >> dhtmlxTree", including Appearance, Checkboxes, Context menu, Dataprocessor (sending data back to server), Drag-n-drop, Error handlers, Events, and Getting tree data. The main content area features the heading "dhtmlxTree" and some descriptive text about the component.



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 URL in the address bar is "https://dhtmlx.com/docs/products/dhtmlxTree/". The page contains a navigation menu with links for Products, License, Services, Support, Company, and Download. Below the menu, there are two panels displaying a hierarchical tree structure of book categories. The left panel shows collapsed categories like Thrillers, Bestsellers, History, Horror, Fiction & Fantasy, Teens, Magazines, and Sport. The right panel shows the same categories with some expanded, such as Bestsellers, History, Horror, Fiction & Fantasy, Teens, and Magazines, revealing sub-categories like Robert Crais, Ian Rankin, James Johns, Nancy Atherton, and Sport. At the bottom of the page is a button labeled "View more demos". The browser's taskbar at the bottom shows various pinned icons, and the system tray indicates the date and time 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 shows a web browser window displaying a JavaScript Tree Menu - Ajax demo. The page has a blue header with the DHX logo and navigation links for Products, License, Services, Support, Company, and Download. Below the header are two tree view components. The left tree has nodes for Thrillers, Bestsellers, Horror, Fiction & Fantasy, Teens, History, and Magazines. The right tree has nodes for Books, Thrillers, Bestsellers, History, Horror, Fiction & Fantasy, Teens, and Magazines. Both trees have sub-nodes such as authors or genres. A 'View more demos' button is located at the bottom of the tree area. The browser's taskbar at the bottom shows various pinned icons.



EXERCISE:

1. Gmail registration using scroll down:

Program:

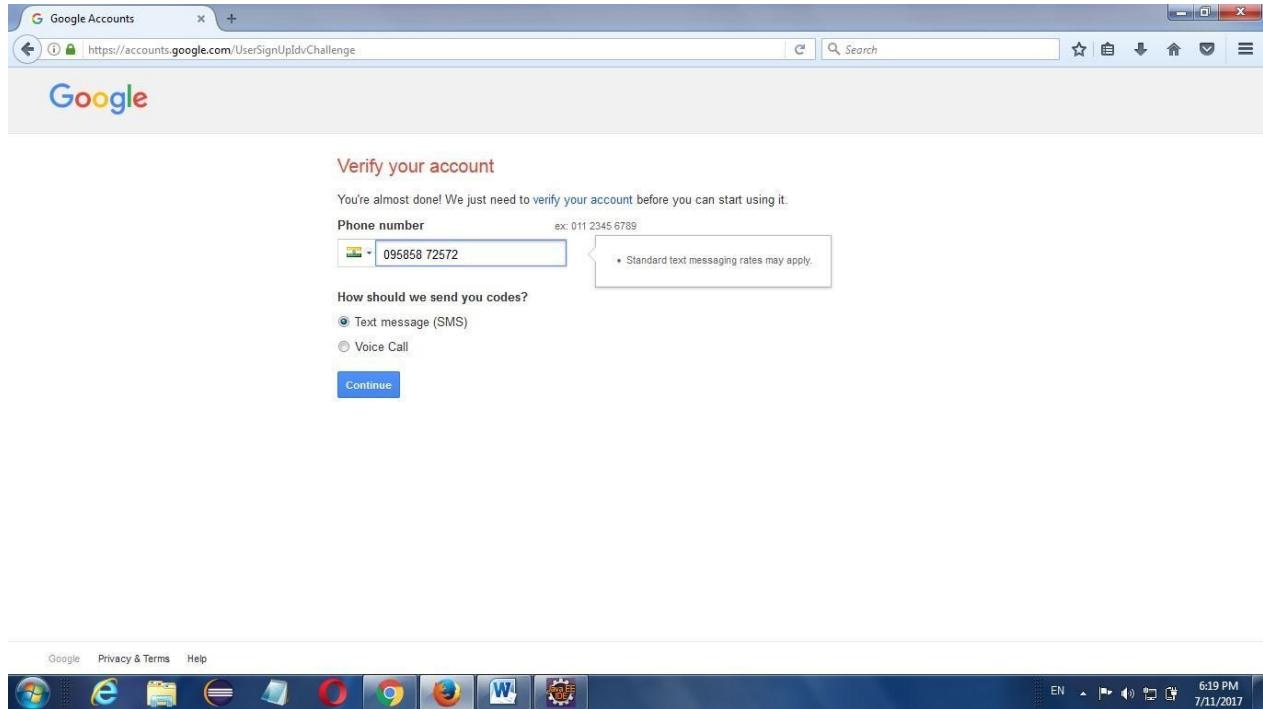
```
public class Ex2 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
        "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver=new FirefoxDriver();  
  
        driver.get("https://accounts.google.com/SignUp?service=mail&continue=https%3A%2F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



```
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:

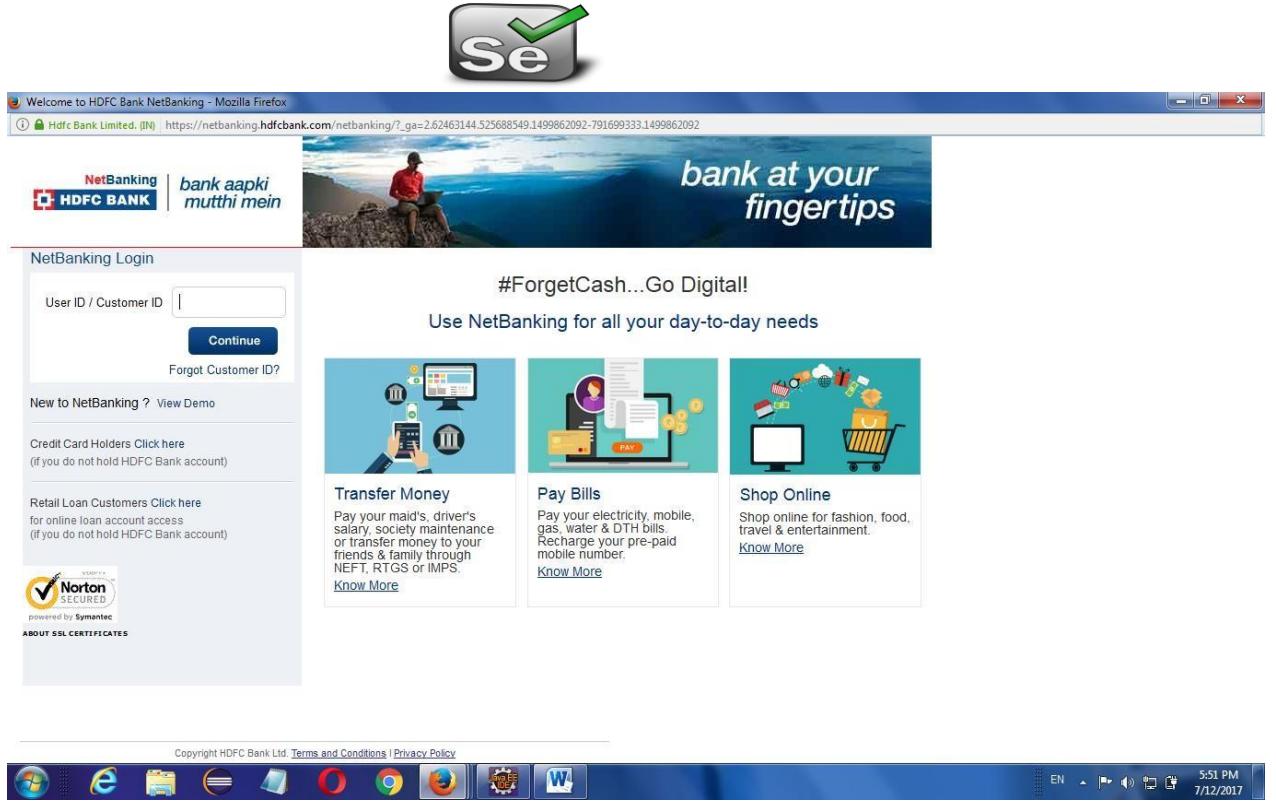
The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer (left):** Shows the project structure with files like Ex3.java, dummy.java, Ex1.java, dummy1.java, dummy3.java, Ex2.java, Ex4.java, Dummy.java, and DummyTest.java.
- Code Editor (center):** Displays the Java code for interacting with multiple windows using WebDriver. The code includes logic to switch between parent and child windows and handle multiple browser windows.
- Console (bottom):** Shows the terminal output of the application, indicating the creation of a remote session and the detection of W3C dialect.

```
1.3 WebDriver driver=new FirefoxDriver();
1.4 driver.get("https://www.hdfcbank.com/");
1.5 driver.findElement(By.xpath("//[@id='cee_closeBtn']/img")).click();
1.6 String parentwindowId = driver.getWindowHandle();
1.7 System.out.println("Parent Window ID:"+parentwindowId);
1.8 driver.findElement(By.id("loginsubmit")).click();
1.9 Set<String> allWindowId = driver.getWindowHandles();
2.0 Iterator<String> a = allWindowId.iterator();
2.1 while(a.hasNext()){
2.2     String s = a.next();
2.3     System.out.println("All Windows ID:"+s);
2.4     if(!parentwindowId.endsWith(s)){
2.5         System.out.println("Child Window ID:"+s);
2.6         driver.switchTo().window(s);
2.7         Thread.sleep(3000);
2.8         driver.findElement(By.xpath("html/body/div[4]/div[2]/div[1]/a")).click();
2.9     }
2.10 }
2.11
2.12
2.13
2.14 Thread.sleep(3000);
2.15 // driver.quit();
2.16
2.17
2.18
2.19
2.20
2.21
2.22
2.23
2.24
2.25
2.26
2.27
2.28
2.29
2.30
2.31
2.32
2.33
2.34
2.35
2.36
2.37
```

Console Output:

```
<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. The left pane displays the Package Explorer with a project structure under 'selenium.assign5'. The right pane shows a code editor with Java code for a 'Dummy2' class. The code uses Selenium to navigate to a URL, find an element, click it, switch to the alert, accept it, and print its text. Below the code editor is a 'Console' window showing log output from a Java application named 'Dummy2'. The log includes startup messages for Marionette and Firefox, and a prompt for a valid user name.

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

Console output:

```
<terminated> Dummy2 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 6:26:19 PM)
1499864180914 [terminated] Dummy2 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 6:26:19 PM)
1499864180941 geckodriver...marionette INFO Starting browser C:\Program Files\Firefox\firefox.exe with args [-marionette"]
1499864180945 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 displaying the Rediffmail login page. The URL is https://mail.rediff.com/cgi-bin/login.cgi. The page features a header with the rediff logo and shopping links. On the right, there's a 'rediffmail' login form with fields for 'Username' (venkat123), 'Password', and 'Keep me signed in'. Below the form is a link to create a new account. On the left, there are promotional banners for various products like blankets, dispensers, and medical supplies. At the bottom, there's a footer with copyright information and links to disclaimer and privacy policy.

rediff.com

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rediffmail

Username: venkat123

Password: [Forgot Password?](#)

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2. Confirm:

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

Example program:

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

Output:

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

- Project Explorer:** Shows the project structure with packages like selenium.assign1, selenium.assign2, selenium.assign3, selenium.assign4, and selenium.assign5.
- Editor:** Displays the Java code for `Dummy3.java`. The code imports Selenium WebDriver and handles a confirmation alert by clicking OK and then quitting the driver.
- Console:** Shows the terminal output of the application's execution. It includes log messages from the geckodriver and Marionette, indicating the browser was started and listening on port 53221. It also shows the confirmation dialog message "Confirm pop up with OK and Cancel button".
- Bottom Bar:** Shows the Windows taskbar with various application icons and the system clock indicating 6:46 PM on 7/12/2017.



3. Prompt:

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

Example program:

```

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

```



Output:

Eclipse - Java - Selenium/src/selenium/assign5/Dummy4.java - Eclipse

```

File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer dummy1.java dummy2.java Ex2.java Ex.java Dummy.java Dummy2.java Dummy3.java *Dummy4.java
src
Array Assignment Collection Dummy Exception ExtRept firstproject kkkkk Mav Sample Sample1 Selenium
selenium.assign1 selenium.assign2 selenium.assign3 selenium.assign4 selenium.assign5
Dummy.java Dummy2.java Dummy3.java Dummy4.java Ex1.java selenium.browser JRE System Library [JavaSE-1.7]
Referenced Libraries driver lib SeleniumTesting String

```

```

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

```

<terminated> Dummy4 [Java Application] C:\Program Files\Java\jre1.8.0_101\bin\javaw.exe (Jul 12, 2017, 7:01:41 PM)
14998663304043 geckodriver INFO Listening on 127.0.0.1:11563
14998663304897 geckodriver:marionette INFO Starting browser C:\Program Files\Mozilla Firefox\firefox.exe with args ["-marionette"]
1499866311683 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?

```

Writable Smart Insert 20:5 EN 7:02 PM 7/12/2017

TOOLSQLA | Free QA Automation

toolsqa.com/handling-alerts-using-selenium-webdriver/

Simple Alert Pop up

Simple Alert

HTML code for such types of pop is

```

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

```

Confirm Alert box

Confirm Pop up

HTML code for Confirm alerts is

```

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

```

Prompt Alert box

Prompt Pop up

HTML code for prompt alerts is

```

1 var person = prompt("Do you like toolsqa?", "Yes/No");

```

Share this page f t g+ p in

7:04 PM 7/12/2017



EXERCISE:

1.naukri.com registration:

```
public class Ex1 {  
    public static void main(String[] args) throws InterruptedException {  
        System.setProperty("webdriver.gecko.driver",  
                           "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");  
        WebDriver driver = new FirefoxDriver();  
        driver.get("https://www.naukri.com/");  
        driver.findElement(By.xpath("//input[@value='Register with us']"))  
                           .click();  
        driver.findElement(By.xpath("//button[text()='I am a Professional']"))  
                           .click();  
        Thread.sleep(3000);  
        driver.findElement(By.id("fname")).sendKeys("venkatram");  
        driver.findElement(By.id("email")).sendKeys("venkat10062060@gmail.com");  
        driver.findElement(By.xpath("//input[@name='password']")).sendKeys(  
                           "venkat123450");  
        Thread.sleep(2000);  
        driver.findElement(By.xpath("//input[@name='number']")).sendKeys(  
                           "9444859025");  
        Thread.sleep(2000);  
        driver.findElement(By.xpath("//input[@name='expYear']")).click();  
        Thread.sleep(2000);  
        driver.findElement(By.xpath("//*[text()='3']")).click();  
        driver.findElement(By.xpath("//input[@name='expMonth']"))  
                           .sendKeys("6");  
        driver.findElement(By.xpath("//button[text()='Register Now']"))  
                           .click();  
        Thread.sleep(4000);  
        driver.findElement(By.xpath("//*[@id='designation_0']")).sendKeys(  
                           "Automation Tester");  
        driver.findElement(By.id("company_0")).sendKeys("kekron macron");  
        driver.findElement(By.xpath("//input[@name='salaryLac_0']")).click();  
        driver.findElement(  
  
By.xpath("//*[@id='employmentDetailForm']/div[1]/div[1]/resman-  
salary/div/div[1]/div/div[2]/div[2]/ul/li[5]/div/div/span"))  
                           .click();  
        driver.findElement(By.xpath("//input[@name='salaryThou_0']")).click();  
        driver.findElement(By.xpath("//*[text()='20']")).click();  
        driver.findElement(By.xpath("//input[@name='startYear_0']")).click();  
        driver.findElement(  
  
By.xpath("//*[@id='employmentDetailForm']/div[1]/div[1]/resman-  
duration/div/div[1]/div/div[1]/div[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/l
i[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/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[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**

