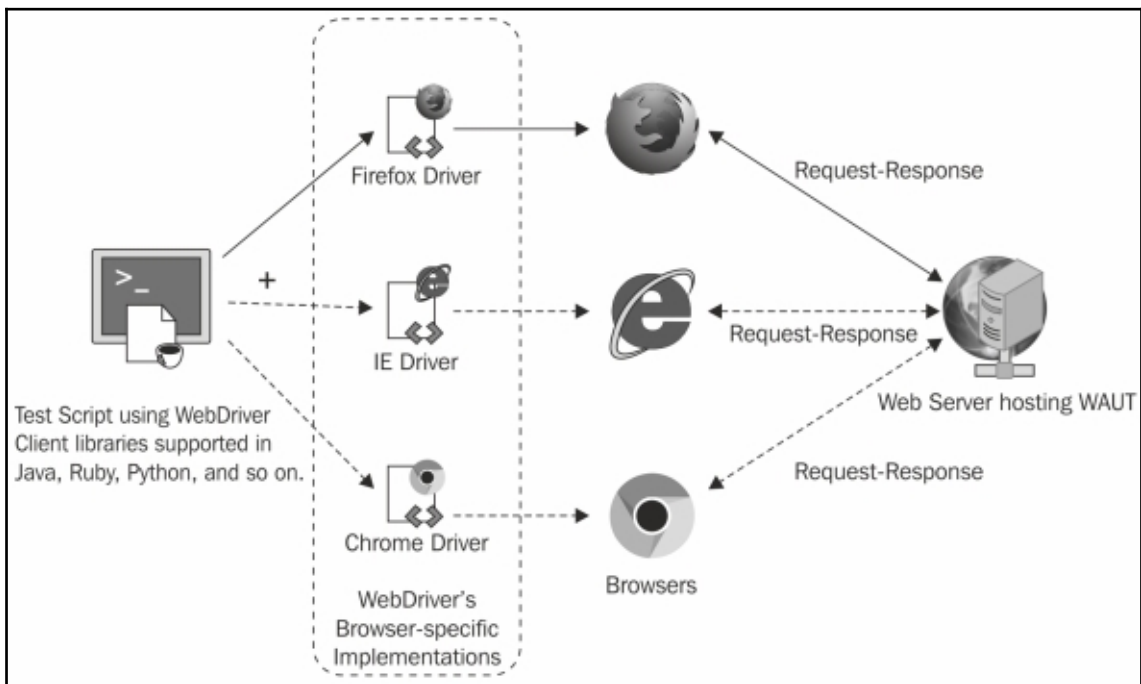


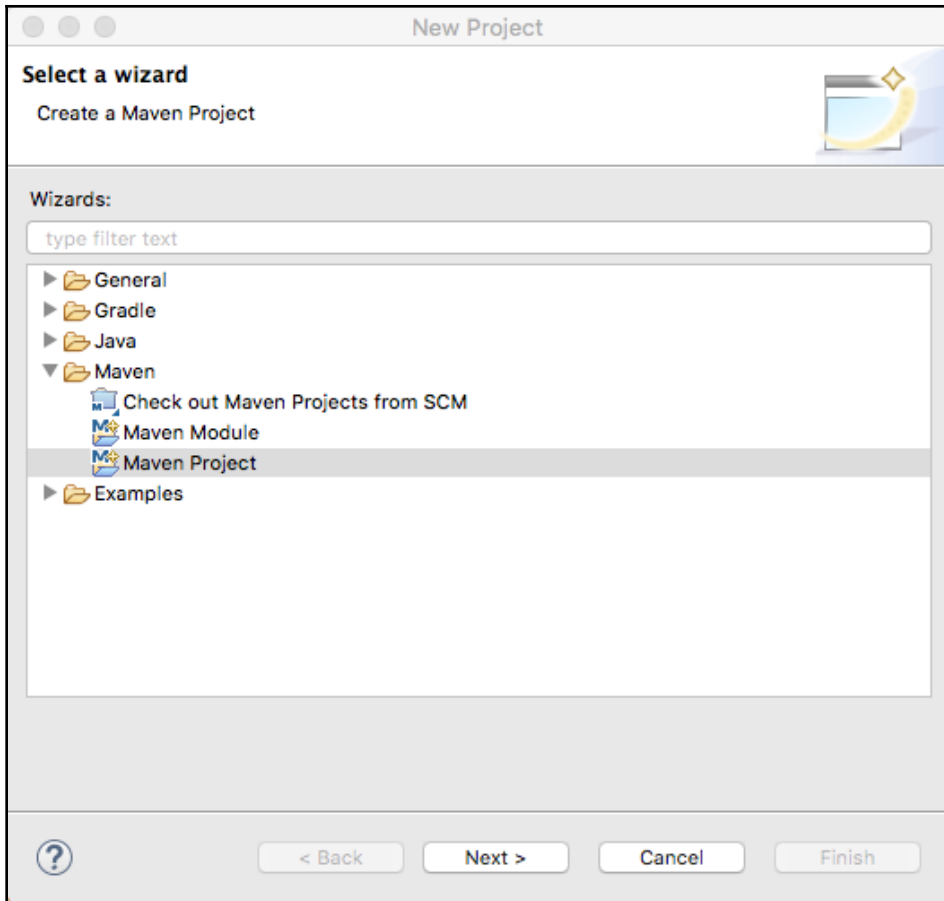
Table of Contents

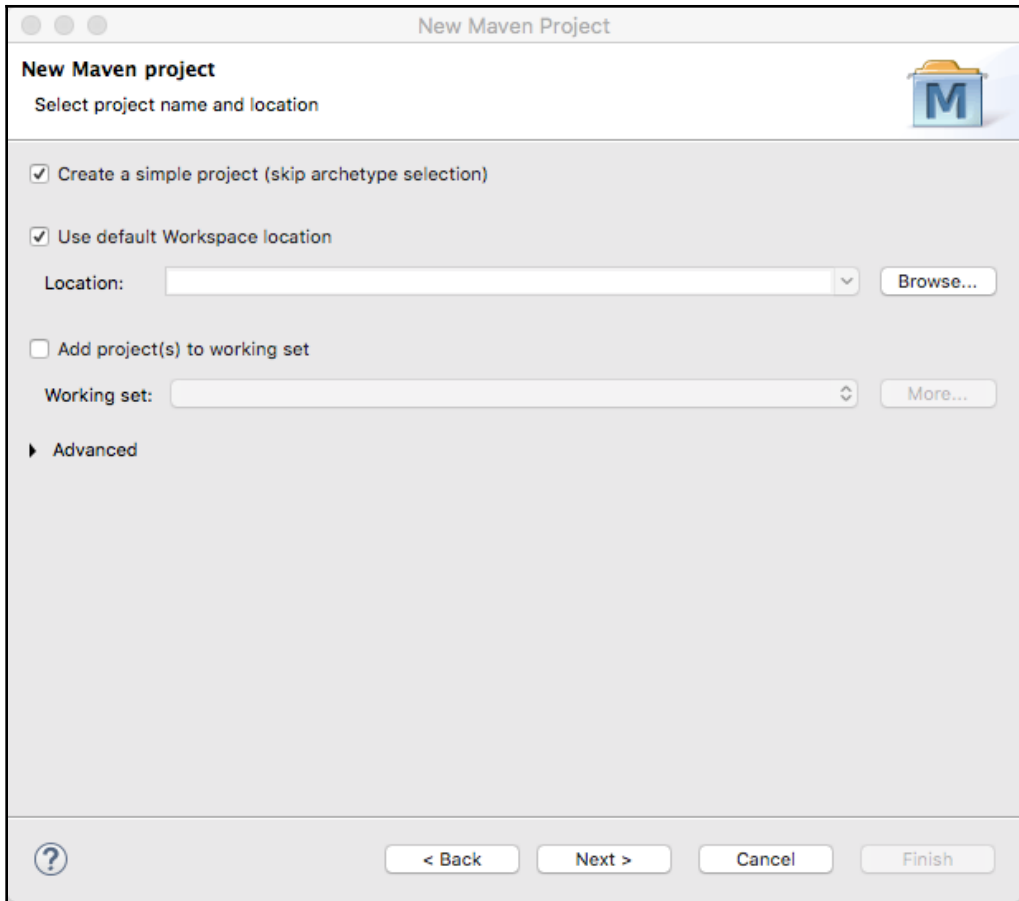
Chapter 1: cymon demo	1
Chapter 01 : Introducing WebDriver and WebElements	1
Chapter 02: Working with Browser Drivers	14
Chapter 03 : Using Java 8 features along with Selenium	19
Chapter 05: Exploring Advanced Interactions of WebDriver	20
Chapter 06: Understanding WebDriver Events	24
Chapter 07 : Exploring RemoteWebDriver	25
Chapter 08: Setting up Selenium Grid	30
Chapter 09 : The PageObject Pattern	35
Chapter 10: Mobile Testing on iOS and Android using Appium	36
Chapter 11: Data Driven Testing with TestNG	45
Index	46

