Take Screenshots

This is the next tutorial in selenium-java series. Please go through the previous tutorials before you start this one. In the last tutorial, we learned how to handle mouse hover operation. In this tutorial we will see how to take screenshots!

What you will Learn:
1. Exercise on mouse hover
2. Take screenshots

Exercise on mouse hover

Before we look at take screenshots, let us do an exercise on mouse hover. Navigate to https://americangolf.co.uk

You would see a search field

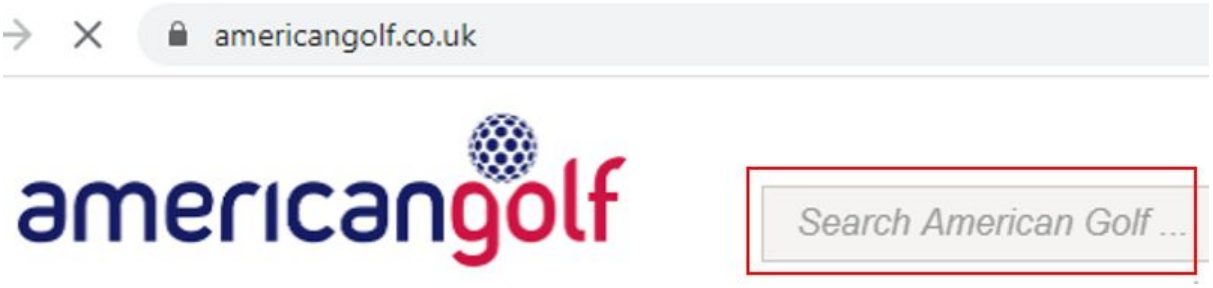


Figure 1

Let us say we want to type HELLO in the search field in capital letters. Let us simulate the user action and see how the user would perform these steps manually. The user will click the search field, press the shift key, type the text 'hello'. This results in HELLO being typed in the search field.

Let us now inspect the search field. Notice that it is represented by 'input' tag and has a unique id. So we can form an xpath: **//input[@id='q']**