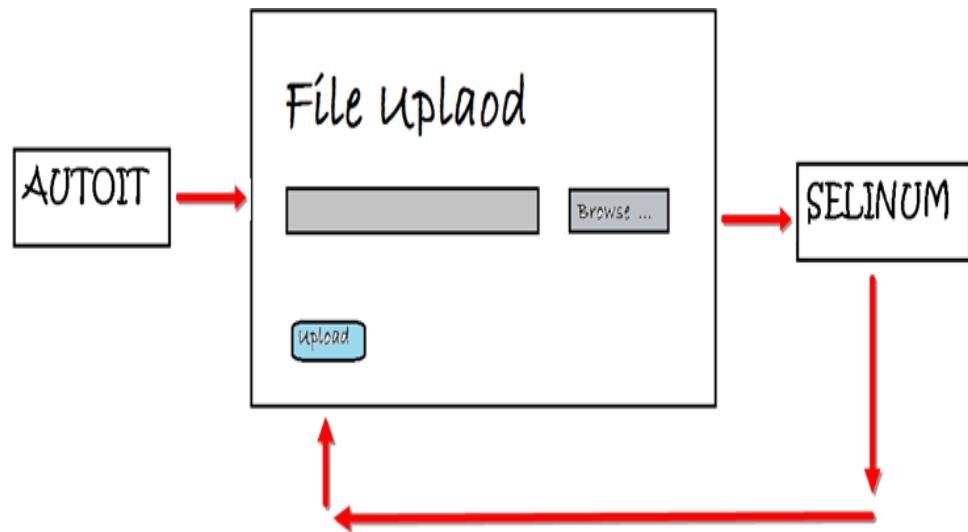
```
public static void uploadFiles(File path) {  
    try {  
        Robot robot = new Robot();  
        robot.setAutoDelay(3000);  
        StringSelection selection = new StringSelection(  
            path.getAbsolutePath());  
        Toolkit.getDefaultToolkit().getSystemClipboard()  
        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

Autolt Downloads - Autolt X

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

AUTOIT

Autolt ▾ Autolt Editor ▾ Autolt Tools ▾

Autolt Downloads

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

Autolt 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!

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

Step 3) Click on 'AutoIT' Downloads option.

Autolt ▾ Autolt Editor ▾ Autolt 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
<p>AutoIt Full Installation. Includes x86 and x64 components, and:</p> <ul style="list-style-type: none">• 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!	 A rectangular button with rounded corners containing the text "Download AutoIt" and a small blue icon of a person with a gear. The entire button is enclosed in a red square border.



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 'Downloads' button (which is highlighted with a red box and has a green arrow pointing to it), and an 'Online Documentation' section. A large text block on the left side of the page says: 'Scripting tools from this site will run on Windows 98, Windows ME, Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008/2008 R2, and all versions of Windows 7. No special libraries required!'.

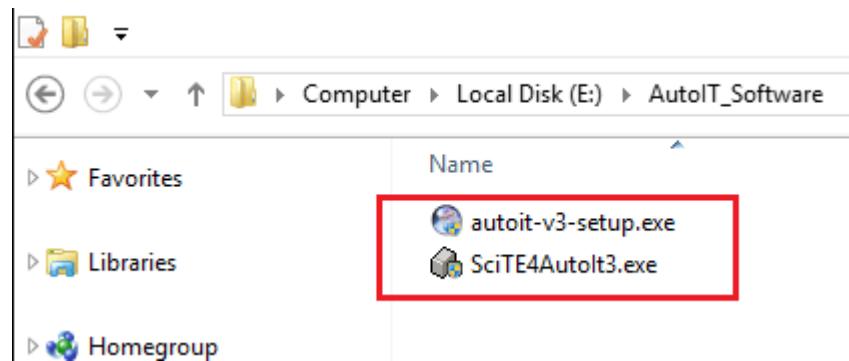
Step 6): Click on the link as shown below.

The screenshot shows a web browser displaying the 'Downloads' page for AutoIt Script Editor. The page title is 'Autolt Script Editor Downloads'. It features a large 'AUTOIT' logo and a navigation bar with 'Autolt', 'Autolt Editor', 'Autolt Tools', and 'Code'. Below the navigation is a section titled 'Current Versions' containing a table. The table has columns for 'File', 'Date updated', and 'Notes'. The first row of the table is highlighted with a red box and a green arrow pointing to the 'File' column. The table data is as follows:

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



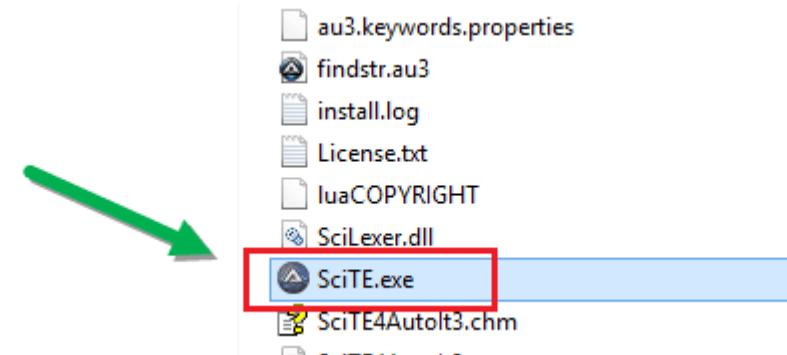
After download you will get two setup file as shown in below screen, first is **AutoIT version 3** setup and second is **Scitautoit3**.



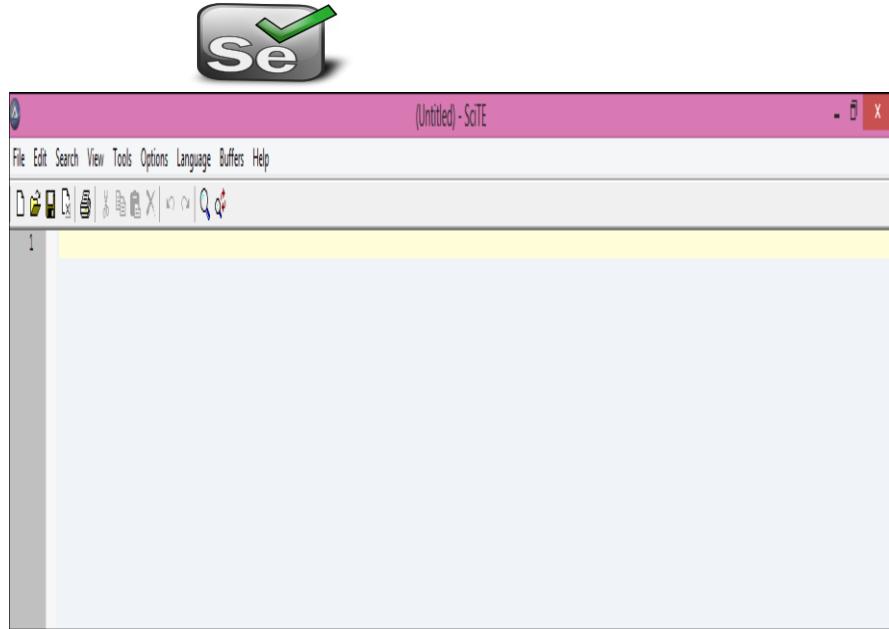
Step 6): For Installing AutoIT-Click on both AutoIT setup one by one .

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

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

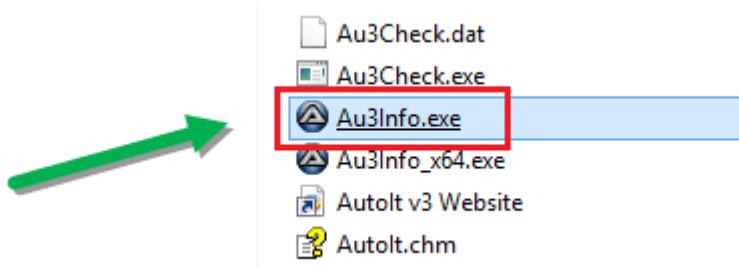


and click on 'SciTE.exe' file, the AutoIT editor opens as shown in below screen.

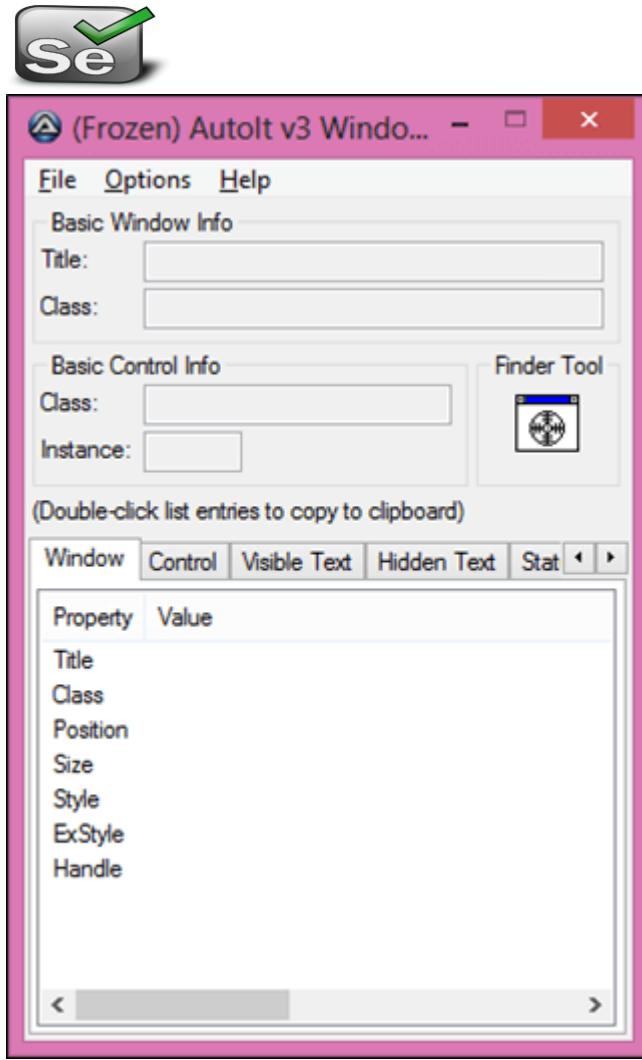


Step 8) : Now opens element Identifier .

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



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



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

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

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

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

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



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

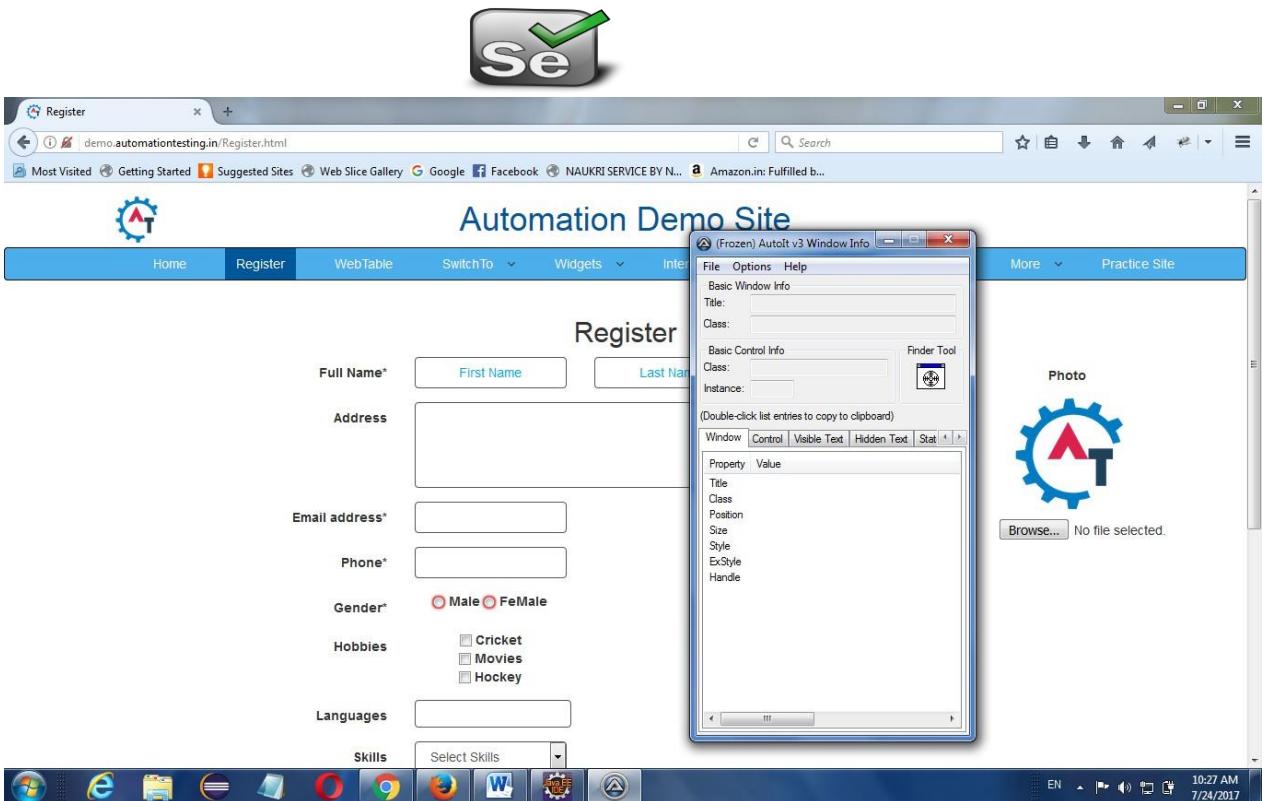
Finally, when we run selenium script-it will fill the form-> upload resume-> Submit form.

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". It features 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" and contains the following form fields:

- Full Name*: Two input fields for First Name and Last Name.
- Address: A large text input field.
- Email address*: An input field.
- Phone*: An input field.
