**Screenshot in Selenium WebDriver:**

Screenshots are desirable for bug analysis. Selenium can automatically take screenshots during execution.

Some of the scenarios we may need to capture screenshot using Selenium WebDriver.

* Application issues
* Assertion Failure
* Difficulty to find Webelements on the web page
* Timeout to find Webelements on the web page

Suppose we write a test script to automate a web page, we would not keep monitoring to see if it’s working right every time. We would let the script do its job and we’d be occupied in some other automation work.

* Screenshots help us in understanding the flow of application and checks if it is behaving accordingly.
* We need to typecast WebDriver instance to TakesScreenshot.
* It helps while we are performing cross-browsing testing as the user requires to view the reports of the execution
* Tracking the execution would become much easy if we are working on a headless browser.
* Screenshot of the tests that failed can also be easily captured.

To capture a screenshot in Selenium, we can make use of an interface, called TakesScreenshot.

In order to capture screenshot and store it in a particular location, there is a method called “getScreenshotAs“.

For WebDriver extending TakesScreenshot method, it depends on the browser to return the screenshot in a preferable order:

* The entire page
* Current window
* Visible portion of the current frame
* A screenshot of the entire display containing the browser
* The entire content of the HTML element – The visible portion of the HTML element

**Taking Screenshot in Selenium is a 3 Step process**

Step 1) Convert web driver object to TakesScreenshot

TakesScreenshot scrShot =((TakesScreenshot)webdriver);

Step 2) Call getScreenshotAs method to create image file

File SrcFile=scrShot.getScreenshotAs(OutputType.FILE);

Step 3) Copy file to Desired Location

C:\\Users\\t-deva1\\Desktop\\Testsnapshot.png

**Single screenshot:** Replace the previous screenshot in the same location

**import** java.io.File;

**import** java.io.IOException;

**import** org.apache.commons.io.FileUtils;

**import** org.openqa.selenium.OutputType;

**import** org.openqa.selenium.TakesScreenshot;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.firefox.FirefoxDriver;

**public** **class** CaptureScreenshotDemoTC {

**public** **static** **void** main(String[] args) {

WebDriver driver = **new** FirefoxDriver();// Open Firefox

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

driver.get("https://www.cleartrip.com/");//open the url

// Take screenshot and store as a file format

File src= ((TakesScreenshot)driver).getScreenshotAs(OutputType.***FILE***);

**try** {

// now copy the screenshot to desired location using copyFile //method

FileUtils.*copyFile*(src, **new** File("C:\\Users\\t-deva1\\Desktop\\Testsnapshot.png"));

}

**catch** (IOException e)

{

System.***out***.println(e.getMessage());

}

driver.close();

}

}

**Multiple screenshot:** create a method and call it multiple times in the script

**import** java.io.File;

**import** java.io.IOException;

**import** org.apache.commons.io.FileUtils;

**import** org.openqa.selenium.OutputType;

**import** org.openqa.selenium.TakesScreenshot;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.firefox.FirefoxDriver;

**public** **class** CaptureScreenshotDemoTC {

**public** **static** WebDriver *driver*;

**public** **void** confgBrow() **throws** IOException{

*driver* = **new** FirefoxDriver();// Open Firefox

// call method

CaptureScreenshotDemoTC.*captureScreenShot*(*driver*);

*driver*.get("https://www.cleartrip.com/");//open the url

// Maximize the window

*driver*.manage().window().maximize();

*captureScreenShot*(*driver*);

// Pass the url

*driver*.get("http://www.google.com");

*captureScreenShot*(*driver*);

}

**public** **static** **void** captureScreenShot(WebDriver ldriver) **throws** IOException{

// Take screenshot and store as a file format

File src=((TakesScreenshot)ldriver).getScreenshotAs(OutputType.***FILE***);

**try** {

// now copy the screenshot to desired location using copyFile method

FileUtils.*copyFile*(src, **new** File("C:\\Users\\t-deva1\\Desktop\\TestScreenshots\\"+System.*currentTimeMillis*()+".png"));

}

**catch** (IOException e)

{

System.***out***.println(e.getMessage());

}

}

**public** **static** **void** main(String[] args) **throws** IOException {

CaptureScreenshotDemoTC cst = **new** CaptureScreenshotDemoTC();

cst.confgBrow();

*driver*.close();

}

}

Keep method name to screenshots using TestNG

<https://stackoverflow.com/questions/29043315/create-dynamic-file-names-for-screenshots-selenium-webdriver>

**Reference links:**

<http://learn-automation.com/how-to-capture-screenshot-in-selenium-webdriver/>

<https://www.testingexcellence.com/how-to-capture-screenshots-using-webdriver-in-java/>

<https://www.softwaretestingmaterial.com/capture-screenshot-using-selenium-webdriver/>

<https://www.edureka.co/blog/how-to-take-a-screenshot-in-selenium-webdriver/>

<http://demo.guru99.com/test/guru99home/>

<https://www.seleniumeasy.com/selenium-tutorials/take-screenshot-with-selenium-webdriver>

<https://www.guru99.com/take-screenshot-selenium-webdriver.html>

<https://dzone.com/articles/using-selenium-webdriver-for-full-page-screenshots>

**Entire Page Screenshot, WebElement Screenshot and Viewable Area’s Screenshot**

<https://www.swtestacademy.com/screenshot-selenium-webdriver/>

To practice with user defined names and different names for multiple screenshots.

<https://sqa.stackexchange.com/questions/17756/how-to-take-screenshot-save-it-with-different-filenames-by-using-selenium-ja>

<https://blog.webnersolutions.com/take-screenshots-and-name-file-using-timestamp-in-selenium>​

public void screenShot() throws IOException, InterruptedException

{

File scr = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

File dest = new File("filPath/image1.png");

FileUtils.copyFile(scr, dest);

}

Generate a unique filename for each save

public void screenShot() throws IOException, InterruptedException {

File scr = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

String filename = new SimpleDateFormat("yyyyMMddhhmmss'.txt'").format(new Date());

File dest = new File("filePath/" + filename);

FileUtils.copyFile(scr, dest);

}

Give your screenShot() function a filename parameter and pass a unique filename in each call

public void screenShot(string filename) throws IOException, InterruptedException {

File scr = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

File dest = new File("filePath/" + filename);

FileUtils.copyFile(scr, dest);

}