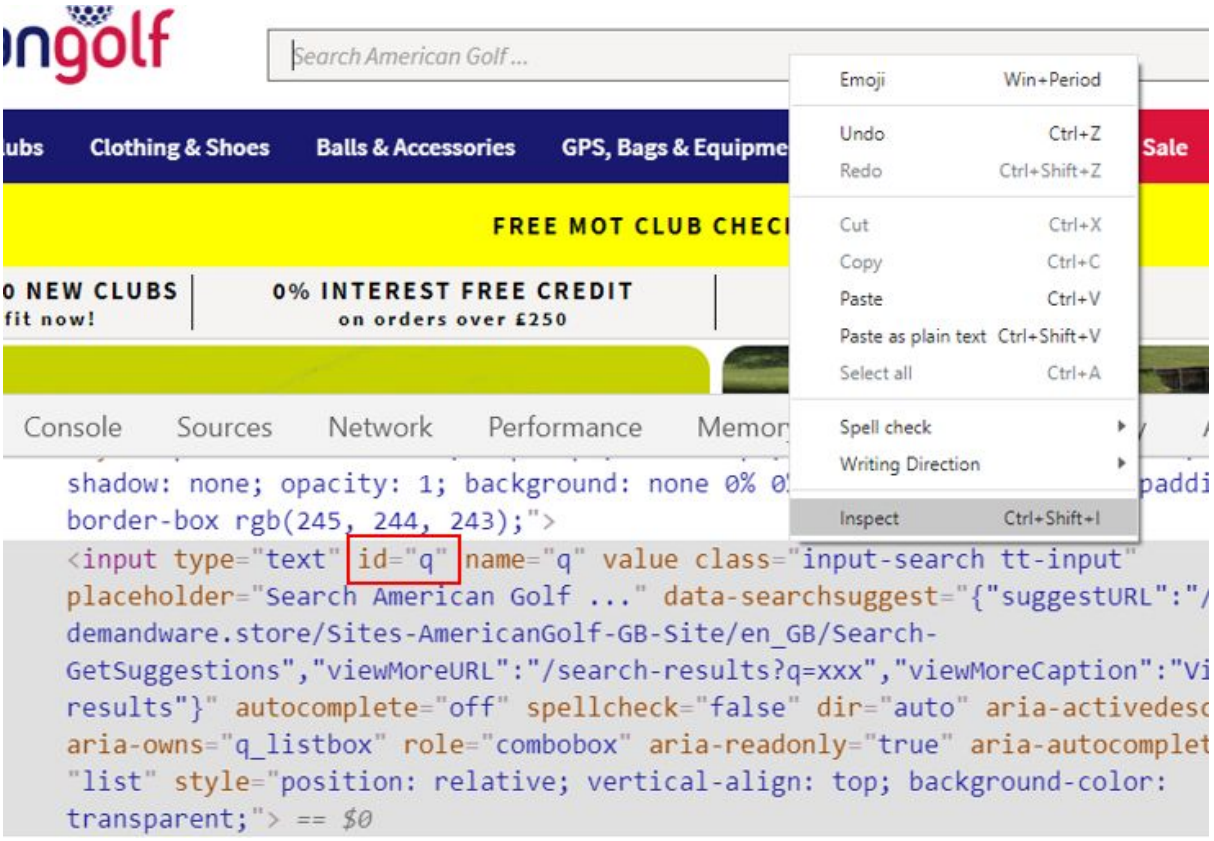


Figure 2

See the code below. In line#21, after moving to the desired element, we are clicking it, than using the 'keyDown' operation and pressing the 'Shift' key. After that we use the 'sendkeys' method to enter the text 'hello'. Do not forget to append .build().perform() at the end

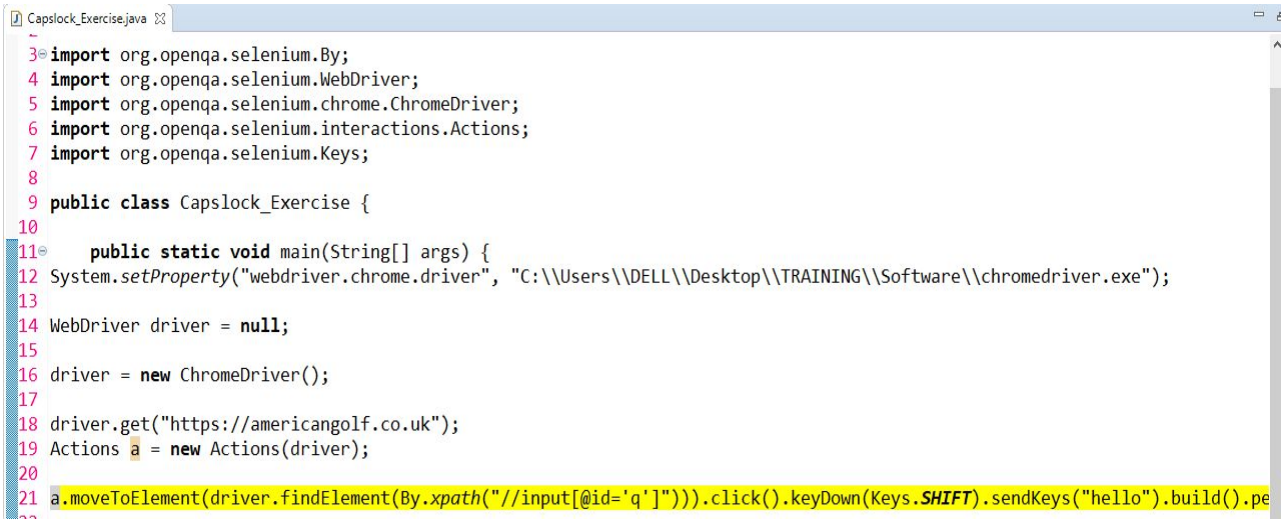


Figure 3

Run the script, notice that the text HELLO gets types in capital letters in the search box