- Gender*: Radio buttons for Male and Female.
- Hobbies: Checkboxes for Cricket, Movies, and Hockey.
- Languages: An input field.
- Skills: A dropdown menu labeled "Select Skills".
- Photo: A placeholder image of a gear with a red 'A' and blue 'T'. Below it are "Browse..." and "No file selected." buttons.

The status bar at the bottom shows system icons and the date/time: 10:24 AM 7/24/2017.

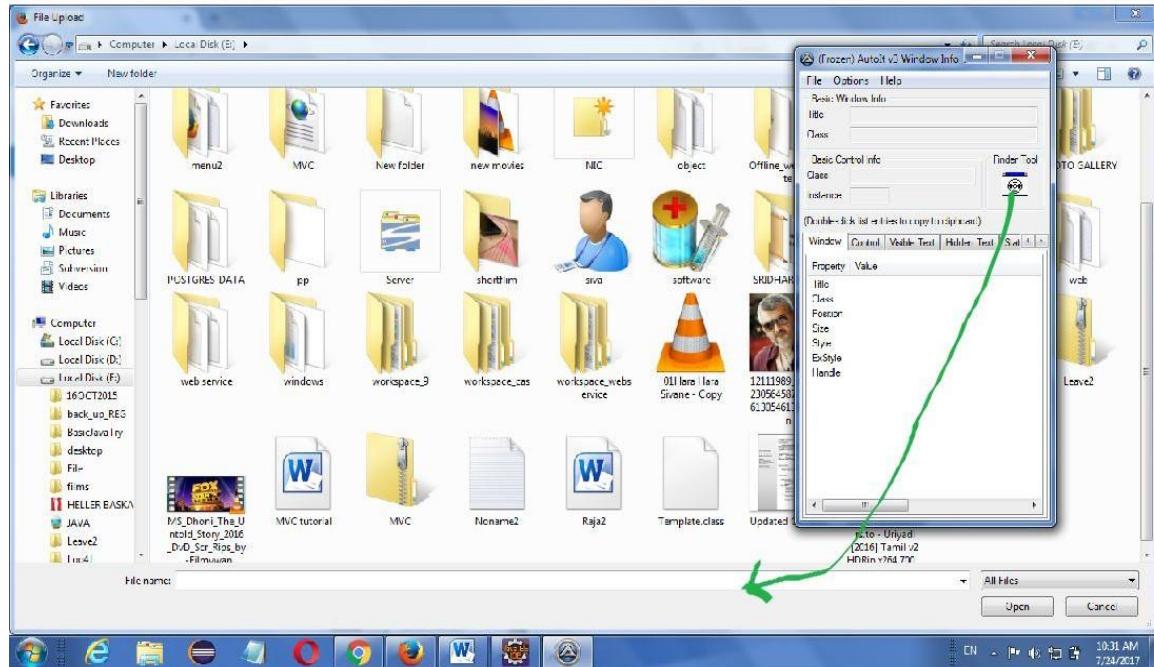
Step 1: Now open element Identifier- Go to 'C:\Program Files (x86)\AutoIt3' and click on 'Au3Info.exe' file, the element identifier window opens as shown in below screen.



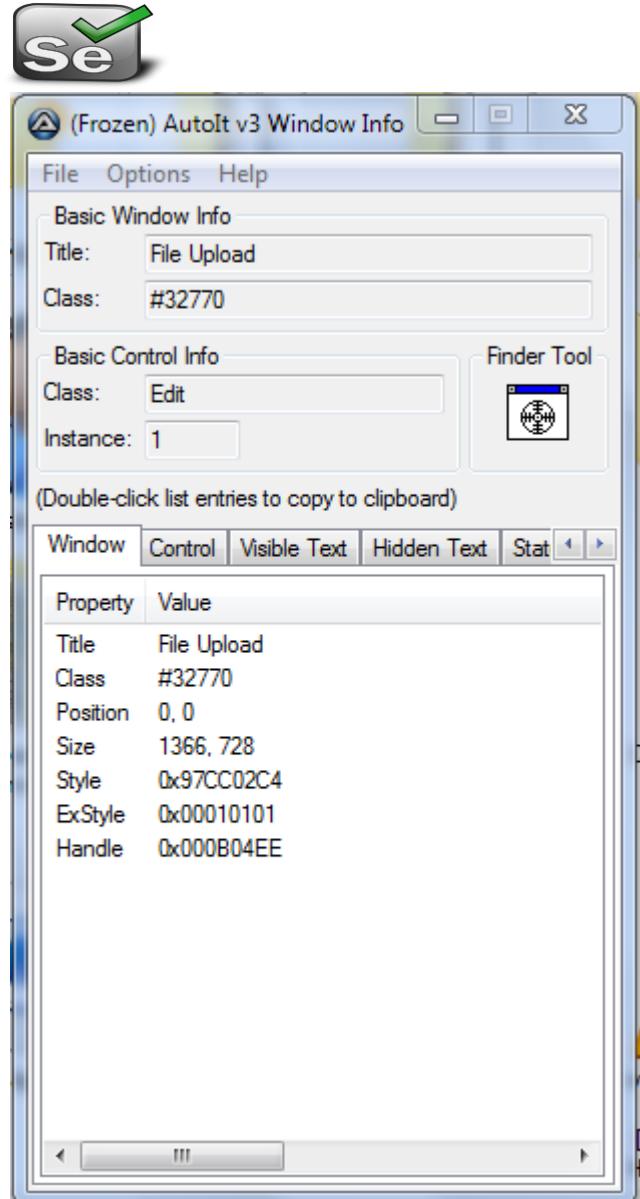
Step 2): Now open file uploader window by clicking on 'Choose File' which is windows activity.



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.

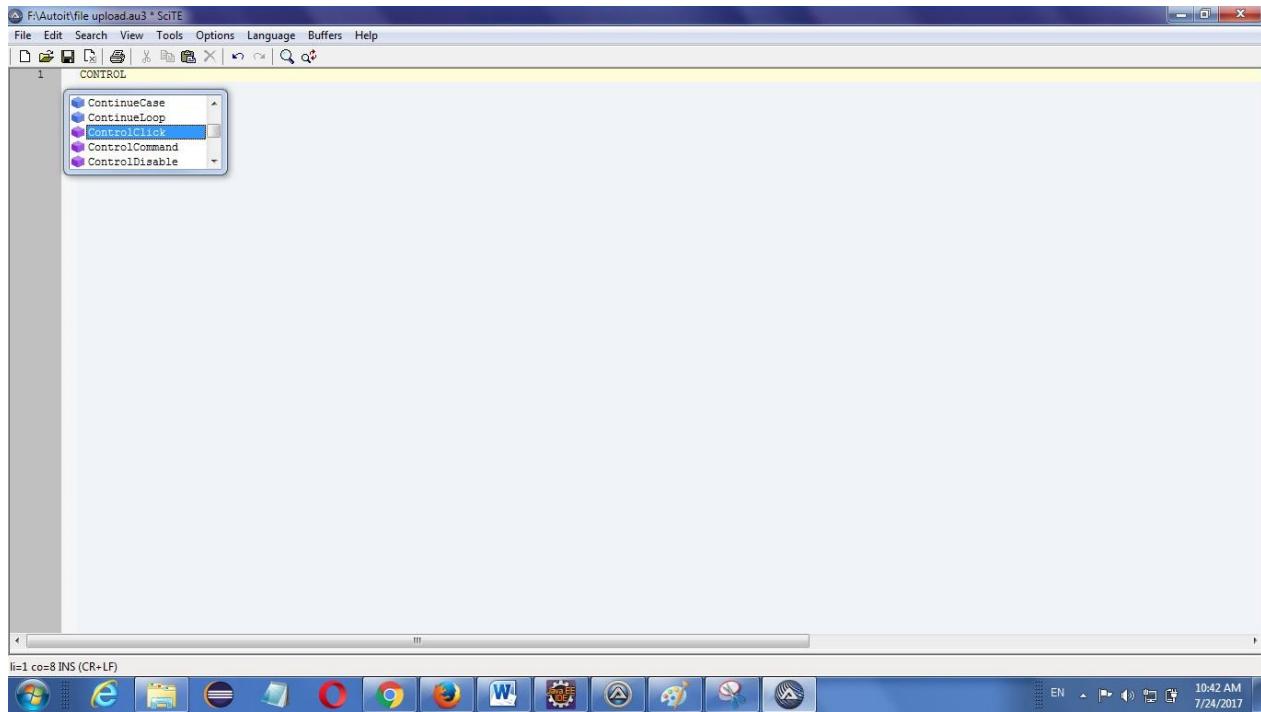
There are lots of method available which we can use in a script according to the requirement, but right now we will focus on the below methods as these methods are required for writing file upload script:

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:

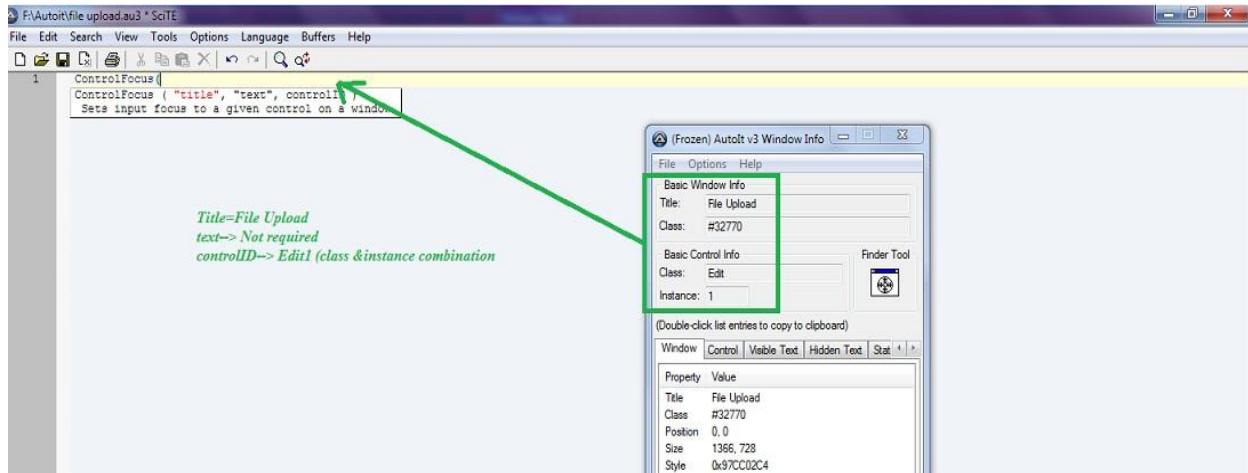
This method sets focus to the 'file name' text box of the file uploader window.

- 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.



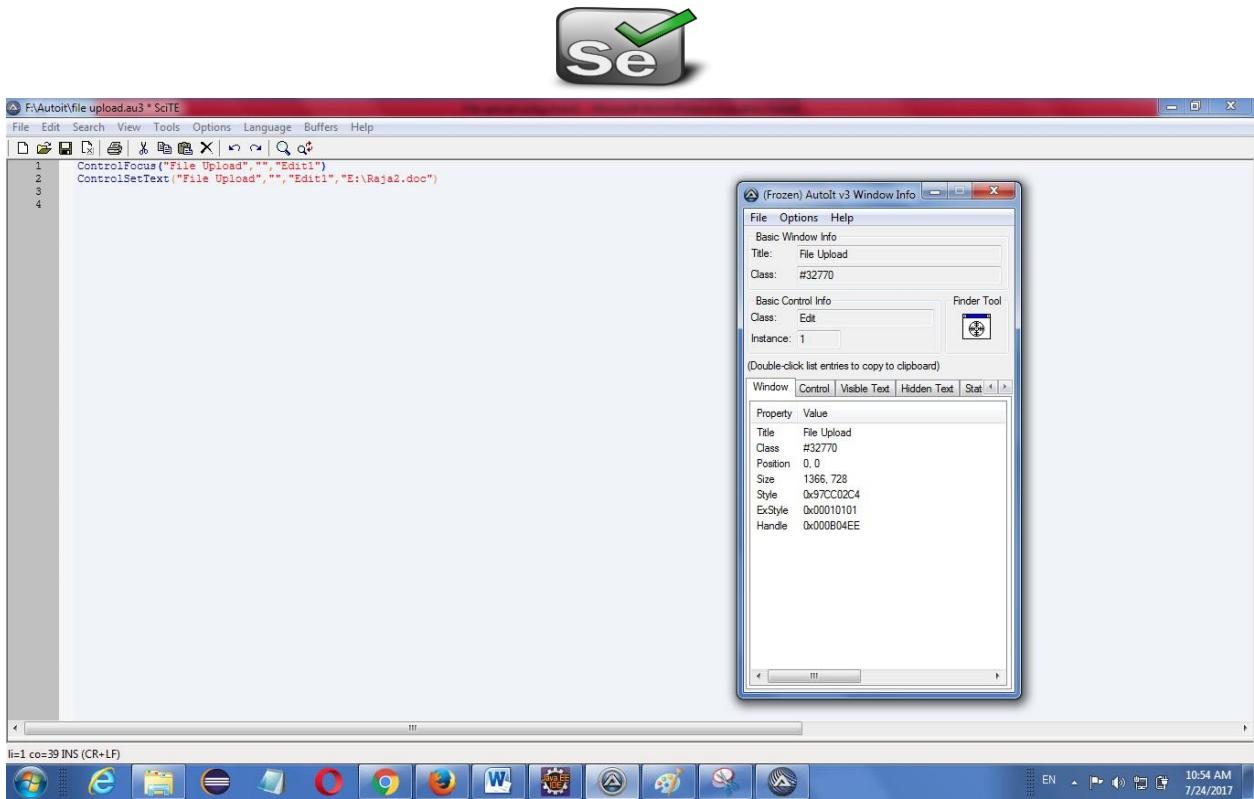
Parameter values for ControlSetText method :

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.

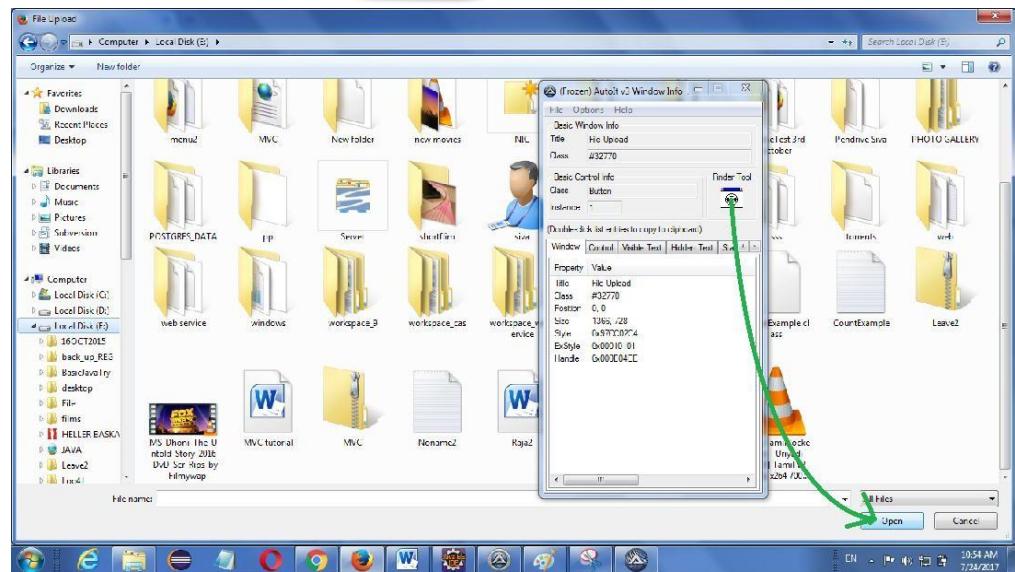
ControlSetText("File Upload","","","Edit1","E:\Raja.doc") // This method input file path of a control.



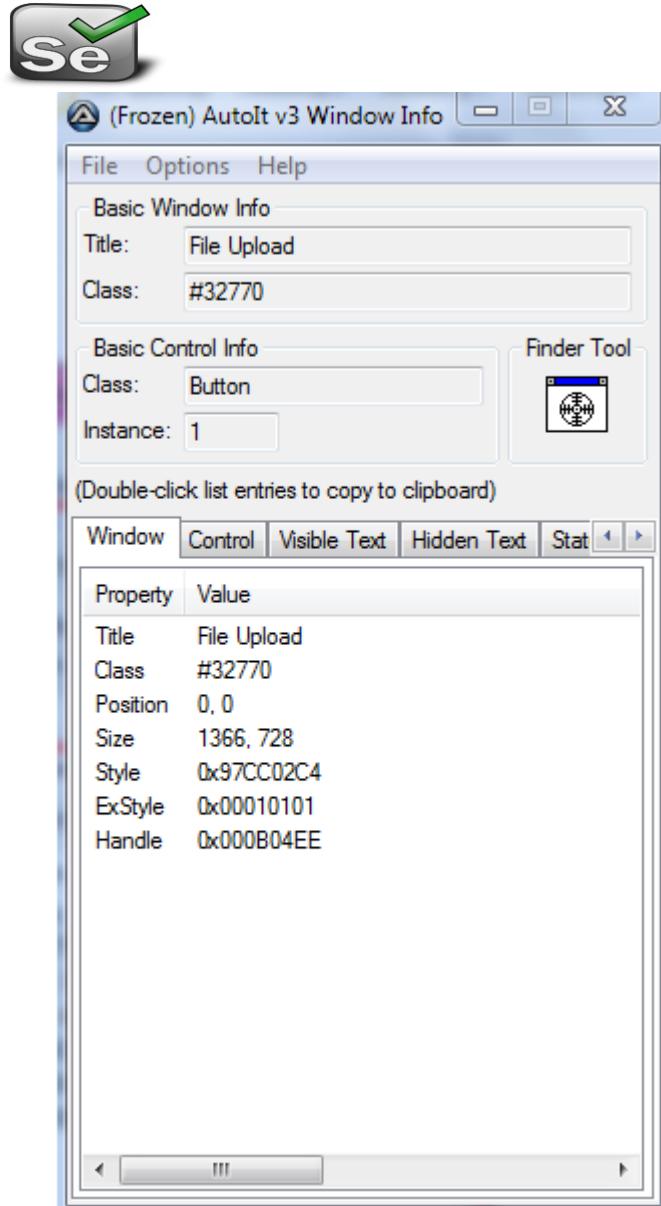
After following the above step, don't close the windows (editor and element identifier), keep it remain open. You again need to open file uploader window as to find attributes of 'Open' Button as shown in below step 5.

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.

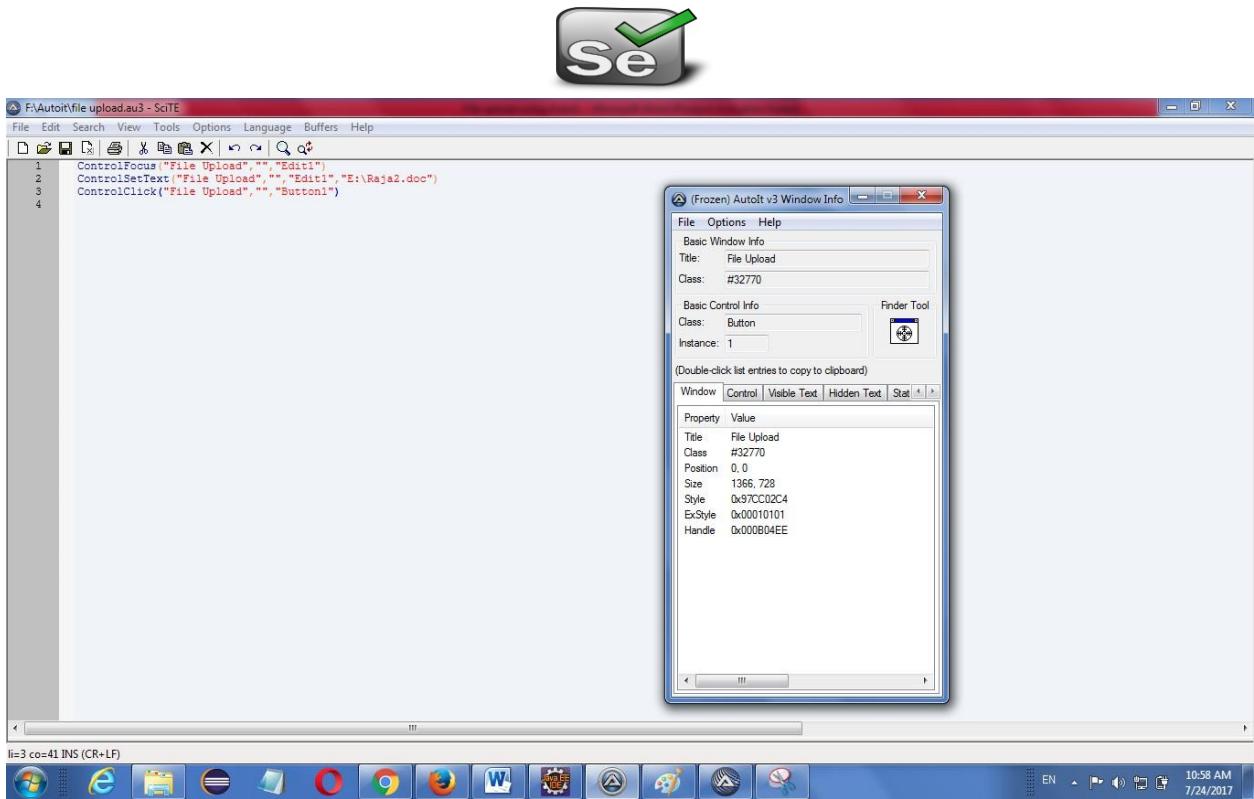


Parameter values for ControlClick method:

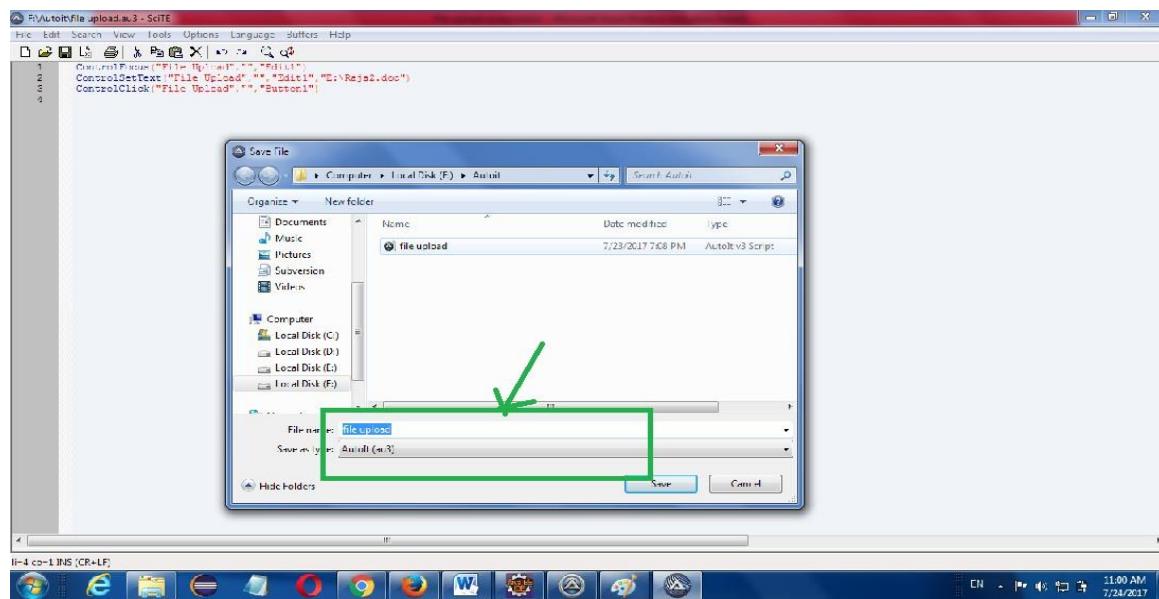
This method clicks on 'Open' button of the file uploader window.

- 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.



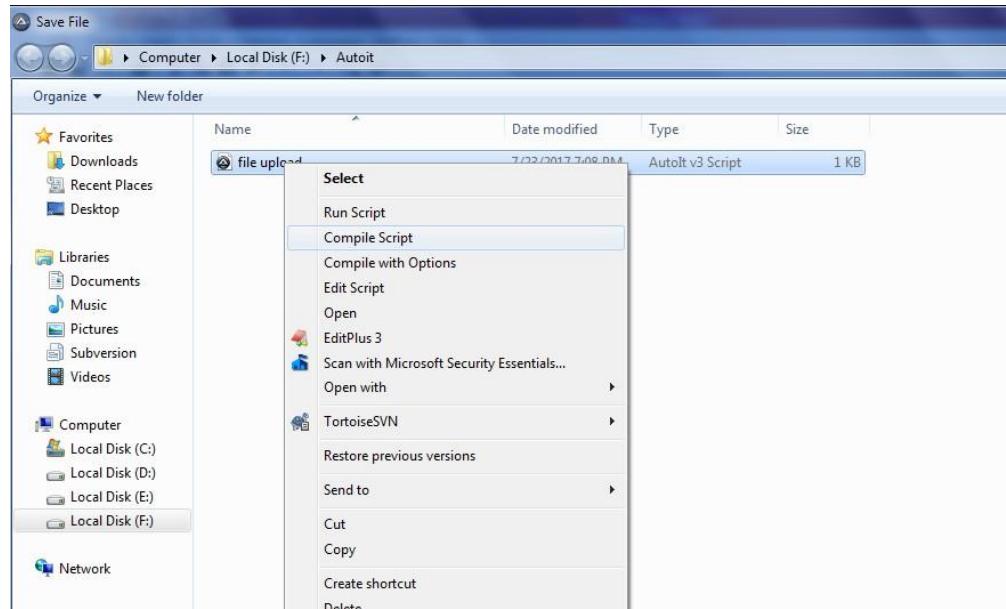
Step 6): You can see in below screen that AutoIT script is completed to handle file uploader. Now you can close the element identifier and save the script as " FileUpload " at the given location (E:\AutoIT).



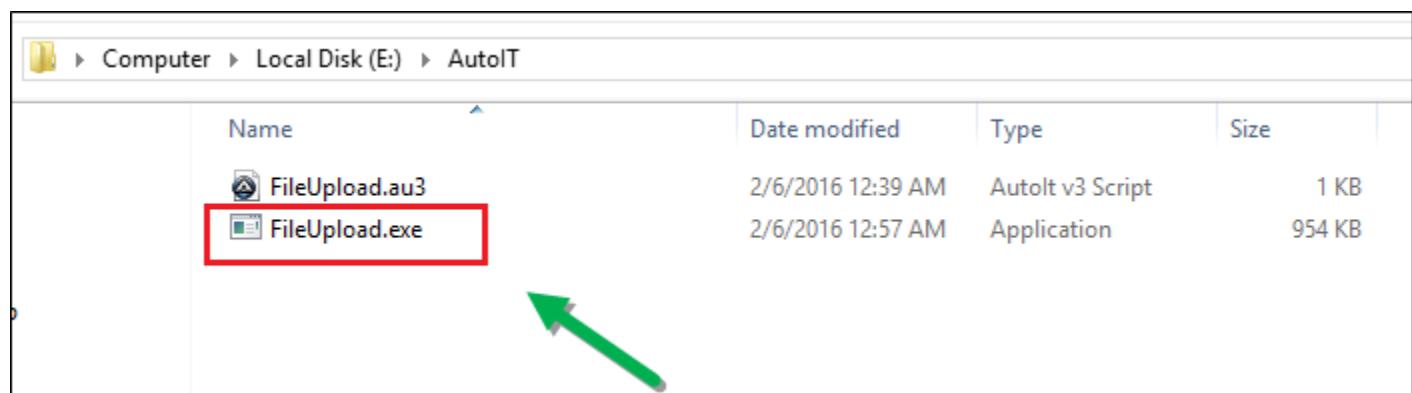


Now you can't execute this script directly, you need to compile this script.

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.



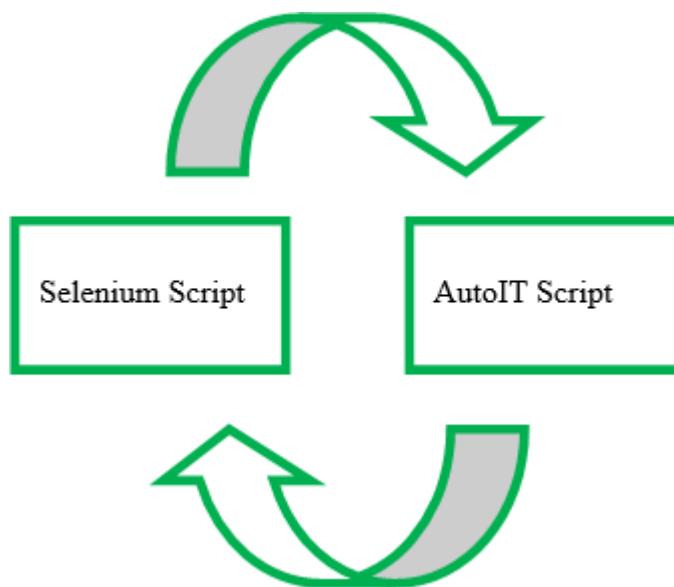
Now we will use this AutoIT script in Selenium web driver. Check below for output.



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 the 'Register' page of the 'Automation Demo Site'. The page has a header with a logo and navigation links like Home, Register, WebTable, SwitchTo, Widgets, Interactions, Video, WYSIWYG, More, and Practice Site. The main content area is titled 'Register'. It contains fields for 'Full Name' (First Name and Last Name), 'Address', 'Email address', 'Phone', 'Gender' (radio buttons for Male and Female, with Male selected), 'Hobbies' (checkboxes for Cricket, Movies, and Hockey), 'Languages', and 'Skills' (a dropdown menu). To the left of the form, there are two images of women's tops. To the right, there is a 'Photo' section with a 'Browse...' button and a file input field containing 'Raja2.doc'. The bottom of the screen shows the Windows taskbar with various pinned application icons.



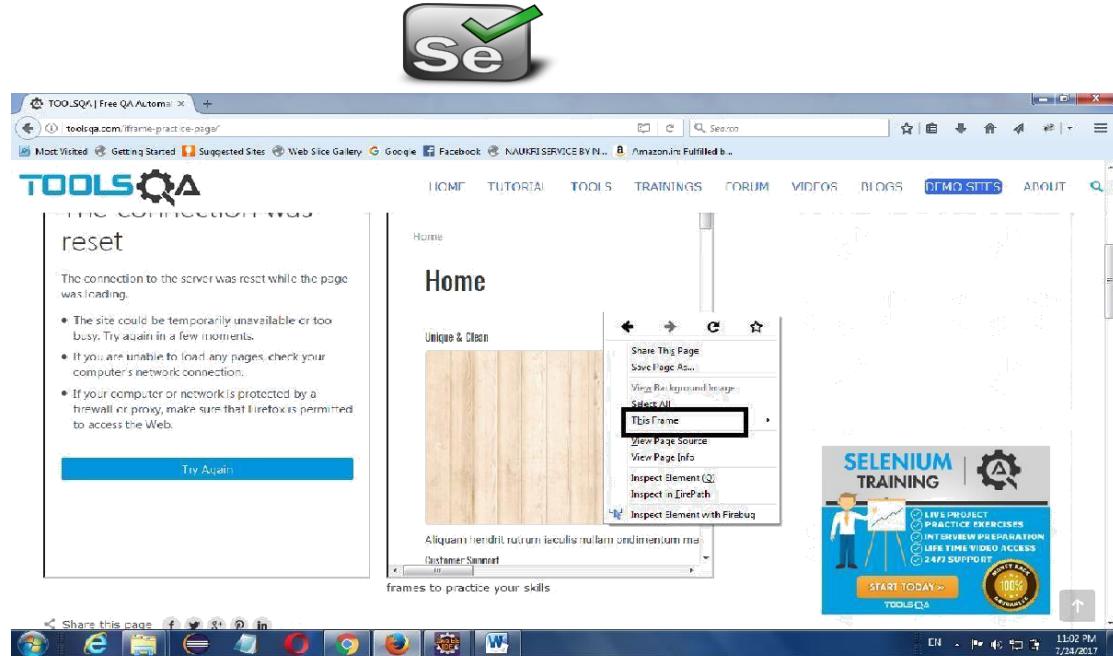
IFRAME:

- 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.

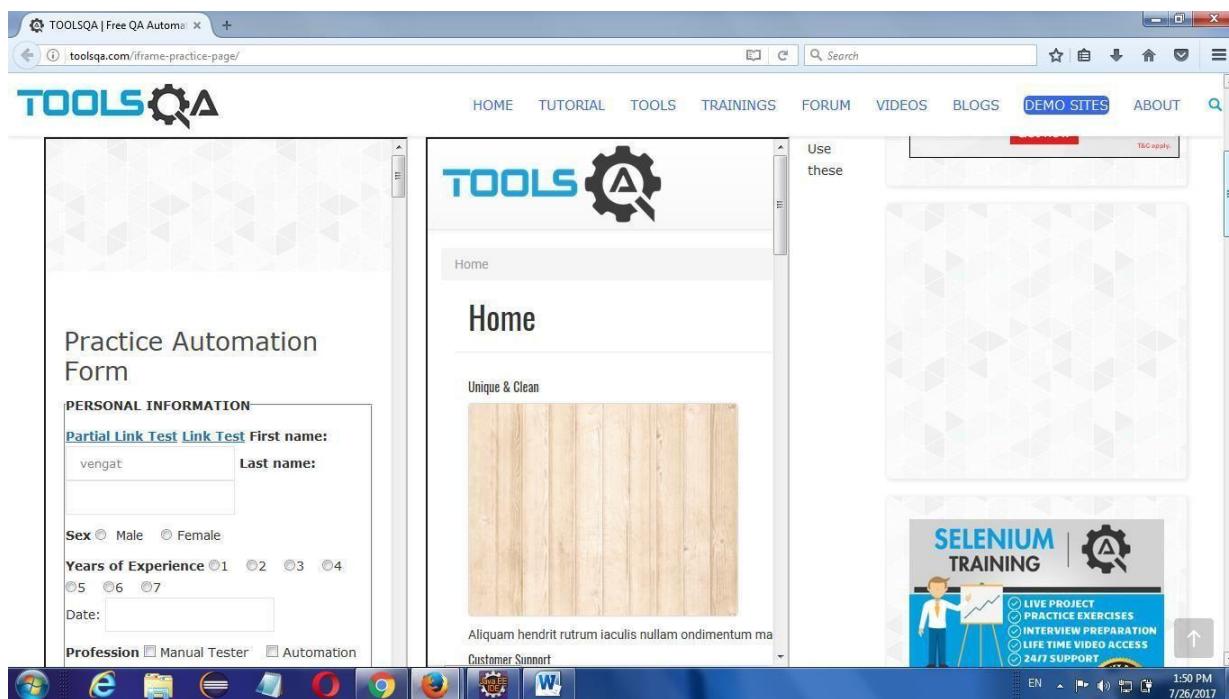
- **driver.switchTo().frame(0);**
- **driver.switchTo().frame(1);**

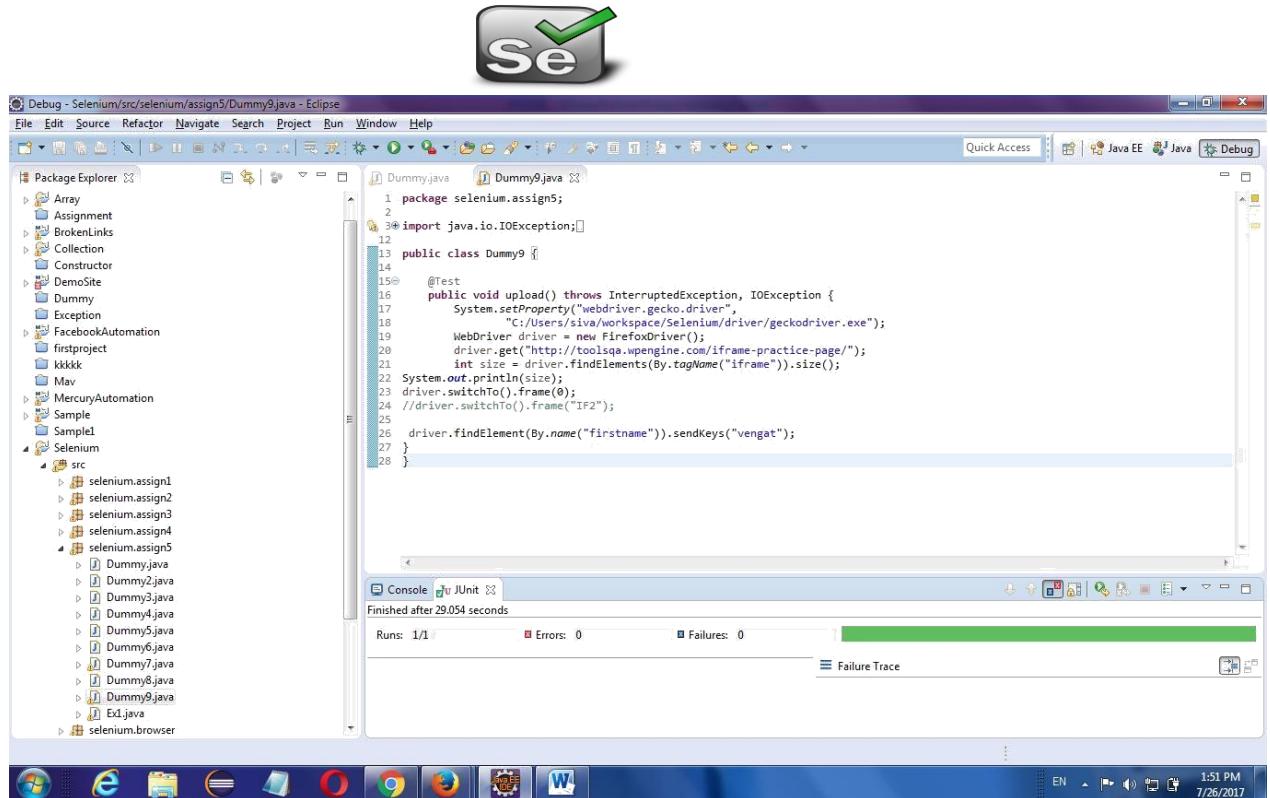


Example program:

```
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:





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 the 'ToolsQA | Free QA Automation' website. The page contains two iframes, 'Frame 1' and 'Frame 2'. The developer tools' 'Elements' panel is open, showing the DOM structure. Arrows point from the labels 'Frame 1 Id' and 'Frame 1 Name' to the respective elements in the DOM tree. The 'Frame 2 Id' and 'Frame 2 Name' labels are also present. The browser's taskbar at the bottom shows various application icons.



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 :

```
Debug - Selenium/src/selenium/assign5/Dummy9.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java EE Java Debug
Package Explorer Dummy9.java
Array Assignment BrokenLinks Collection Constructor DemoSite Dummy Exception FacebookAutomation firstproject kkkkk Mav MercuryAutomation Sample Sample1 Selenium
src selenium.assign1 selenium.assign2 selenium.assign3 selenium.assign4 selenium.assign5
  Dummy.java Dummy2.java Dummy3.java Dummy4.java Dummy5.java Dummy6.java Dummy7.java Dummy8.java Dummy9.java Ex1.java selenium.browser
Dummy9.java
1 package selenium.assign5;
2
3 import java.io.IOException;
4
5 public class Dummy9 {
6
7     @Test
8     public void upload() throws InterruptedException, IOException {
9         System.setProperty("webdriver.gecko.driver",
10             "C:/Users/siva/workspace/Selenium/driver/geckodriver.exe");
11         WebDriver driver = new FirefoxDriver();
12         driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");
13         int size = driver.findElements(By.tagName("iframe")).size();
14         System.out.println(size);
15         // driver.switchTo().frame();
16         WebElement web = driver.findElement(By.id("IF2"));
17         driver.switchTo().frame(web);
18         driver.findElement(By.name("firstname")).sendKeys("vengat");
19     }
20 }
```

Console JUnit

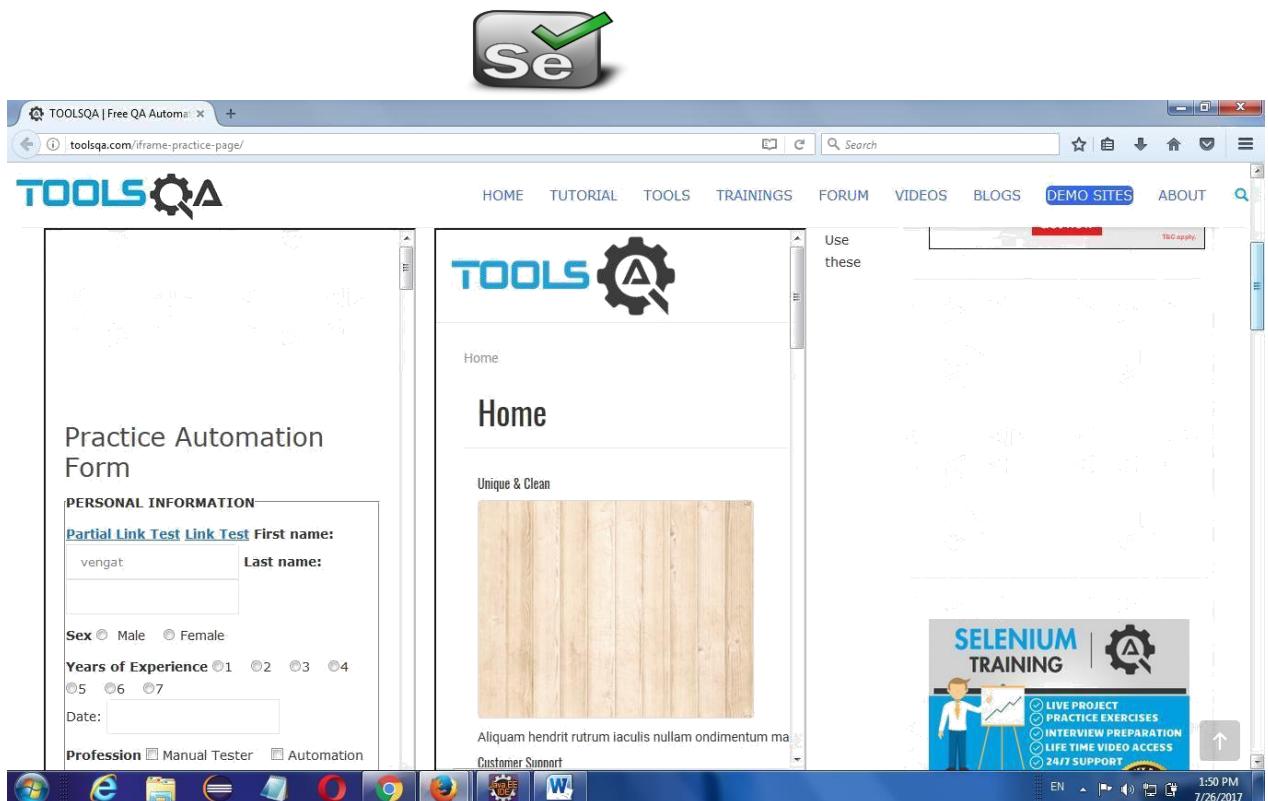
Finished after 29.054 seconds

Runs: 1/1 Errors: 0 Failures: 0

Failure Trace

Writable Smart Insert 29 : 2

EN 2:13 PM 1/26/2017



Switch back to main page:

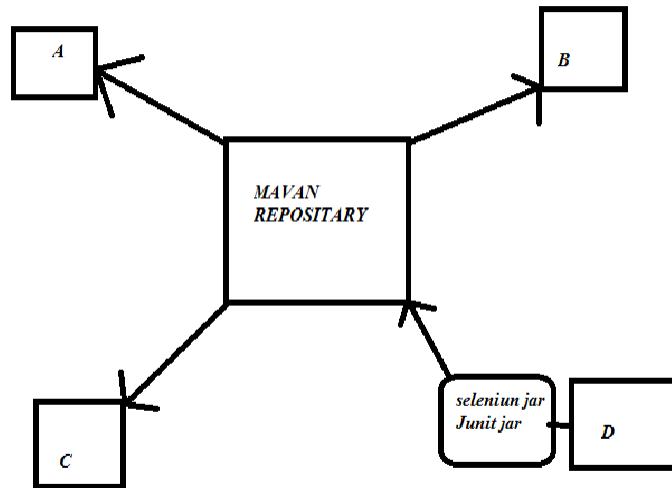
```
public class Dummy9 {  
    @Test  
    void upload() throws InterruptedException, IOException {  
        System.setProperty("webdriver.gecko.driver",  
            "C:/siva/workspace/Selenium/driver/geckodriver.exe"); WebDriver  
        driver = new FirefoxDriver();  
        driver.get("http://toolsqa.wpengine.com/iframe-practice-page/");  
        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:

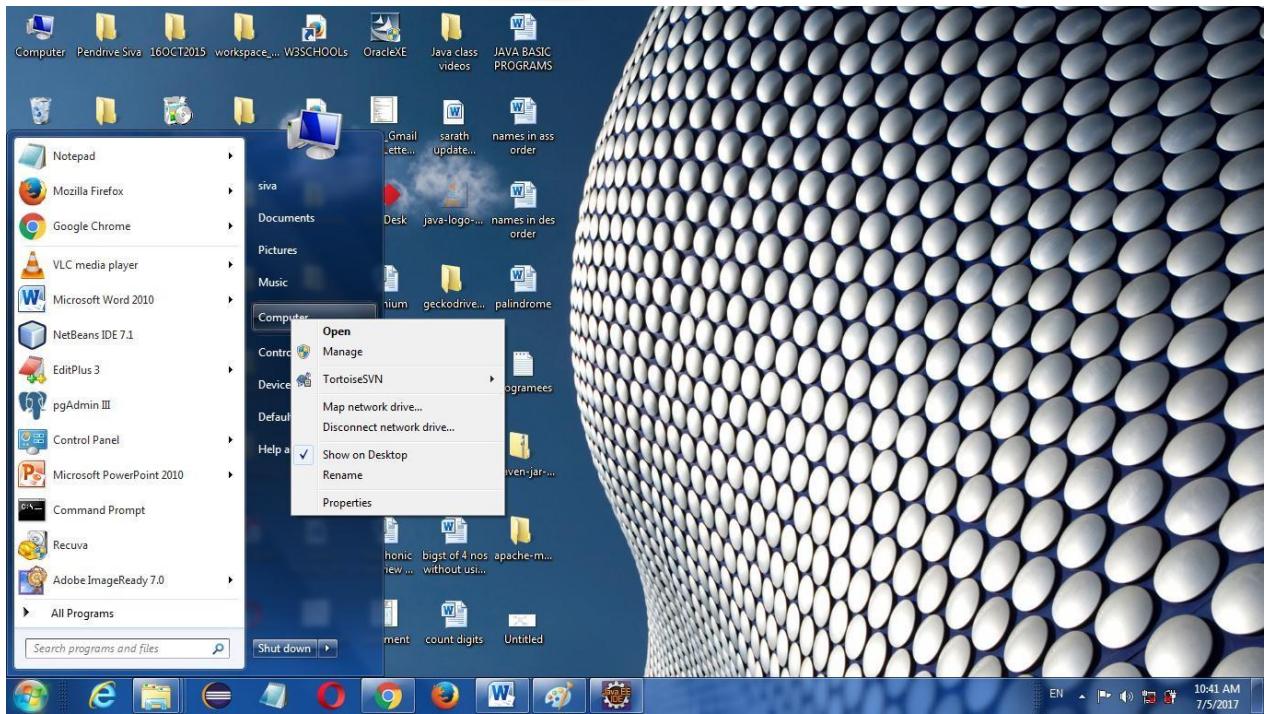
- Project build tool



-
- 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



Screenshot of the Windows Control Panel System settings page:

Control Panel Home

View basic information about your computer

Windows edition

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

System

Rating:

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

Computer name, domain, and workgroup settings

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

Windows activation

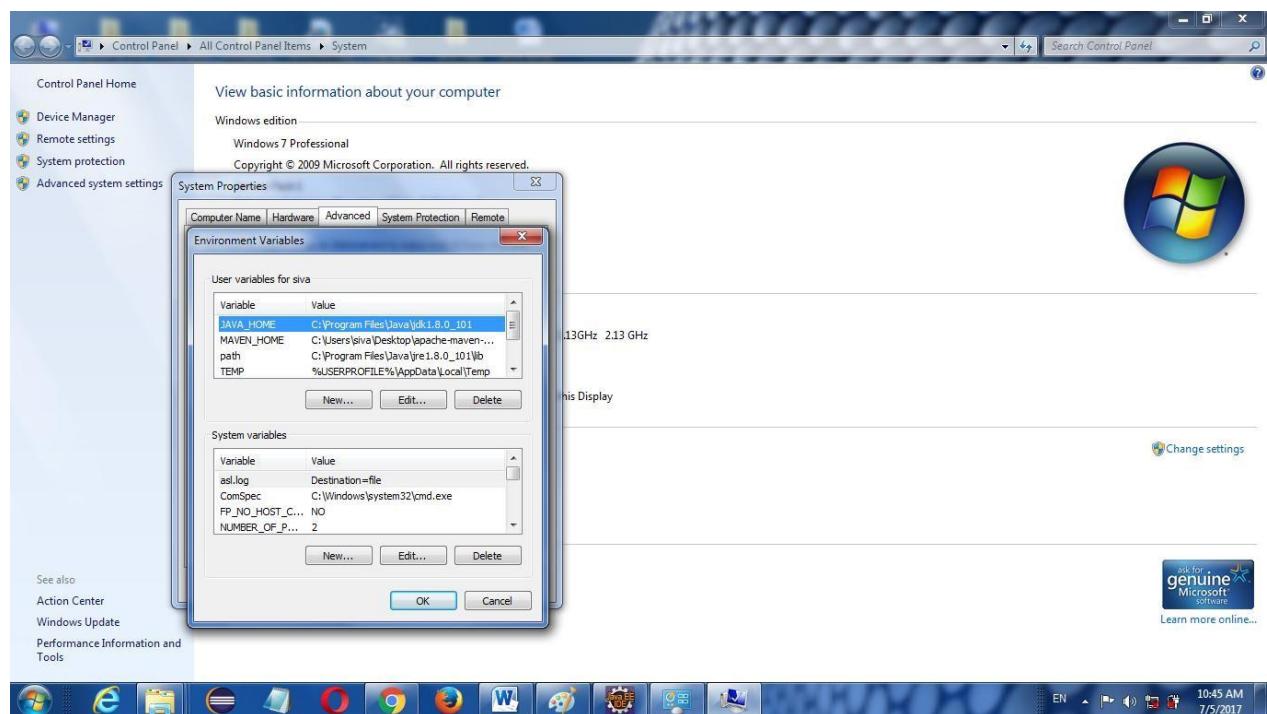
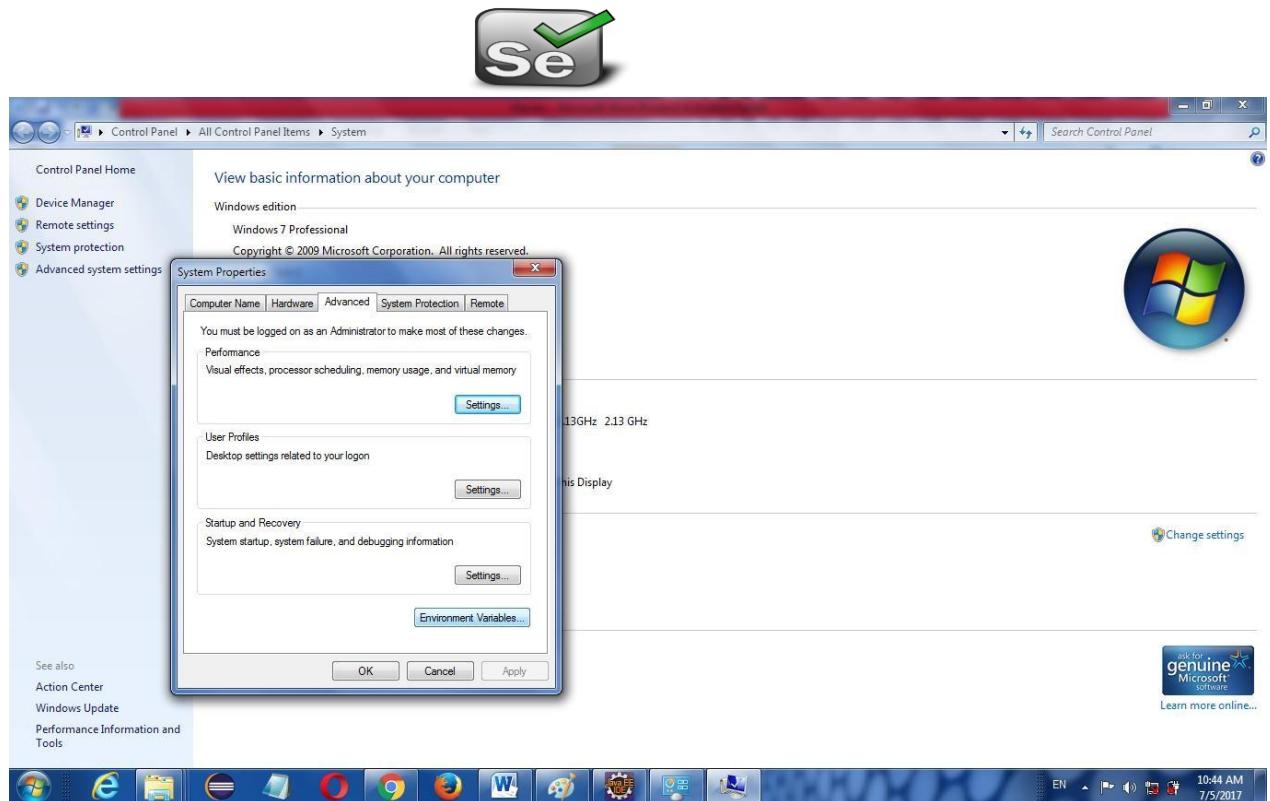
Windows is activated
Product ID: 00371-OEM-8992671-00004

See also

Action Center
Windows Update
Performance Information and Tools

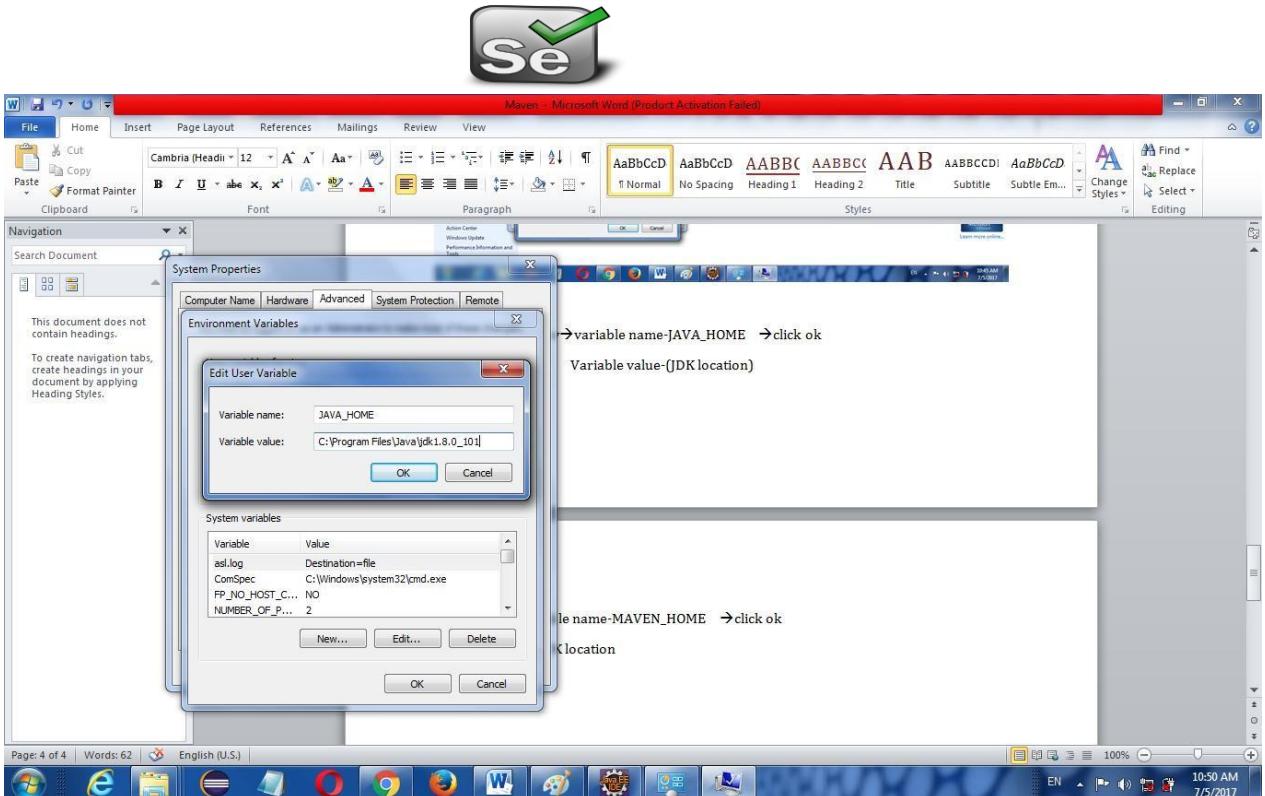
genuine Microsoft Software