1 cymon demo

Chapter 01 : Introducing WebDriver and WebElements







New Maven Project

Configure project

Artifact

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:

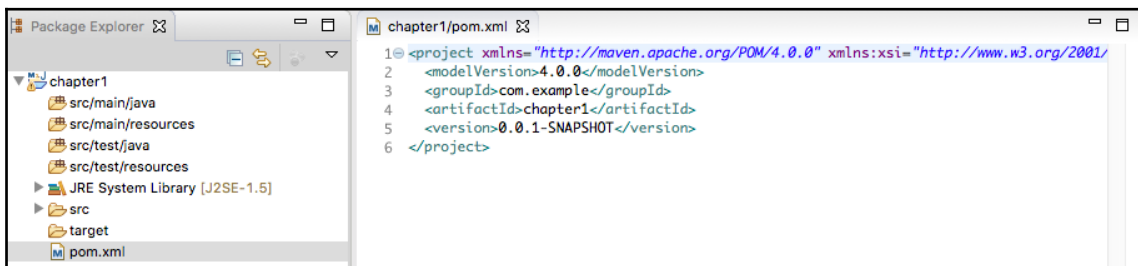
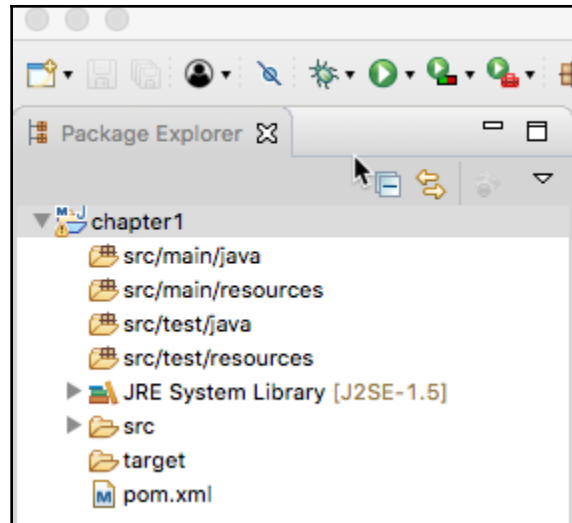
Parent Project

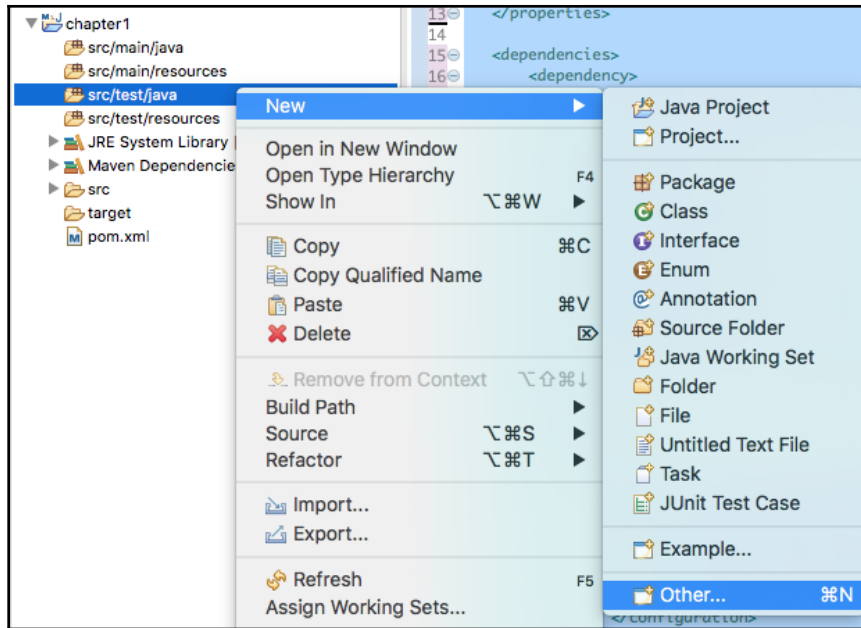
Group Id:

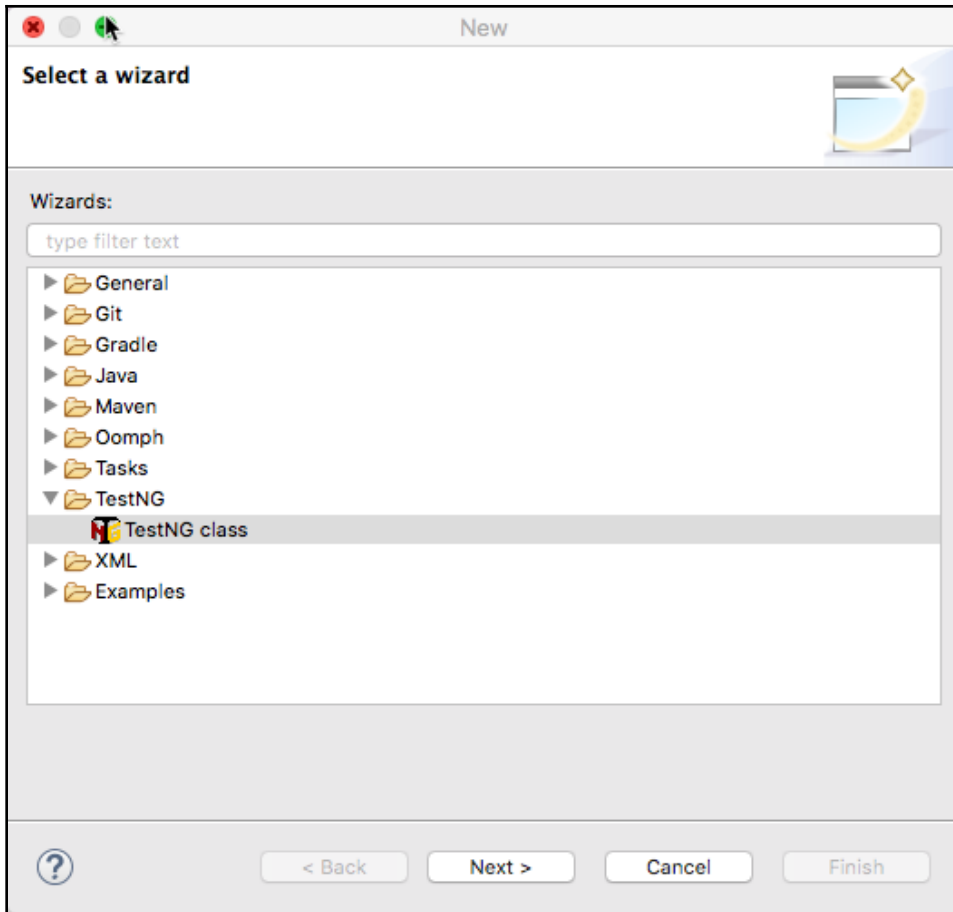
Artifact Id:

Version:

▶ **Advanced**







New TestNG class

Specify additional information about the test class.

Source folder:

Package name:

Class name:

Annotations

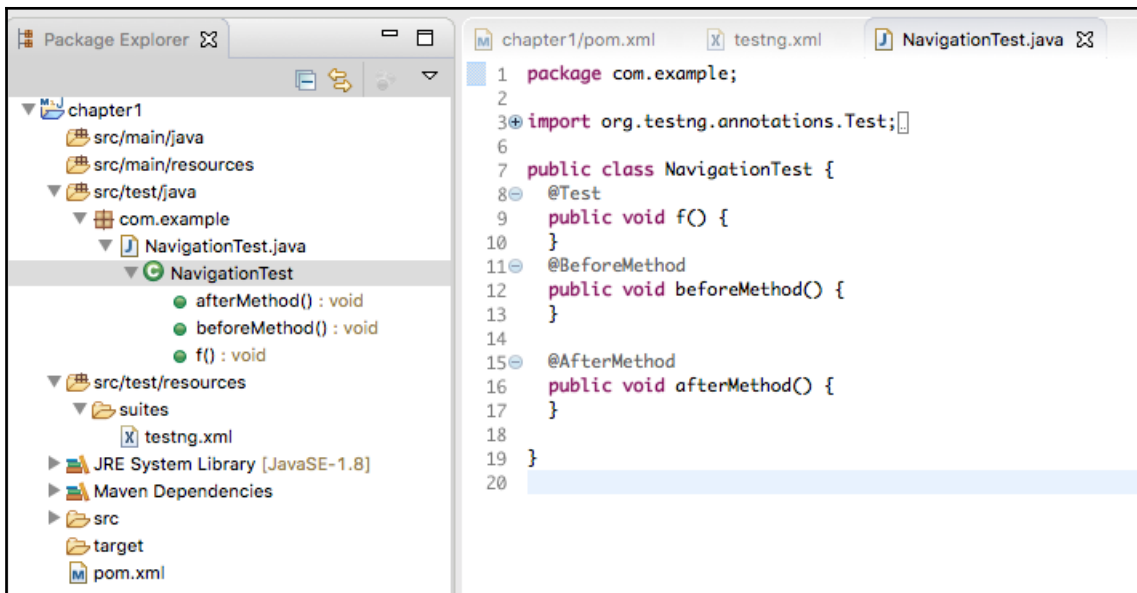
@BeforeMethod @AfterMethod @DataProvider

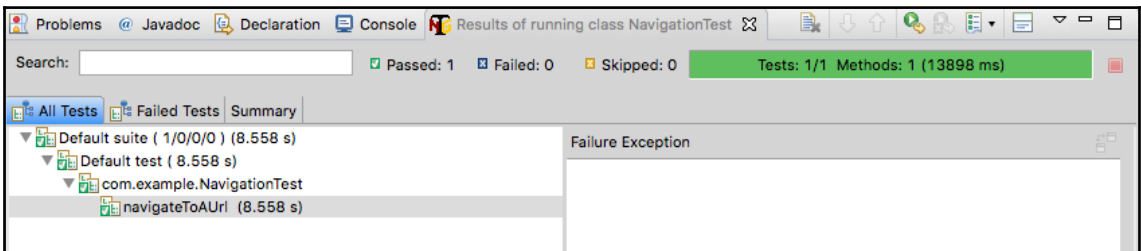
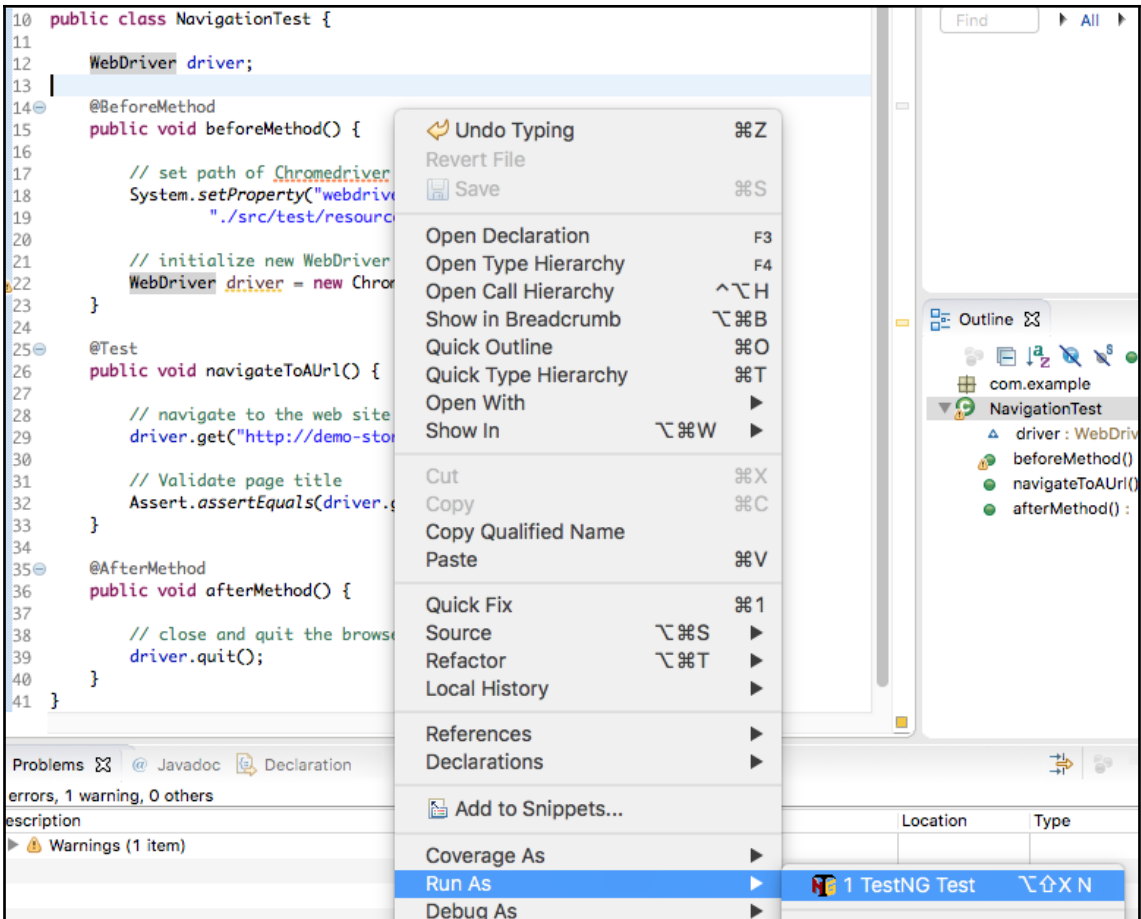
@BeforeClass @AfterClass