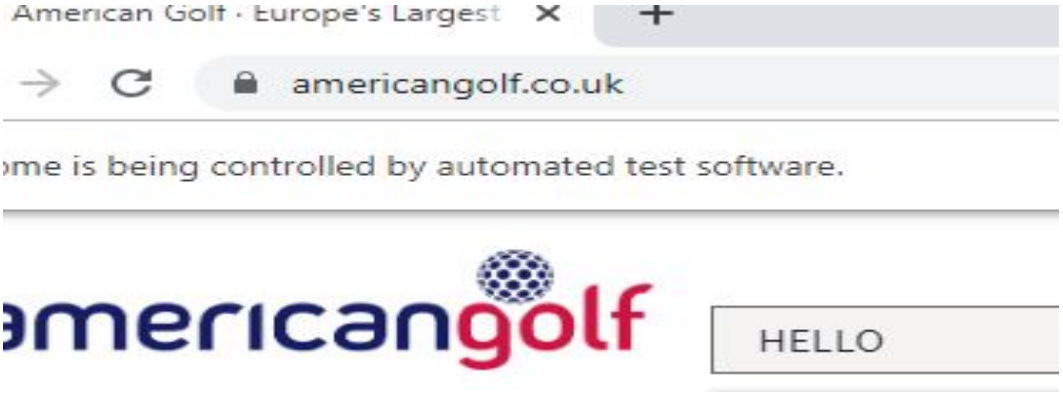


Figure 4

Take Screenshot

Sometimes, we would want to take screenshots of test cases that fail. We have *TakesScreenshot* interface to help us in taking screenshots.

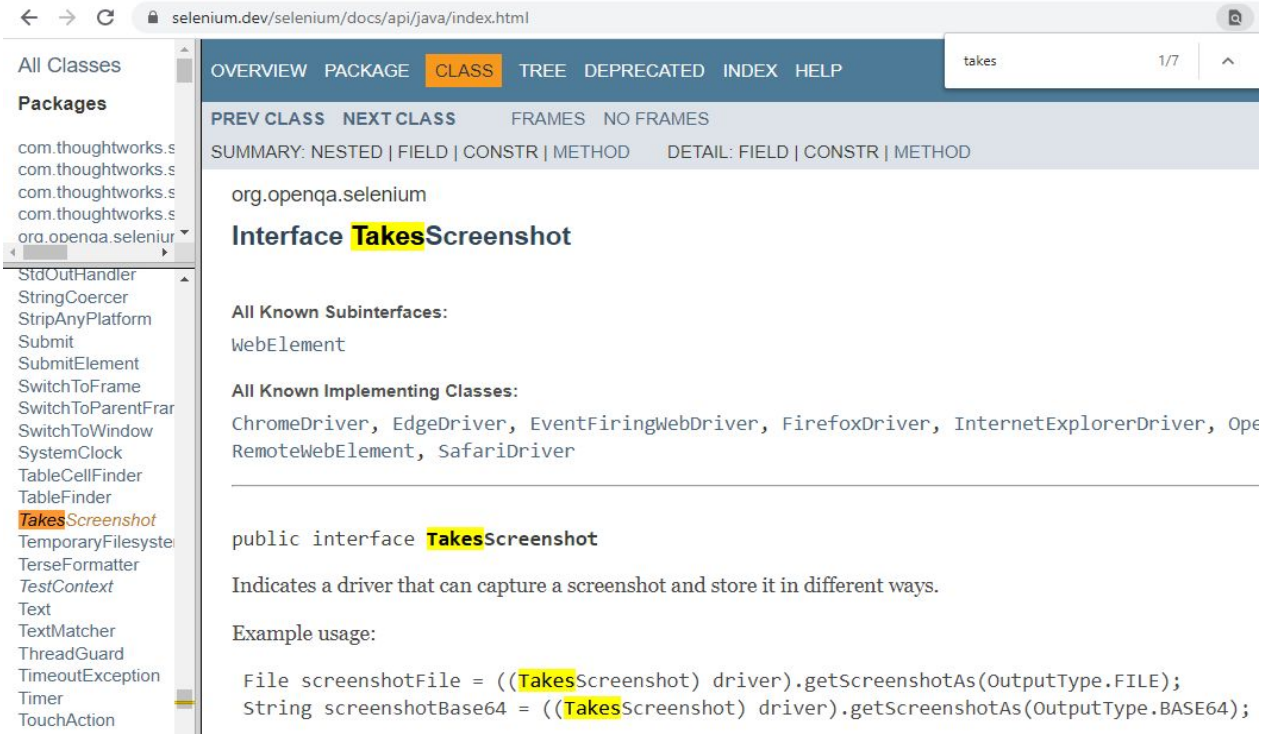


Figure 5

Let us see how we can use this. We create a 'driver' object & then cast this driver object, see line#8 below. So essentially, we have converted the webdriver object to screenshot object

```
1  import org.openqa.selenium.TakesScreenshot;
2  import org.openqa.selenium.WebDriver;
3
4  public class Screenshot {
5
6      public static void main(String[] args) {
7          WebDriver driver = null;
8          ((TakesScreenshot)driver)
```