[Learn more online...](#)

EN 10:44 AM 7/5/2017



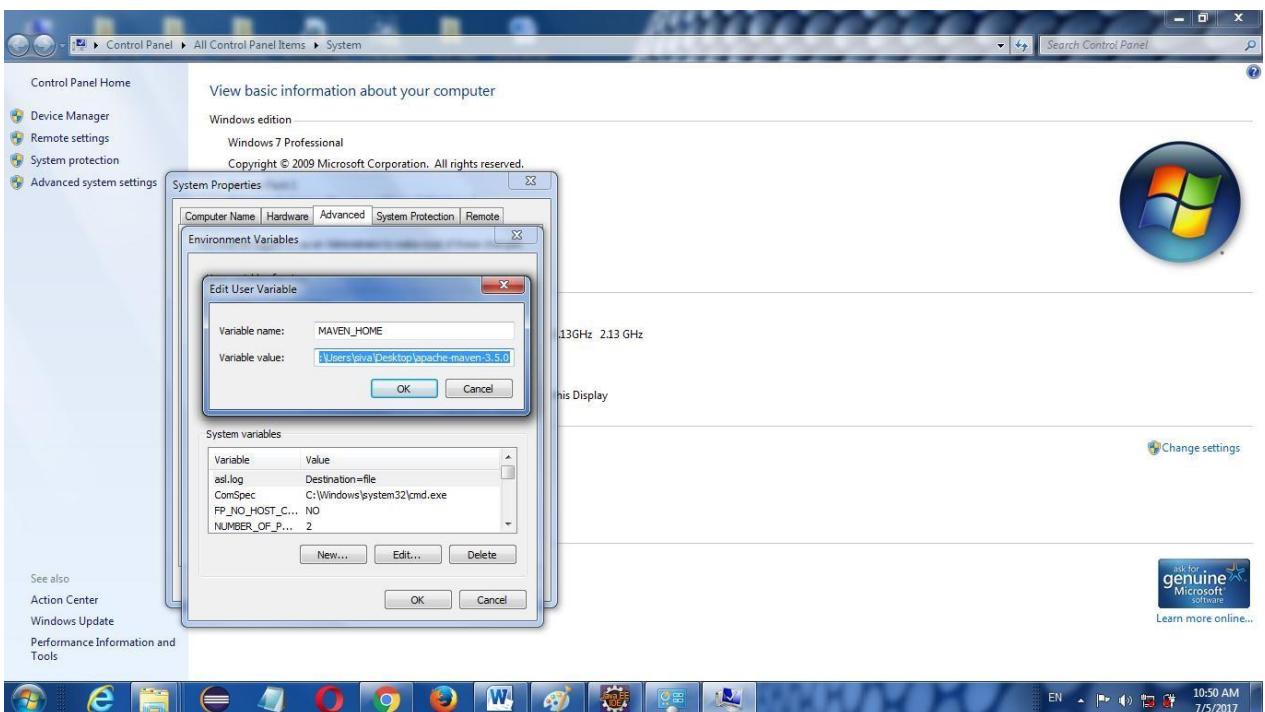
➤ User variable → new → variable name-JAVA_HOME → click ok

Variable value-(JDK location)

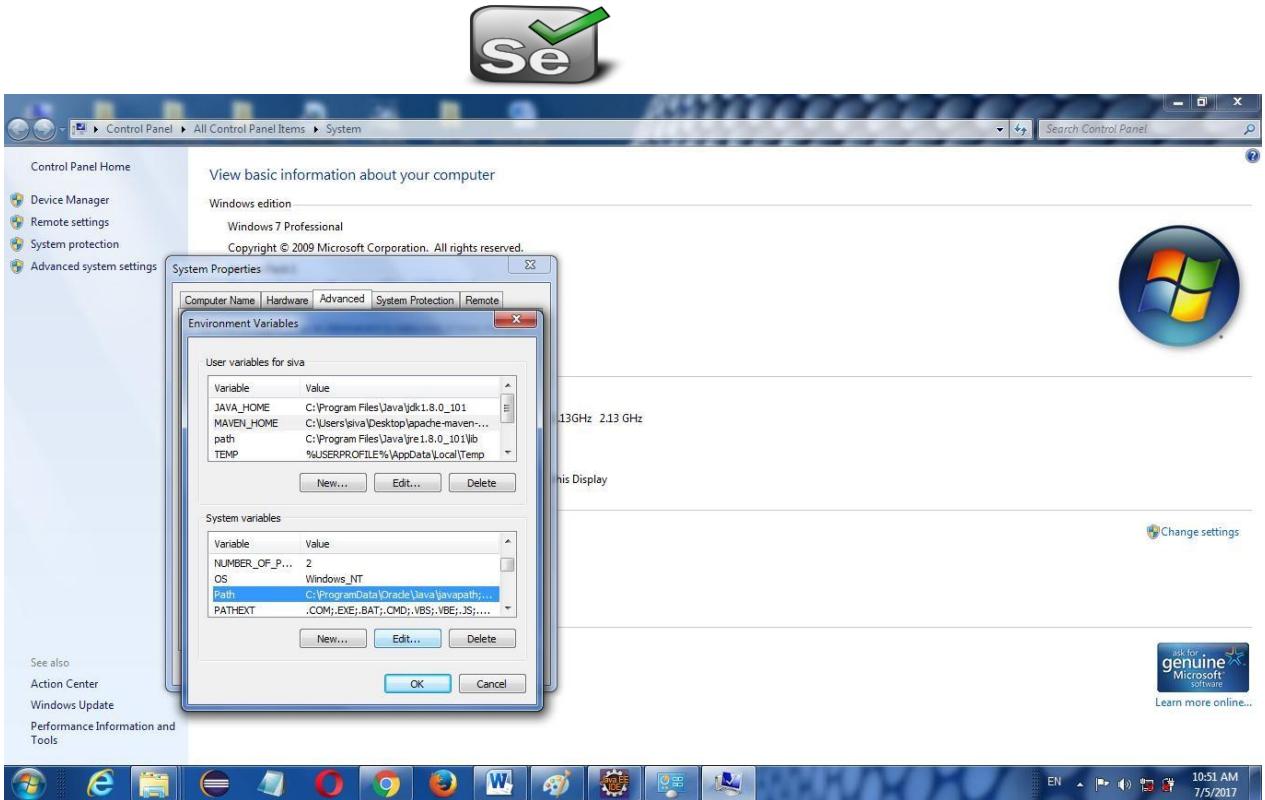


➤ Again new→ variable name-MAVEN_HOME →click ok

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

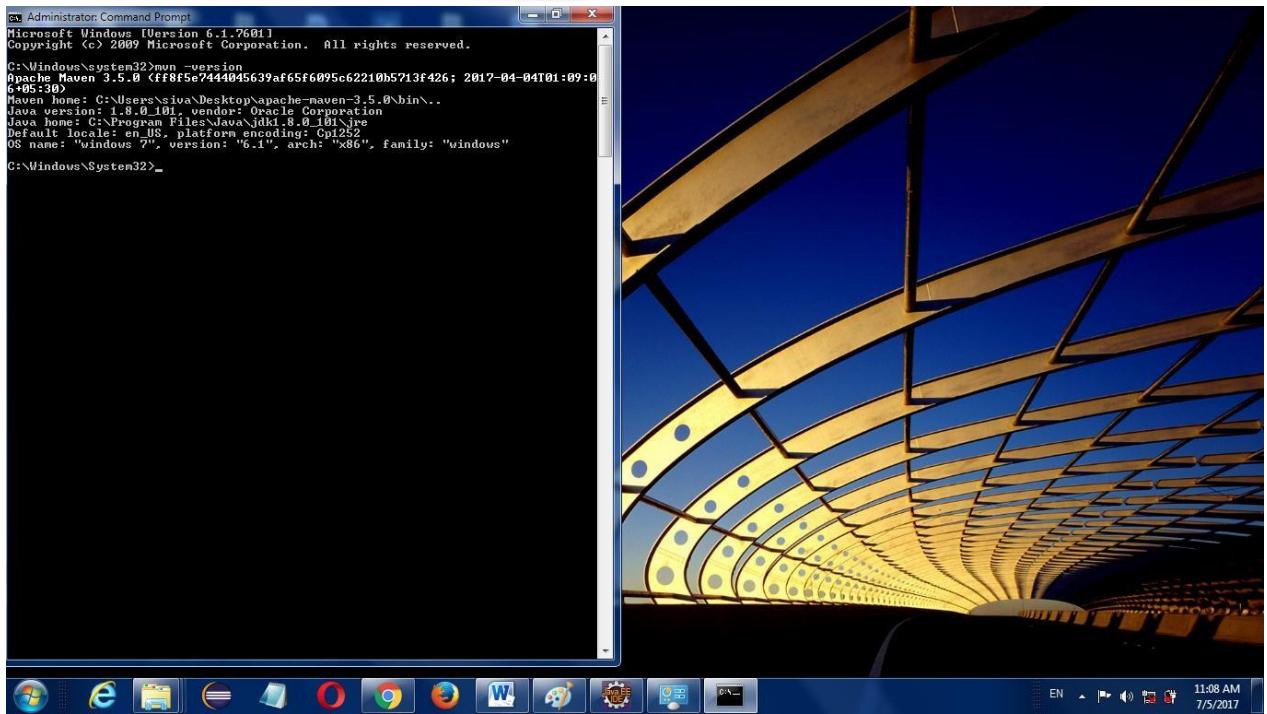
■ → **Default location**

■ → **JDK location**

■ → **Maven location**

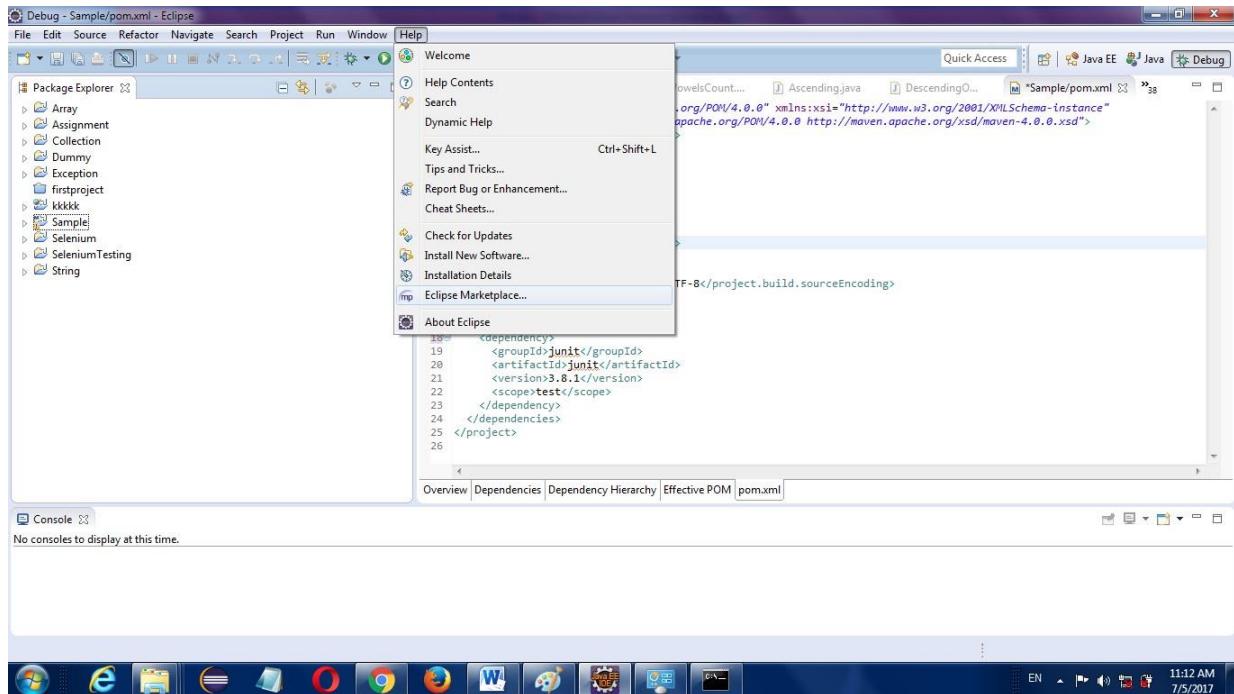
➤ To check maven installed or not

➤ Start → Run → cmd → right click → Run as admin → mvn -version → Enter → here will show maven version and jdk version



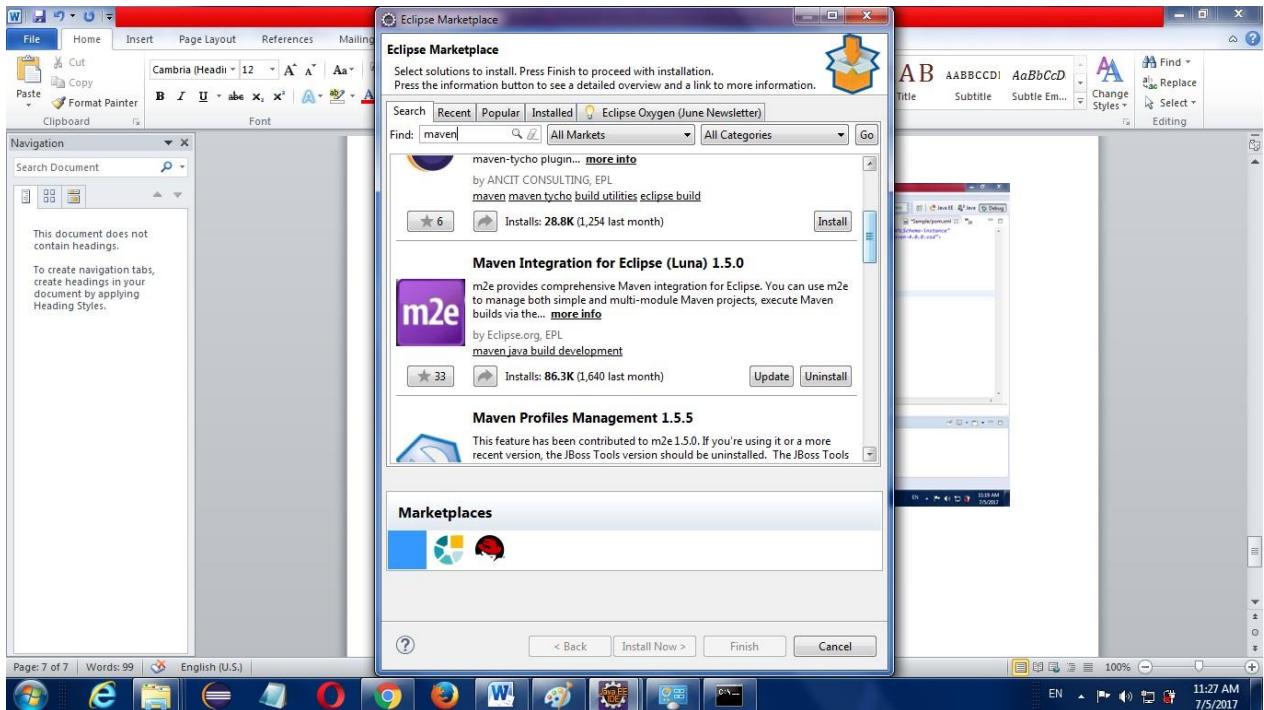
➤ Open Eclipse:

➤ Help → Eclipse Market Place





➤ Search→maven→enter



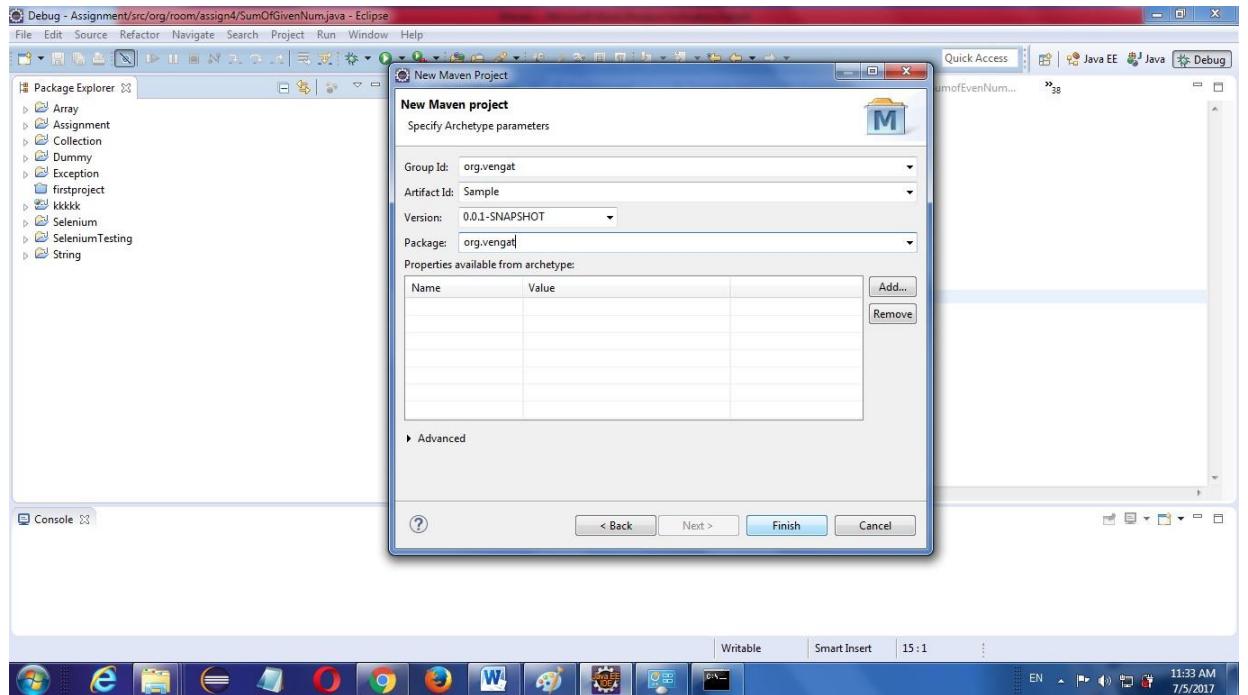
➤ Install mavan integration for eclipse → finish

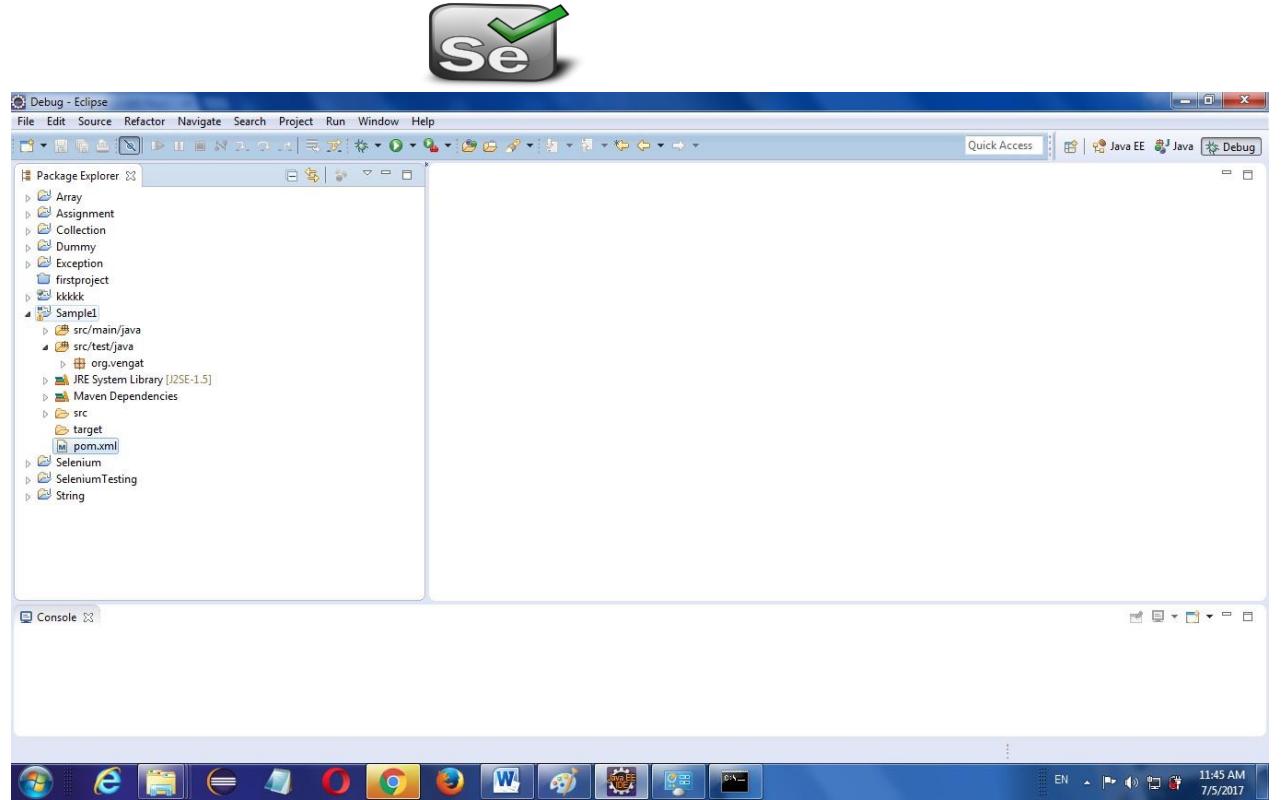


➤ Create maven project

➤ New→project→maven project→Next→Next→Group id(package name) → finish

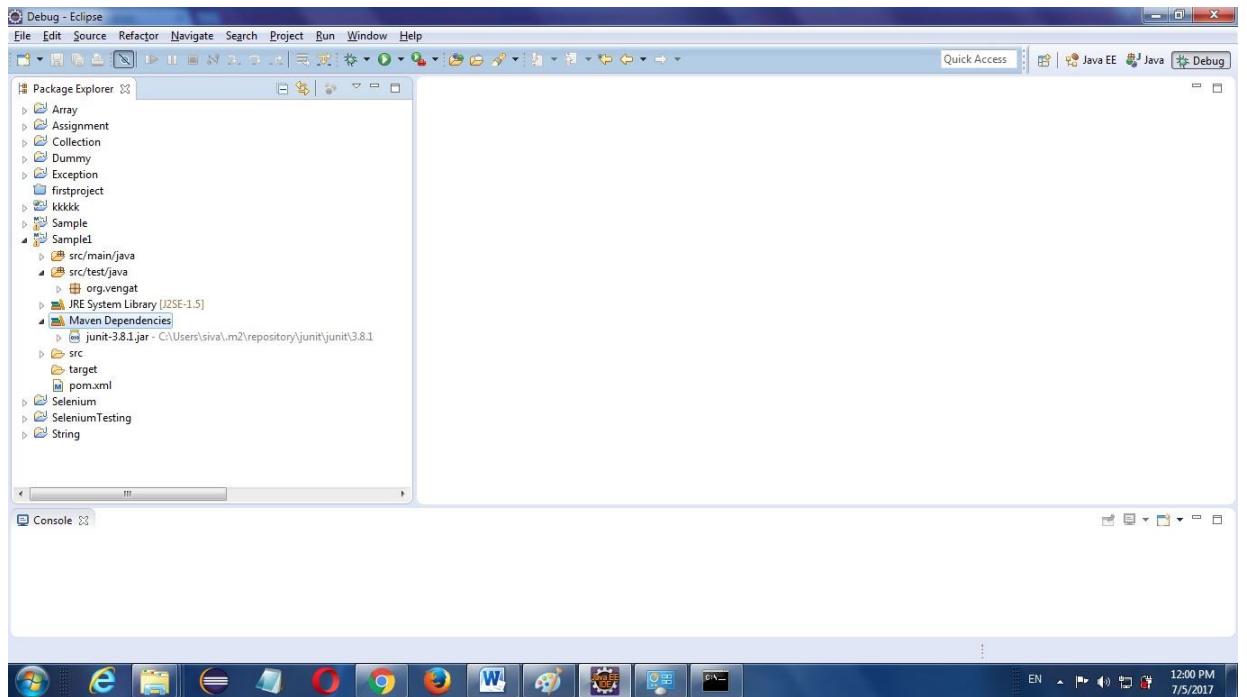
Artifact id(project name)





➤ Maven dependencies → have jall jar files

➤ In default , Maven dependencies have Junit jar.



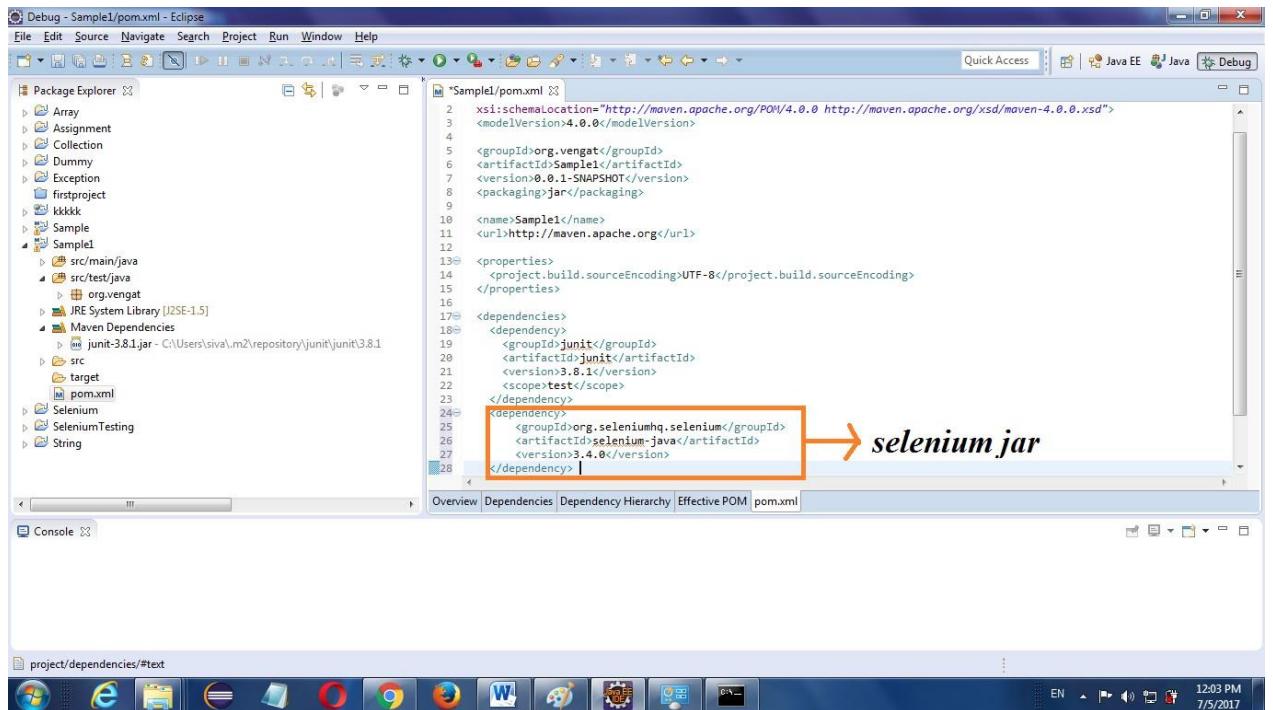


- If we need to add selenium jar, download the dependency code from internet

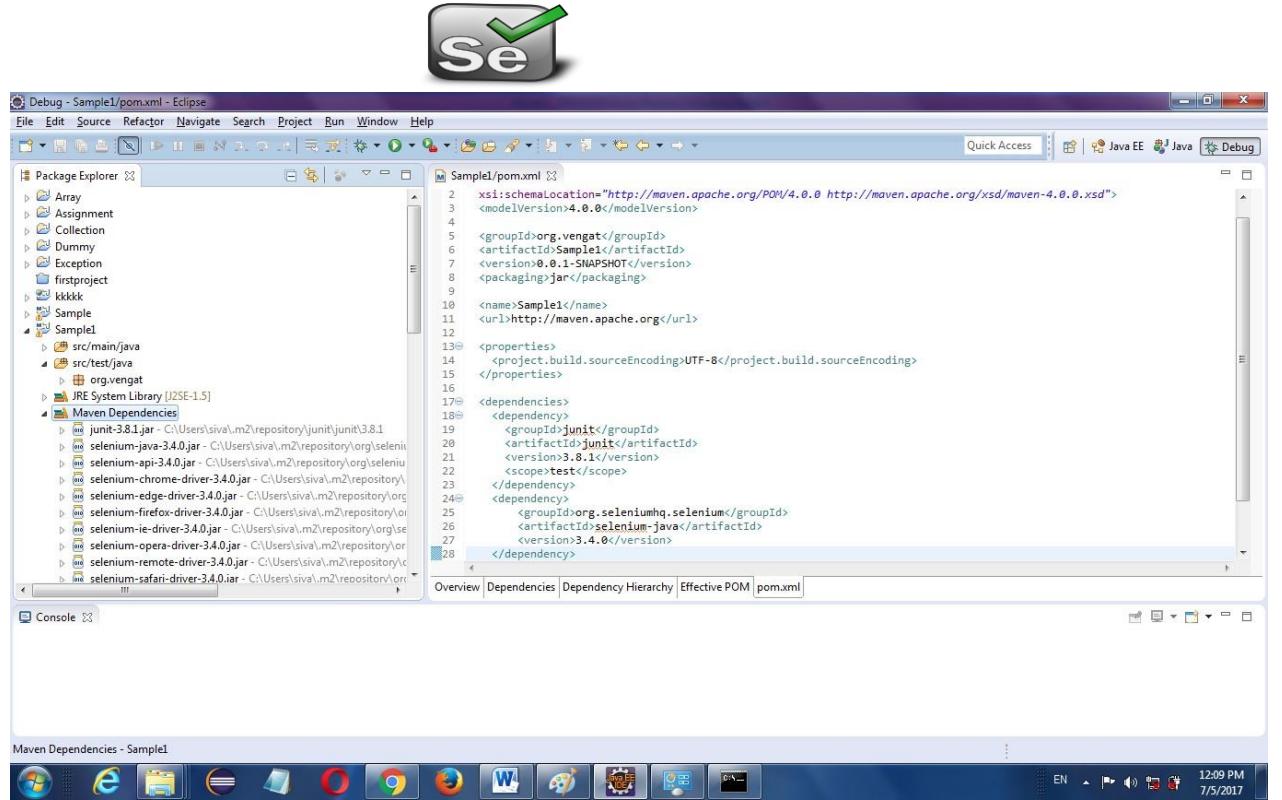
```
<dependency>
<groupId>org.seleniumhq.selenium</groupId>
<artifactId>selenium-java</artifactId>
<version>3.4.0</version>
</dependency>
```

- Just add this jar in pom.xml.

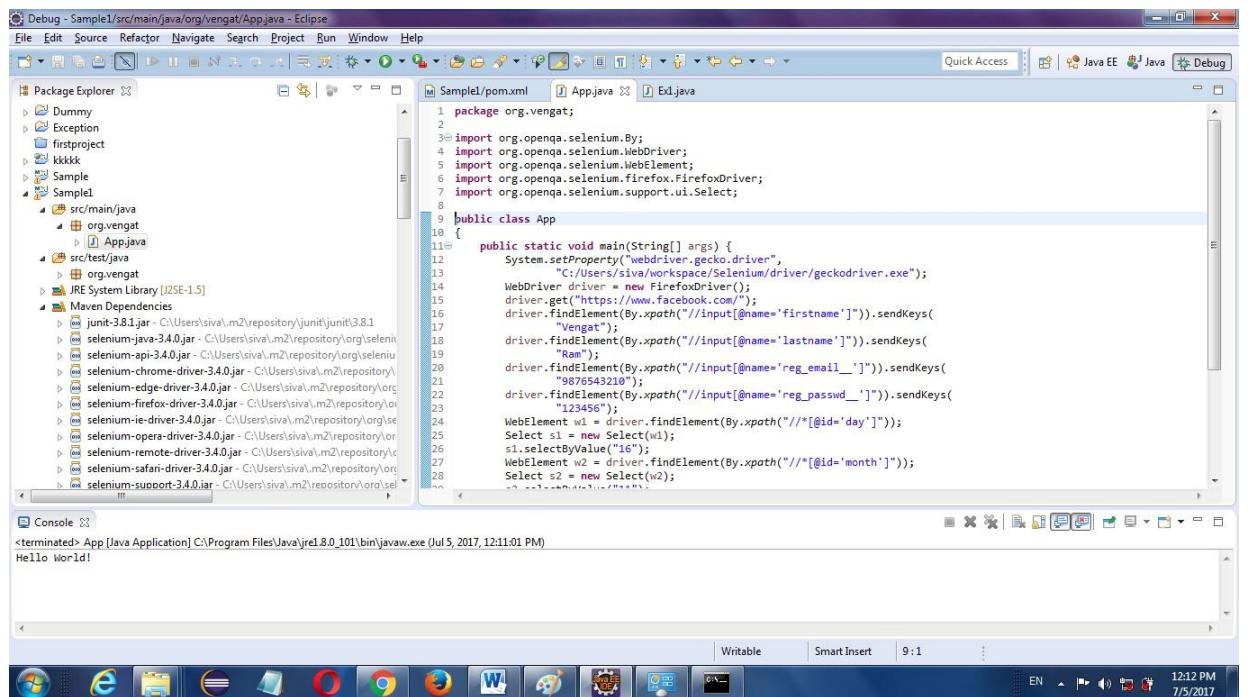
- Click pom.xml→pom.xml→add selenium dependencies code→save



- After selenium jar added automatically in maven dependencies

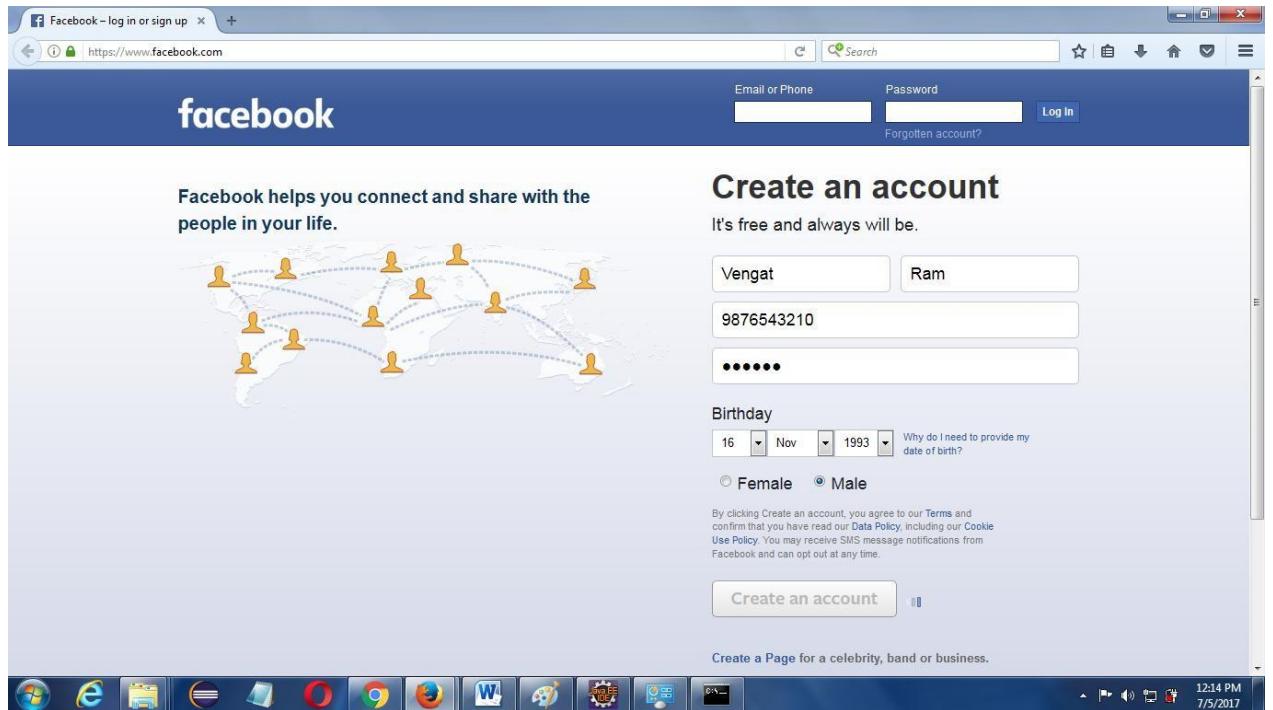


➤ Run a program in maven project:





➤ Output:

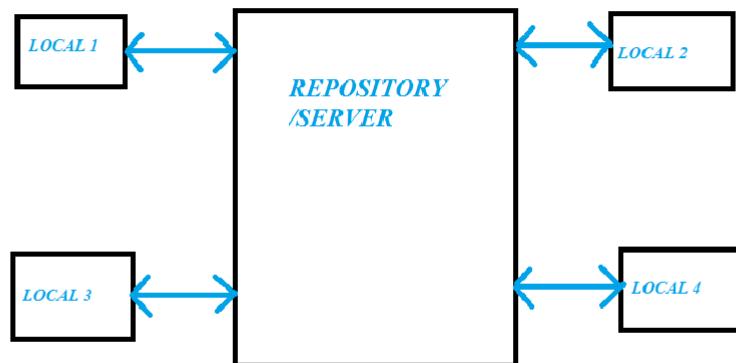


- In case we getting error in program, go to dependencies location → m2 → (delete .last update files)
 - Then in project → right click → run as → maven install
 - Then maven update



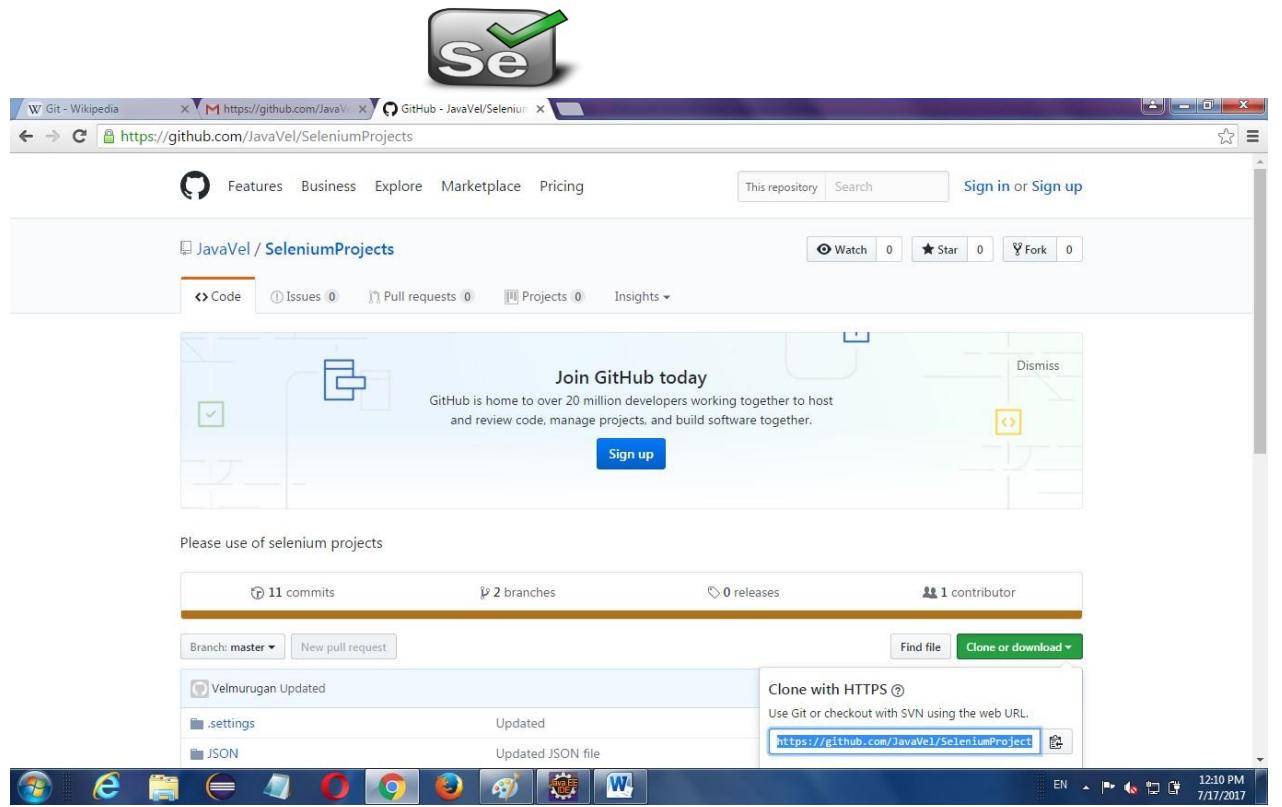
GIT:

- 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.

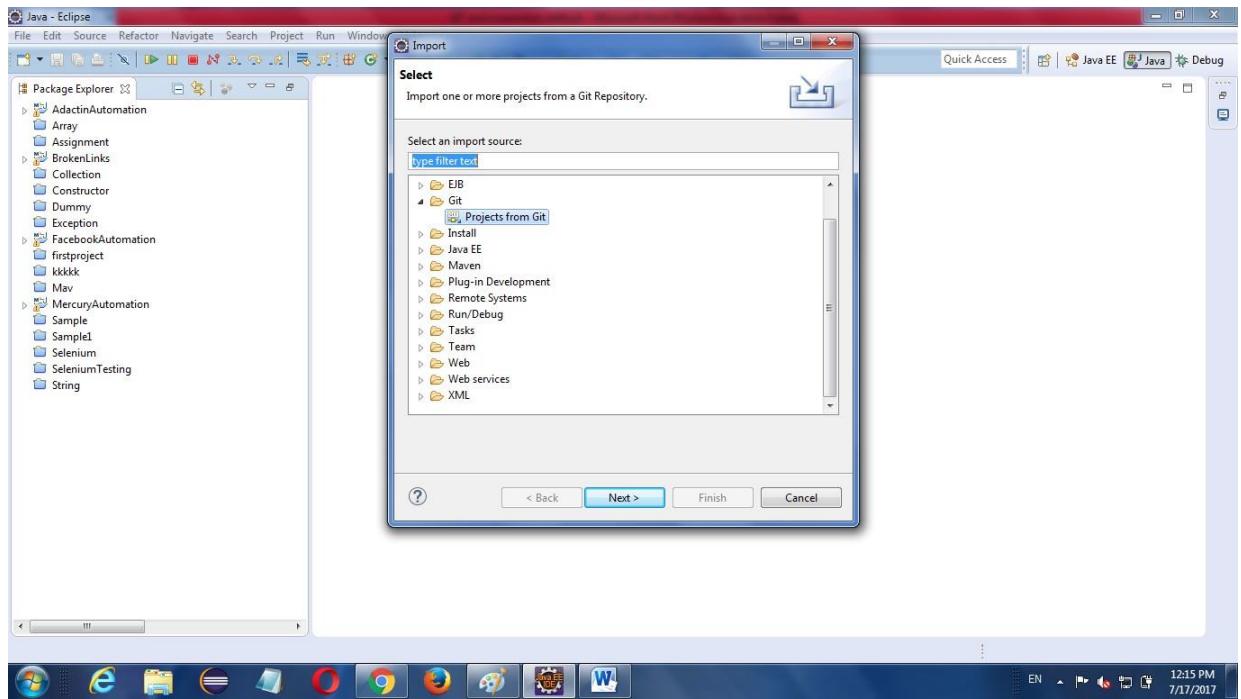


STEPS:

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

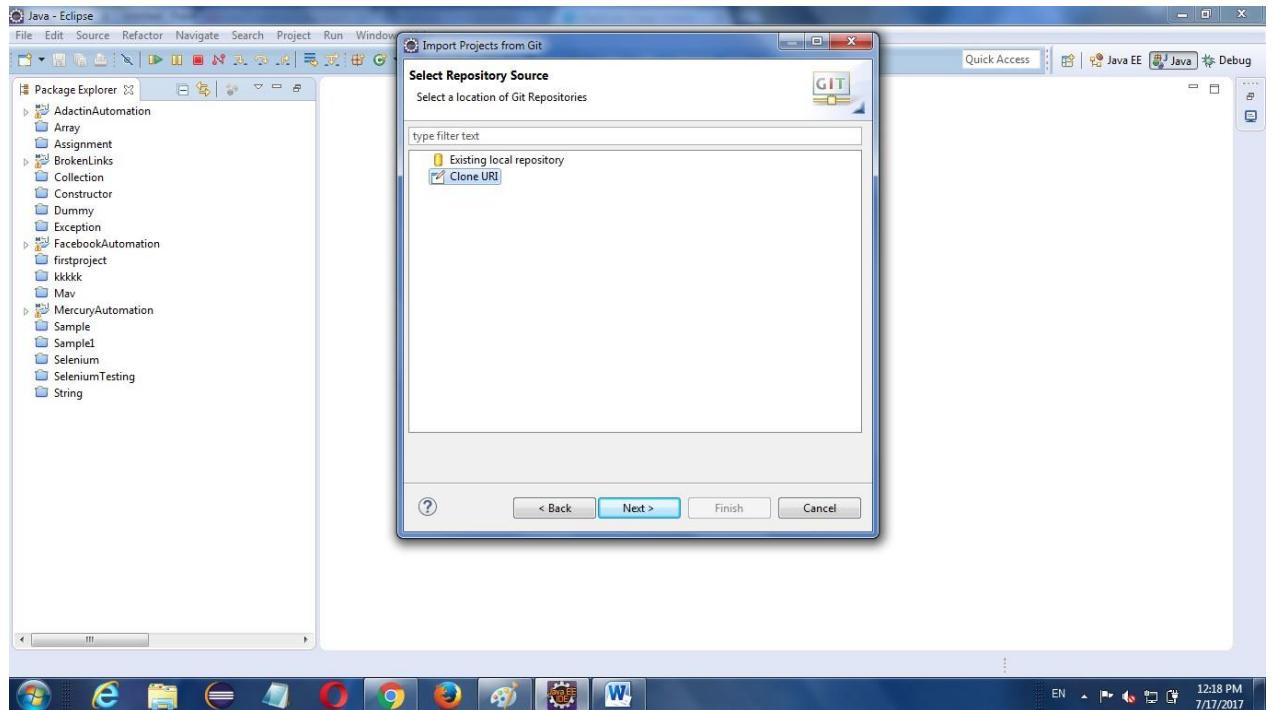


3. Copy the url from clone.
4. Open eclipse
5. In project explore, right click → import → Git → click project from Git

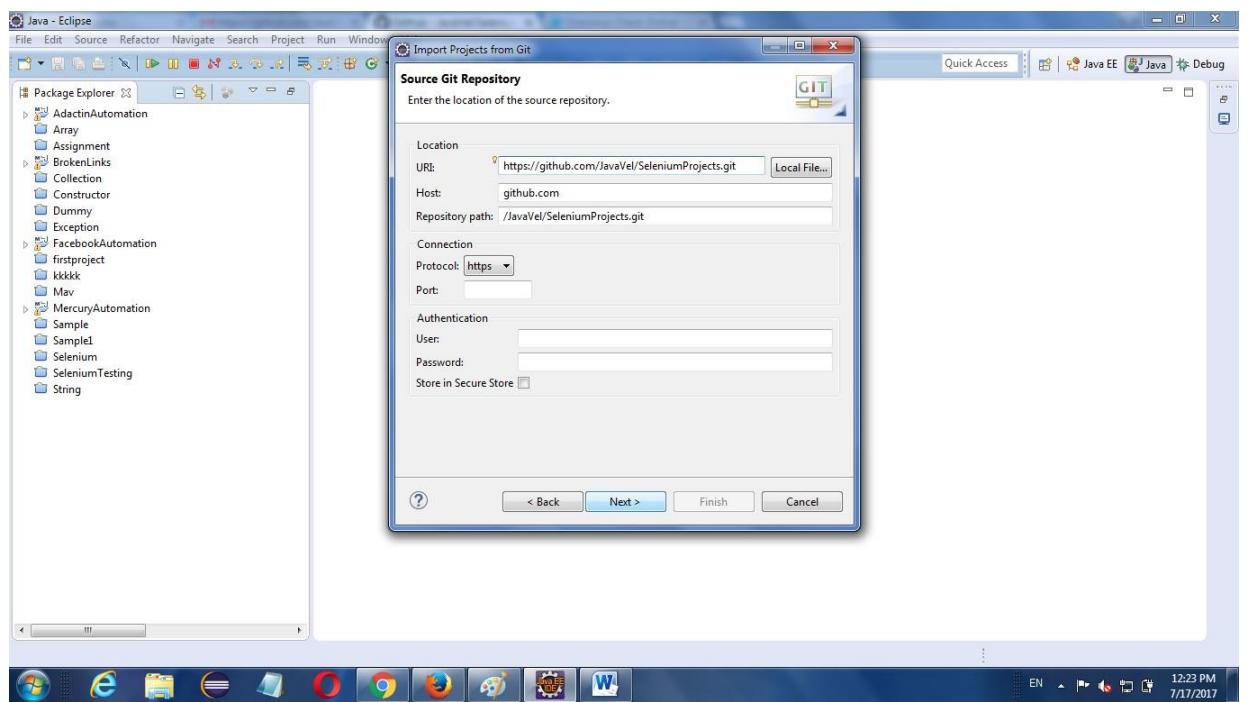




6. Click Next → clone URI → Next

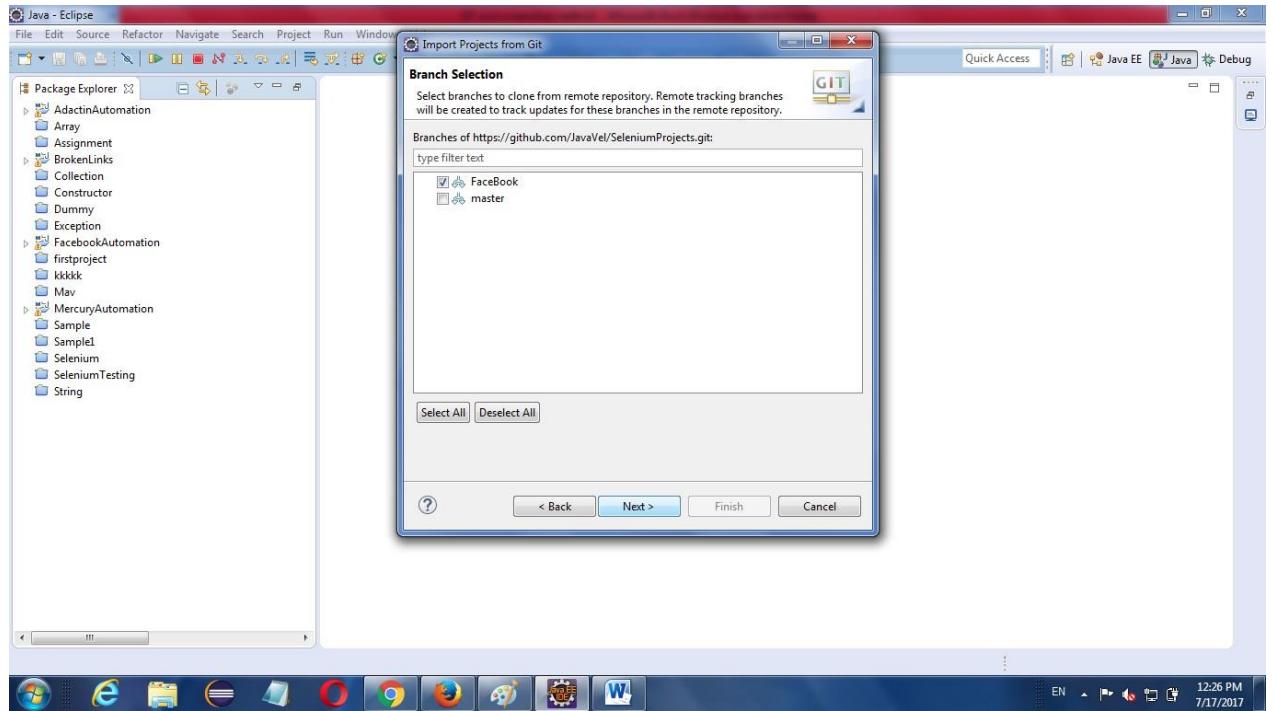


7. Paste the url in a URI → click Next

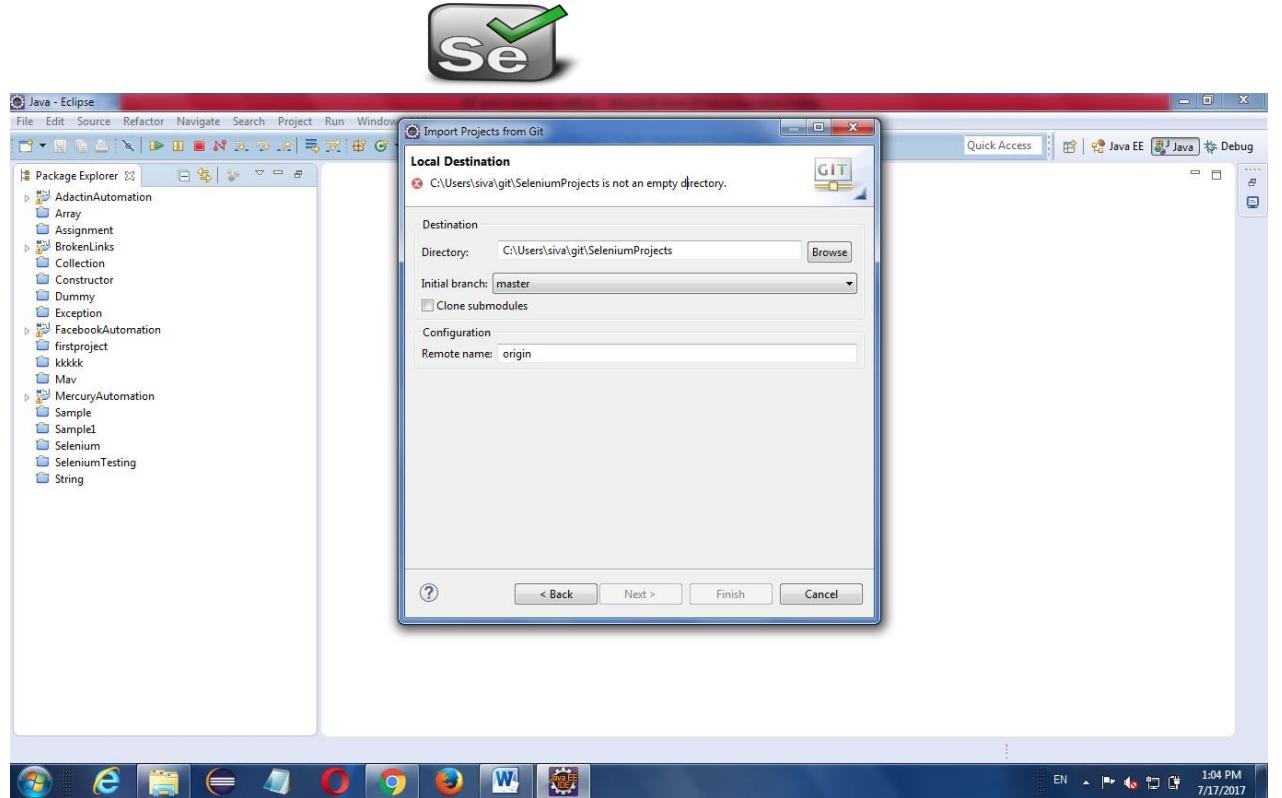