Figure 6

Next we will use 'getScreenshotAs' function to take the screenshot whose output type would be FILE. Ensure that you have name of the methods correctly written otherwise you would get errors. Also ensure that you do the correct library imports

```
1  import org.openqa.selenium.OutputType;
2  import org.openqa.selenium.TakesScreenshot;
3  import org.openqa.selenium.WebDriver;
4
5  public class Screenshot {
6
7      public static void main(String[] args) {
8          WebDriver driver = null;
9          ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE)
```

Figure 7

Next, we will take that into a source file 'src'

```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5
6  public class Screenshot {
7
8      public static void main(String[] args) {
9          WebDriver driver = null;
10         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
11     }
```

Figure 8

Let us now add our usual System.setProperty line & navigate to any website

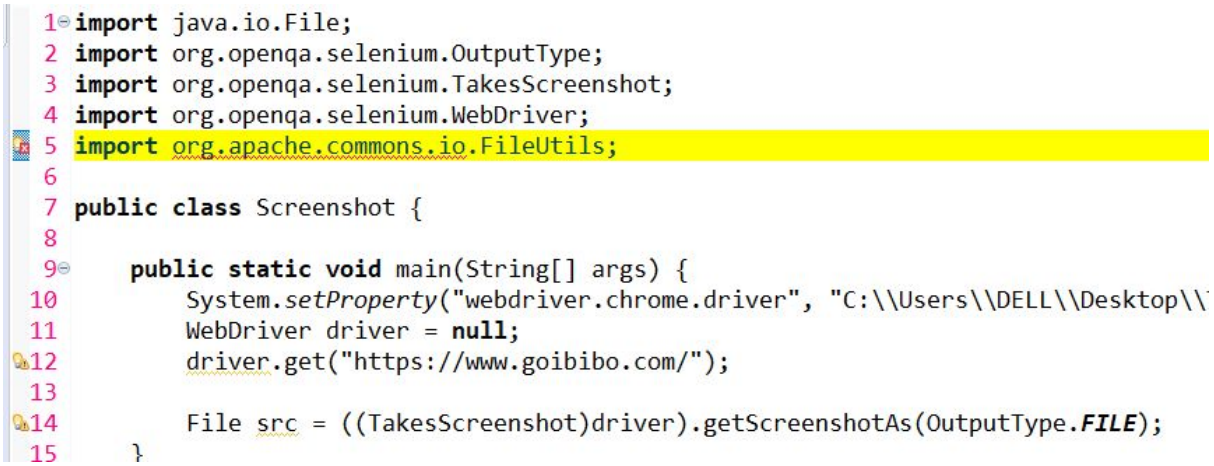
```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5
6  public class Screenshot {
7
8      public static void main(String[] args) {
9          System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Desktop
10         WebDriver driver = null;
11         driver.get("https://www.goibibo.com/");
12
13         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
14     }
```

Figure 9

So 'src' object has the screenshot, however this screenshot cannot still be viewed. After taking screenshot, we will copy this screenshot to a new png file so that this file can be viewed. To achieve this, make sure to import the below package:

import org.apache.commons.io.FileUtils;

You will still get an error as seen below



```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5  import org.apache.commons.io.FileUtils;
6
7  public class Screenshot {
8
9      public static void main(String[] args) {
10         System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Desktop\\
11         WebDriver driver = null;
12         driver.get("https://www.goibibo.com/");
13
14         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
15     }
```

Figure 10

Navigate to http://commons.apache.org/proper/commons-io/

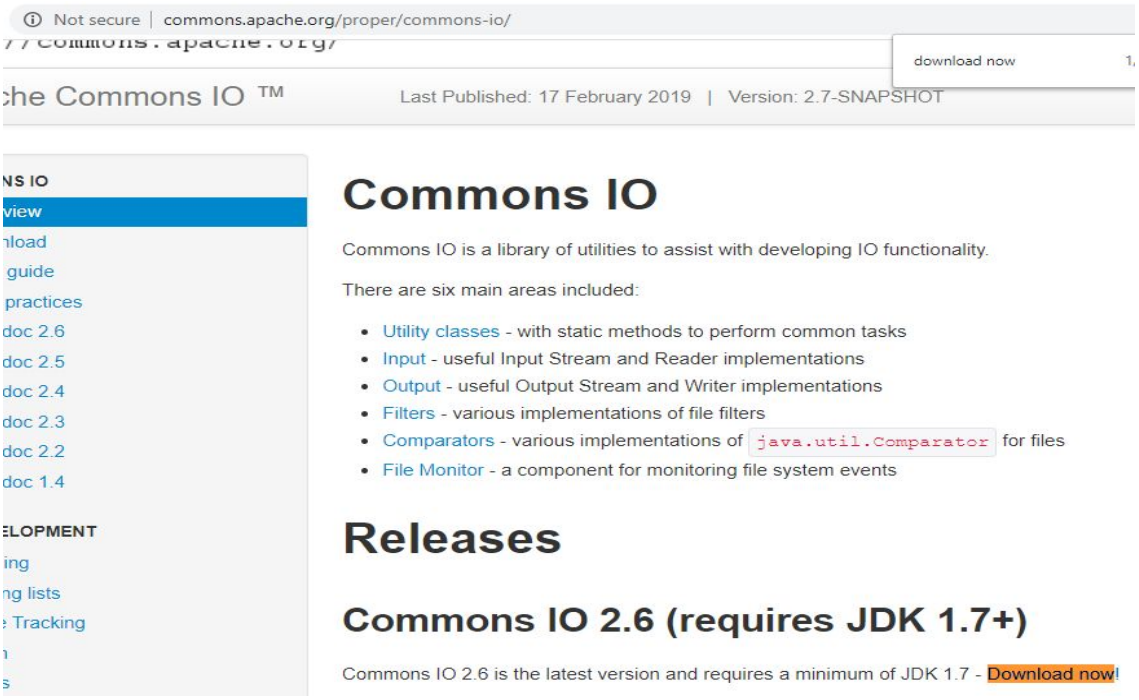


Figure 11

Click 'Download now' link that you see above

Click zip file and download it

Figure 12

Unzip the directory

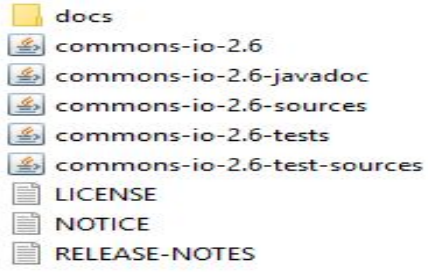


Figure 13

Add it to your project as external jars

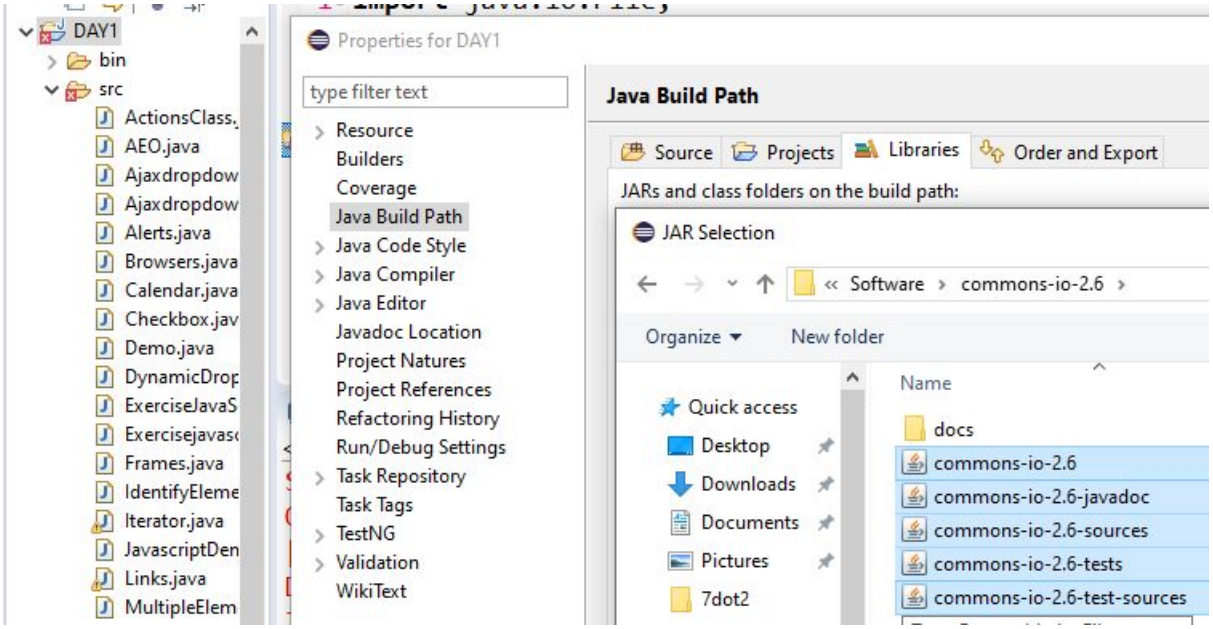


Figure 14

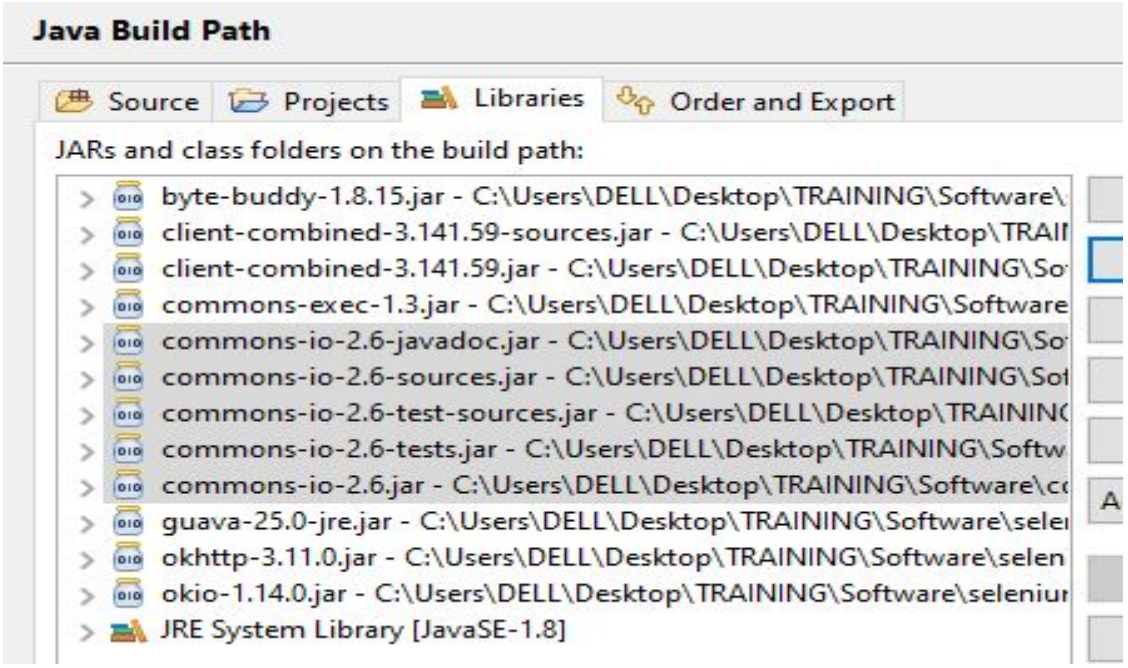


Figure 15

See below, you should not see the error anymore, the error should disappear

```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5  import org.apache.commons.io.FileUtils;
6
7  public class Screenshot {
8
9      public static void main(String[] args) {
10         System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Deskto
11         WebDriver driver = null;
12         driver.get("https://www.goibibo.com/");
13
14         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
15     }
```

Figure 16

Now we will use the methods of 'FileUtils' class to copy the source file to a destination

```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5  import org.apache.commons.io.FileUtils;
6
7  public class Screenshot {
8
9      public static void main(String[] args) {
10         System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Deskto
11         WebDriver driver = null;
12         driver.get("https://www.goibibo.com/");
13
14         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
15         FileUtils.copyFile(srcFile, destFile);
```