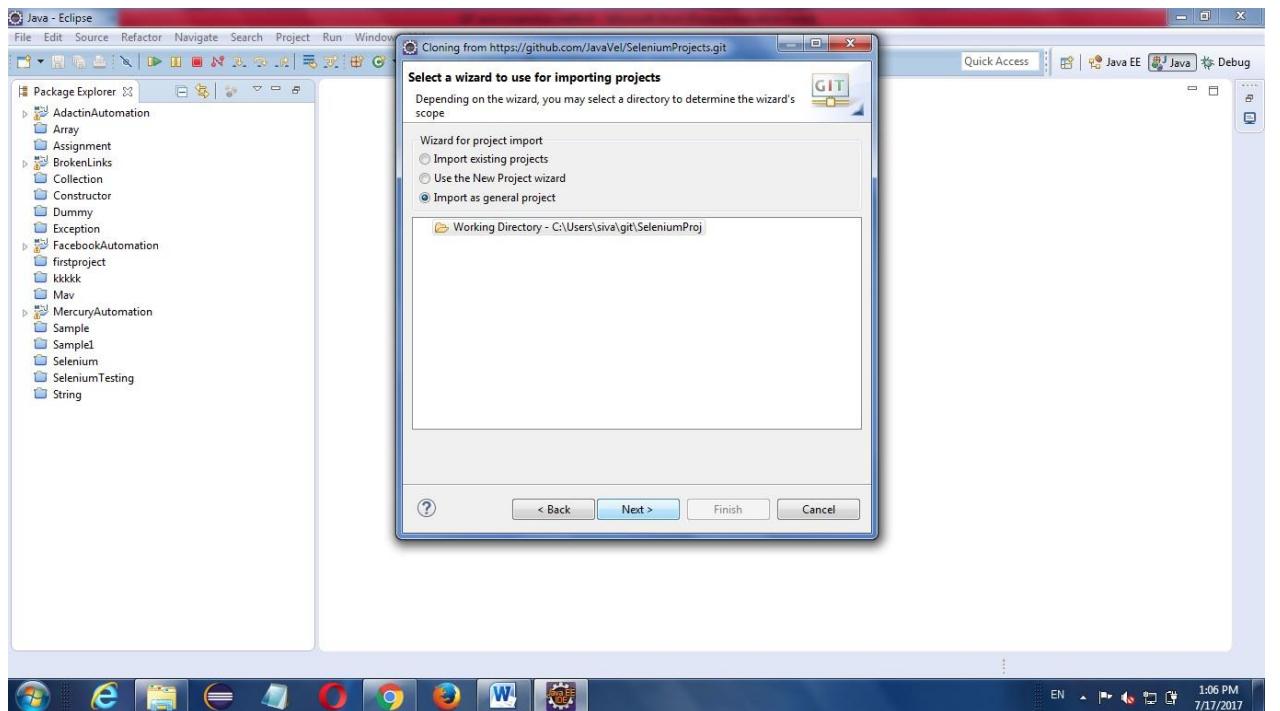
8. Select branch → click Next



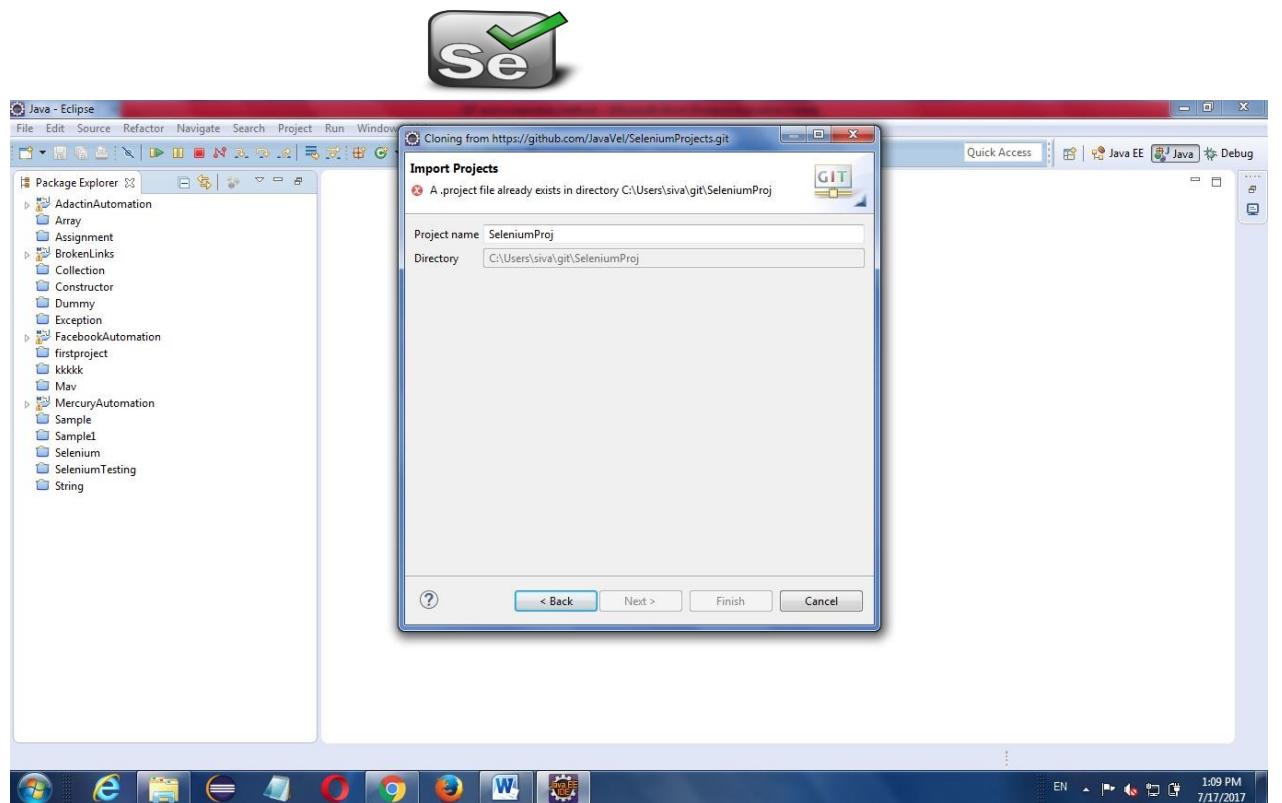
9. If we have that project we get an error message then we have to change the name and click next



10. Select import as general project and click next

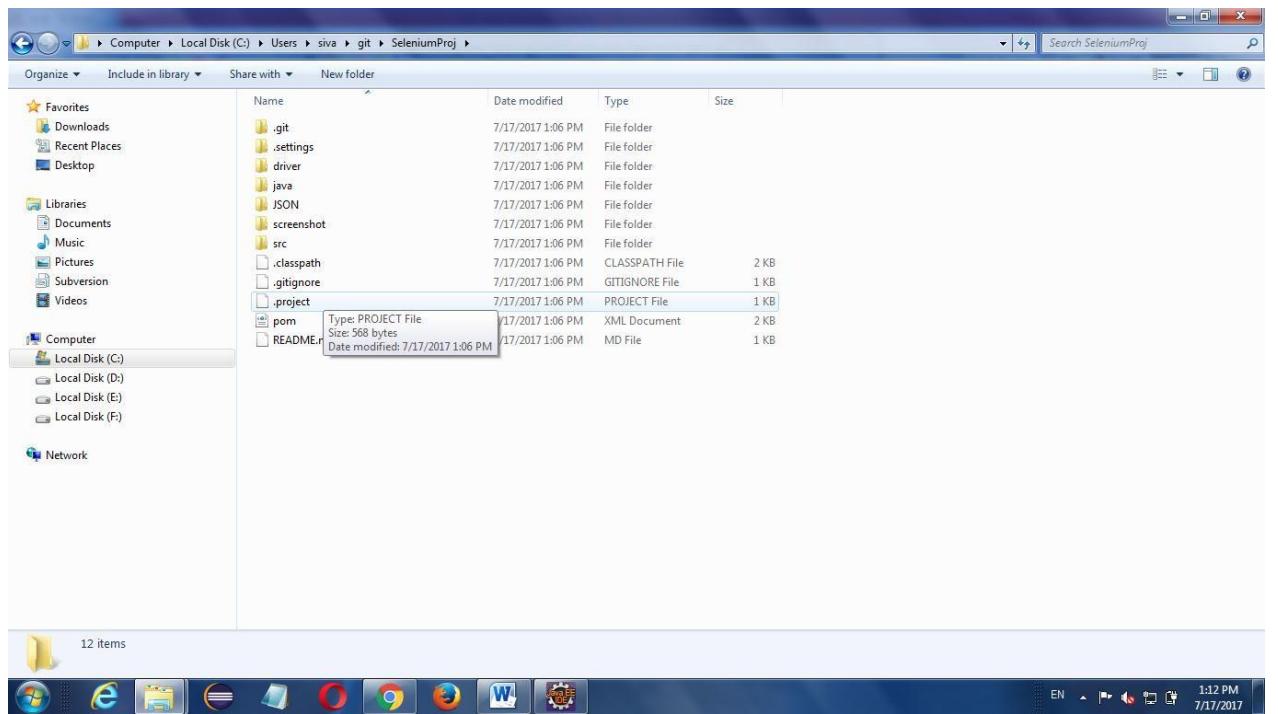


11. We get one error message (i.e.) a .project file is already exist. So we have to delete it from that location.



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

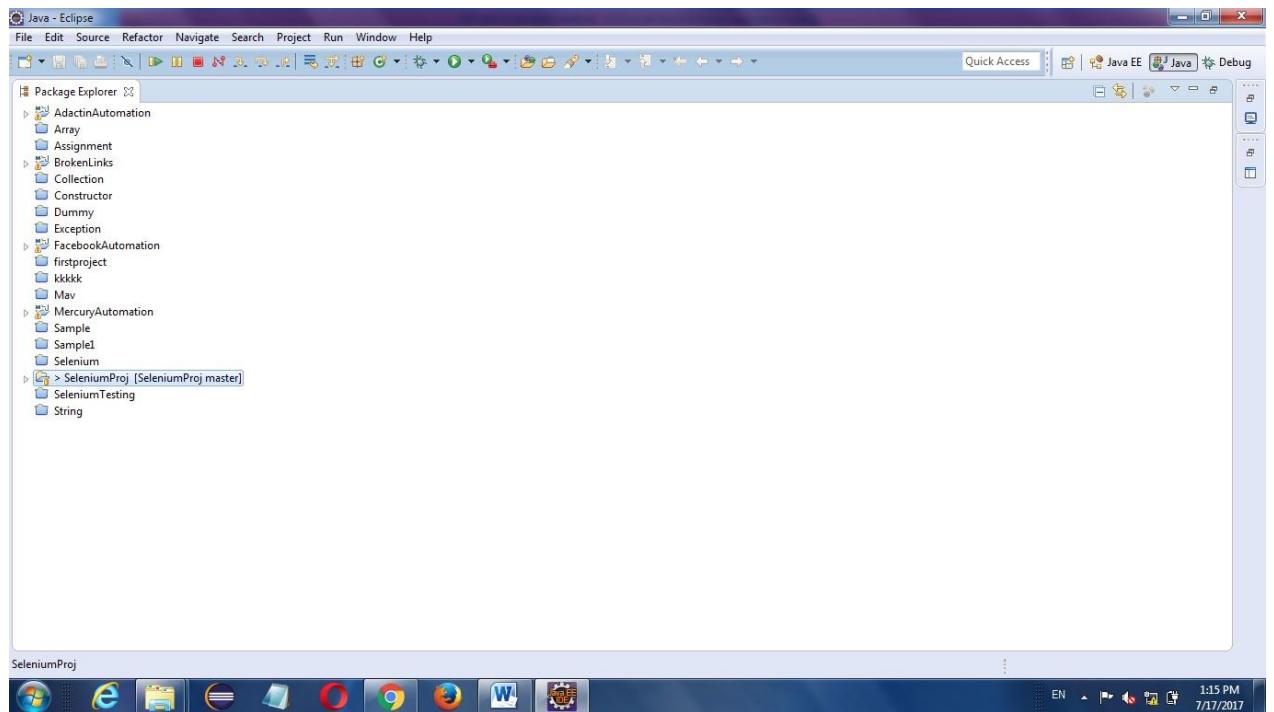
13. Delete .project file



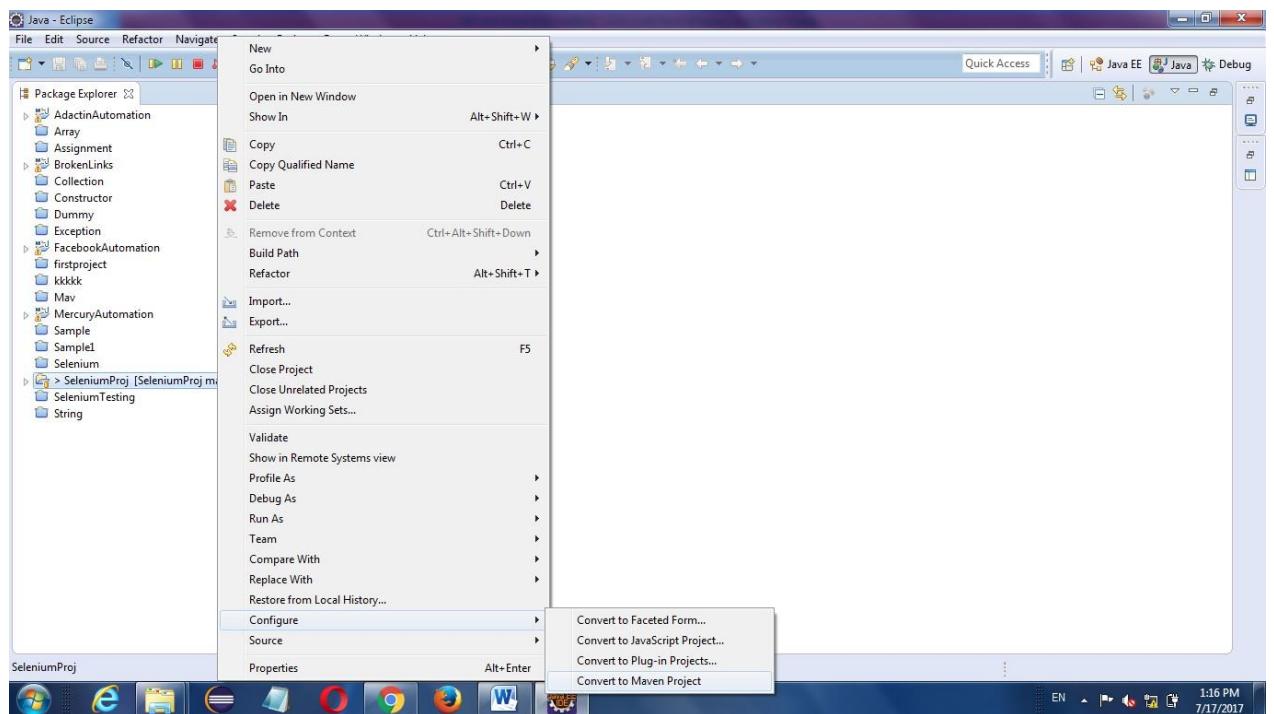
14. Go to eclipse click next → next → finish



15. Git project will be created in eclipse



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

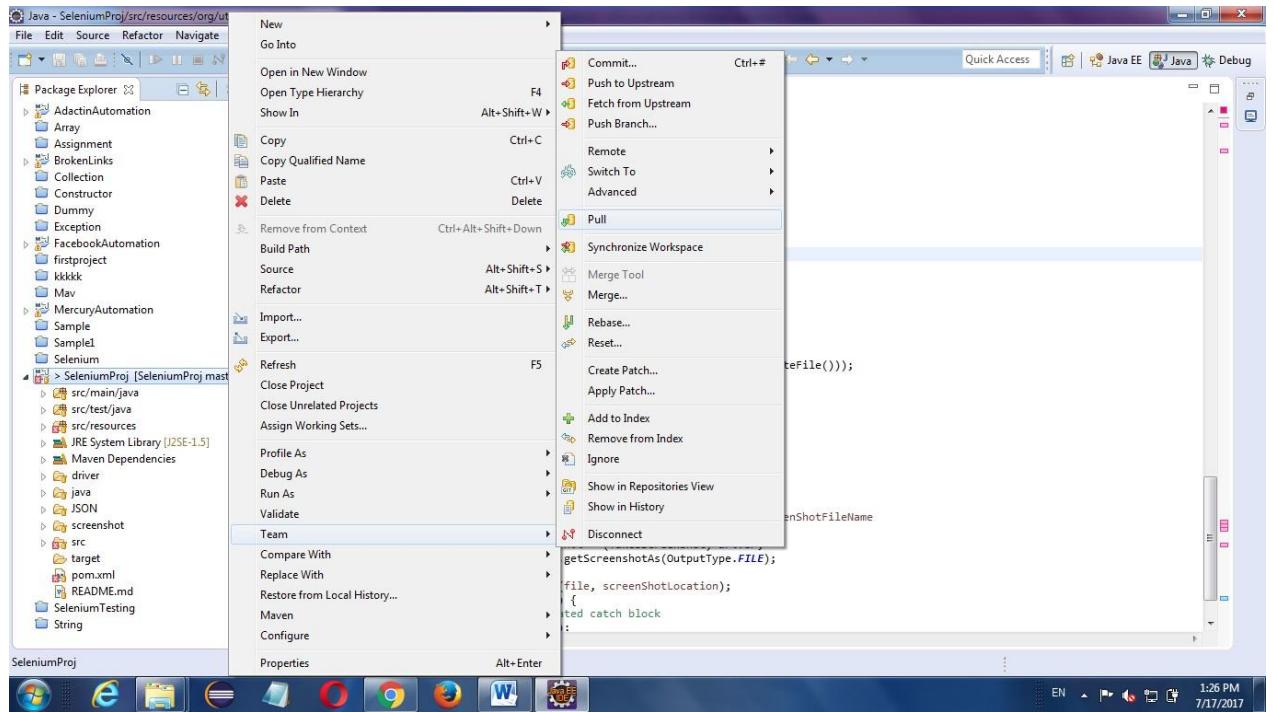


17. Then it will convert to maven project



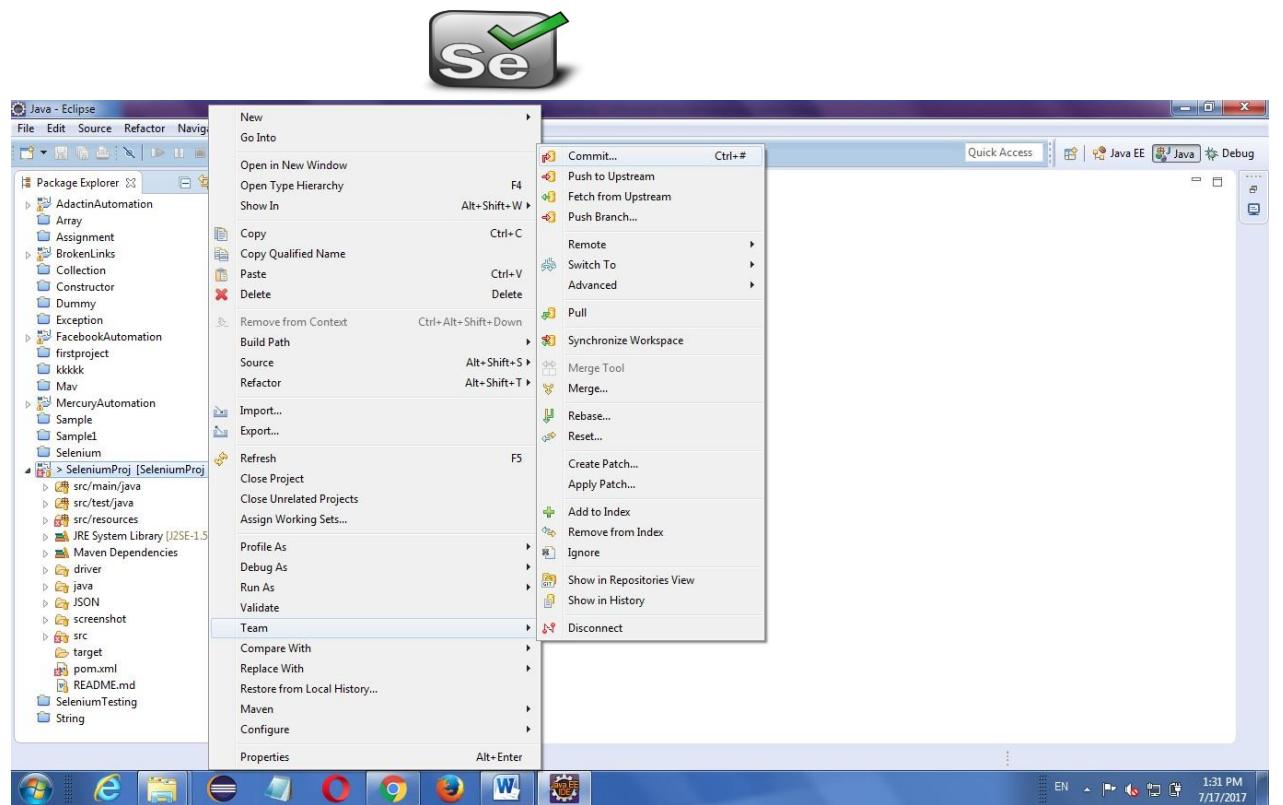
PULL:

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

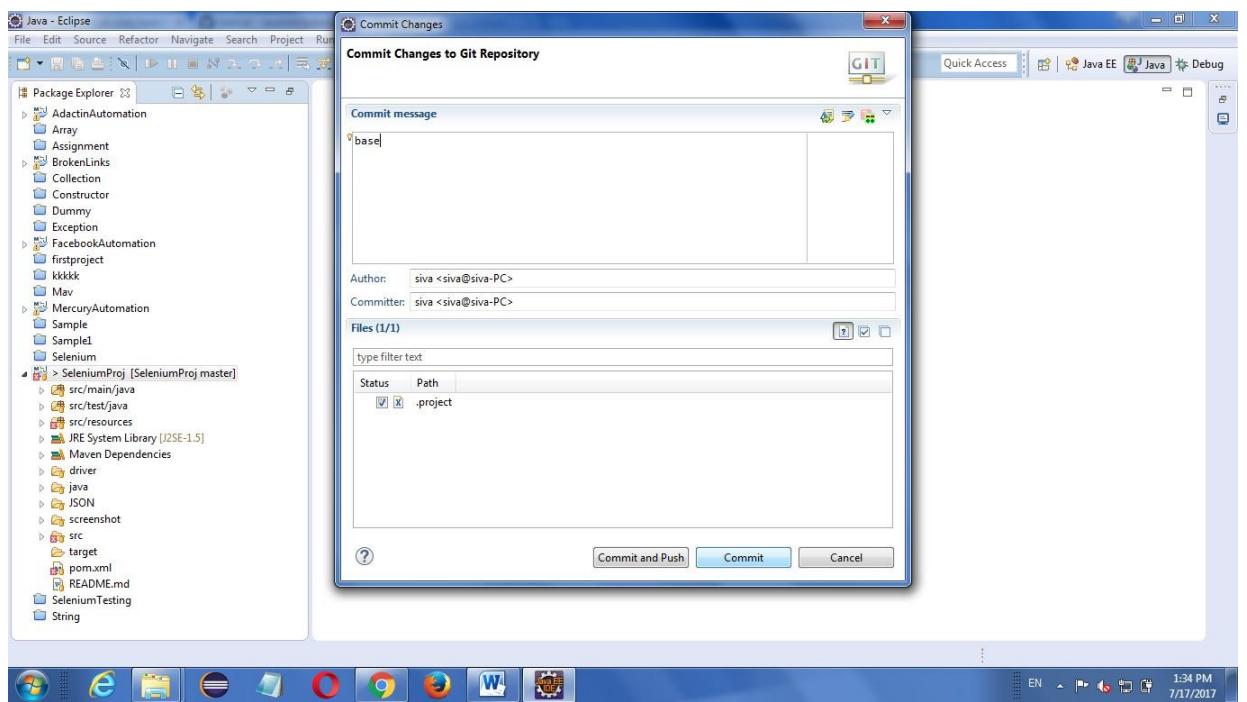


PUSH:

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

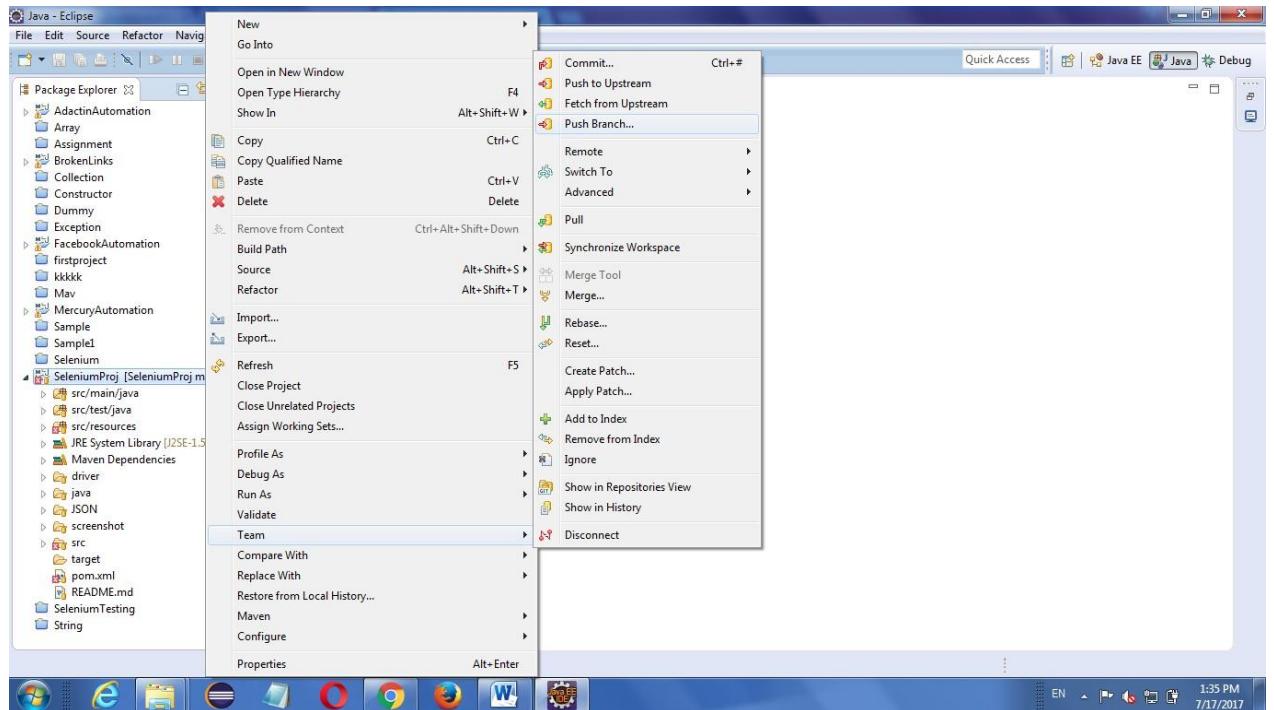


➤ Enter commit message and click enter





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



➤ Click next and give username and password and click finish