Figure 17

Mention source and destination, see line#15 below

```
1  import java.io.File;
2  import org.openqa.selenium.OutputType;
3  import org.openqa.selenium.TakesScreenshot;
4  import org.openqa.selenium.WebDriver;
5  import org.apache.commons.io.FileUtils;
6
7  public class Screenshot {
8
9      public static void main(String[] args) {
10         System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Desktop\\TRAINING\\Software\\cl
11         WebDriver driver = null;
12         driver.get("https://www.goibibo.com/");
13
14         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
15         FileUtils.copyFile(src, new File("C:\\Users\\DELL\\Desktop\\TRAINING\\temp\\screenshot.png"));
16     }
```

Figure 18

We see an error at line#15. Fix the error by adding exception, we see the error disappears

```
public static void main(String[] args) throws IOException {
    System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Desktop\\TRAINING\\Software\\chromedriver.exe");
    WebDriver driver = null;

    driver.get("https://www.goibibo.com/");

    File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
    FileUtils.copyFile(src, new File("C:\\Users\\DELL\\Desktop\\TRAINING\\temp\\screenshot.png"));
}
```

Figure 19

Initiate driver (see line#14 below)

Screenshot.java

```
1  import java.io.File;
2  import java.io.IOException;
3  import org.openqa.selenium.OutputType;
4  import org.openqa.selenium.TakesScreenshot;
5  import org.openqa.selenium.WebDriver;
6  import org.openqa.selenium.chrome.ChromeDriver;
7  import org.apache.commons.io.FileUtils;
8
9  public class Screenshot {
10
11     public static void main(String[] args) throws IOException {
12         System.setProperty("webdriver.chrome.driver", "C:\\Users\\DELL\\Desktop\\TRAINING\\Software\\cl
13         WebDriver driver = null;
14         driver = new ChromeDriver();
15         driver.get("https://www.goibibo.com/");
16
17         File src = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);
18         FileUtils.copyFile(src, new File("C:\\Users\\DELL\\Desktop\\TRAINING\\temp\\screenshot.png"));
19     }
```

Figure 20

As of now the below destination location is empty

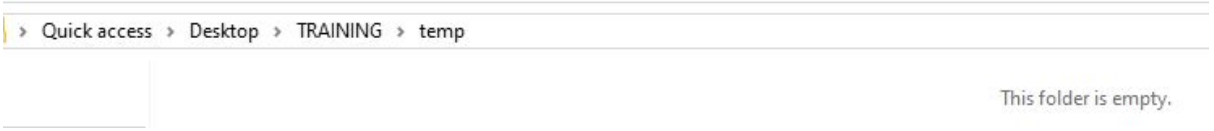


Figure 21

Run the script and wait for the website to launch

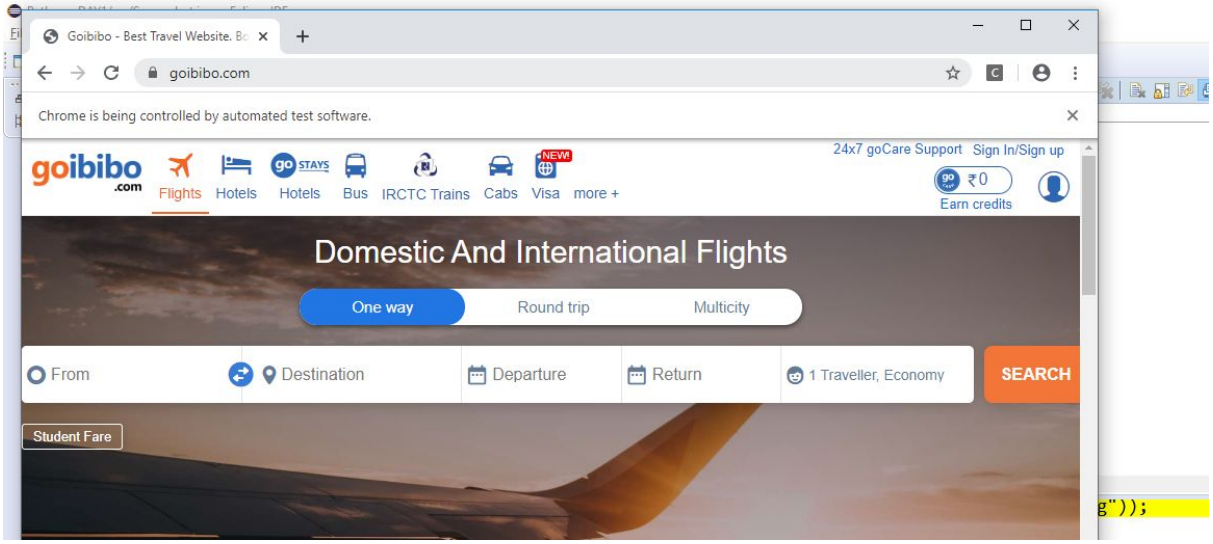


Figure 22

Now go to the destination location, screenshot.png is generated

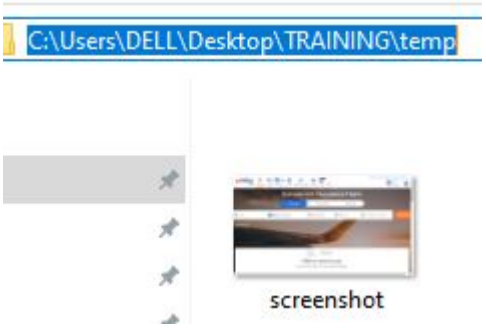


Figure 23

Open the png file. So this is how we can capture the screenshots!

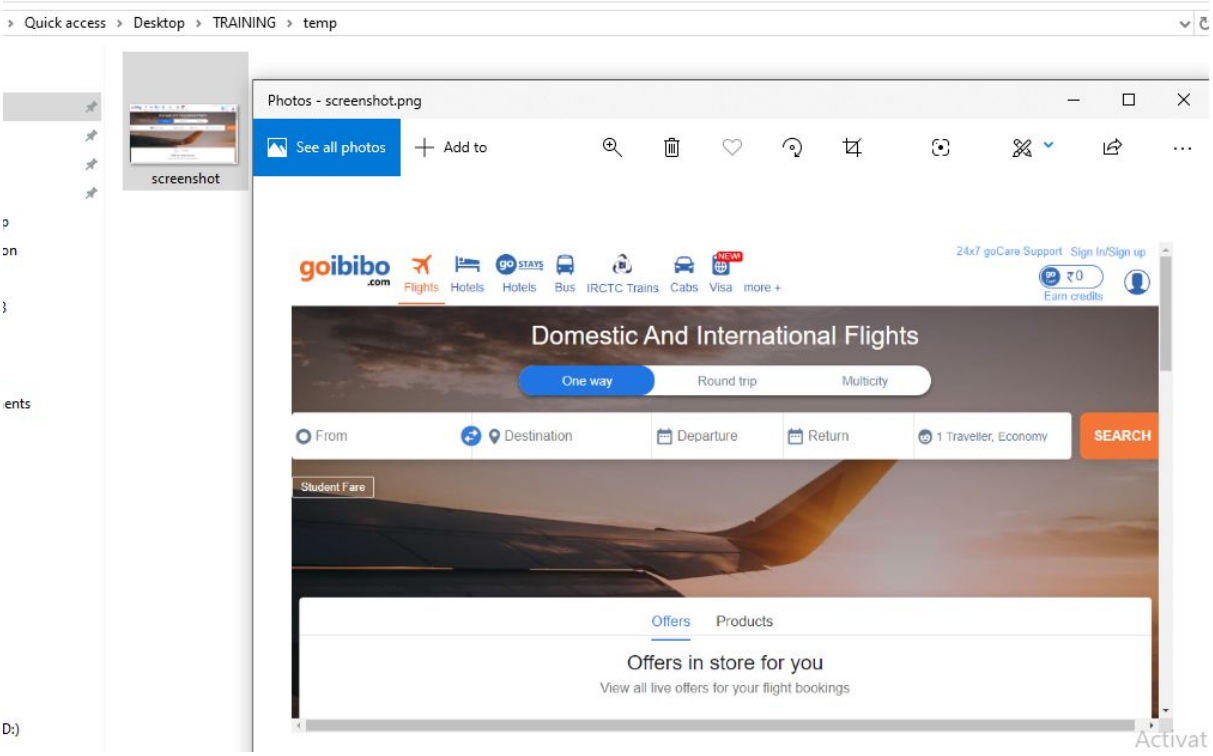


Figure 23

Thanks for reading!