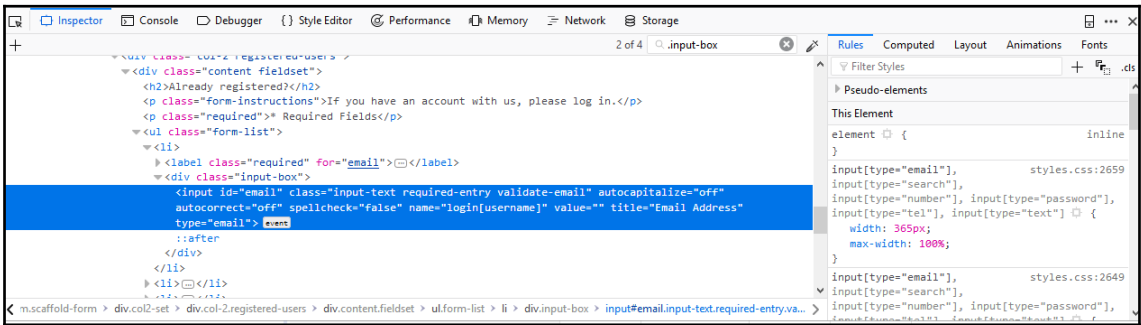
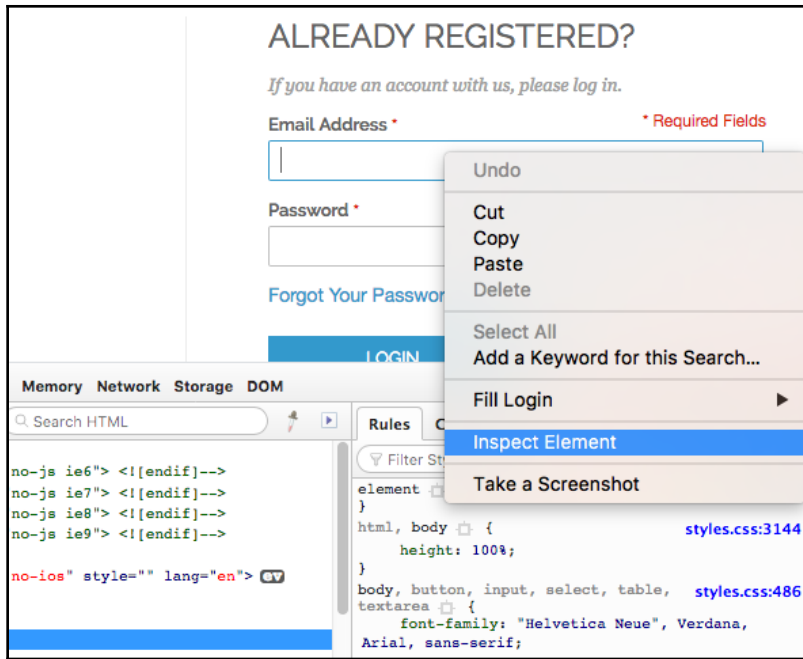
@BeforeTest @AfterTest

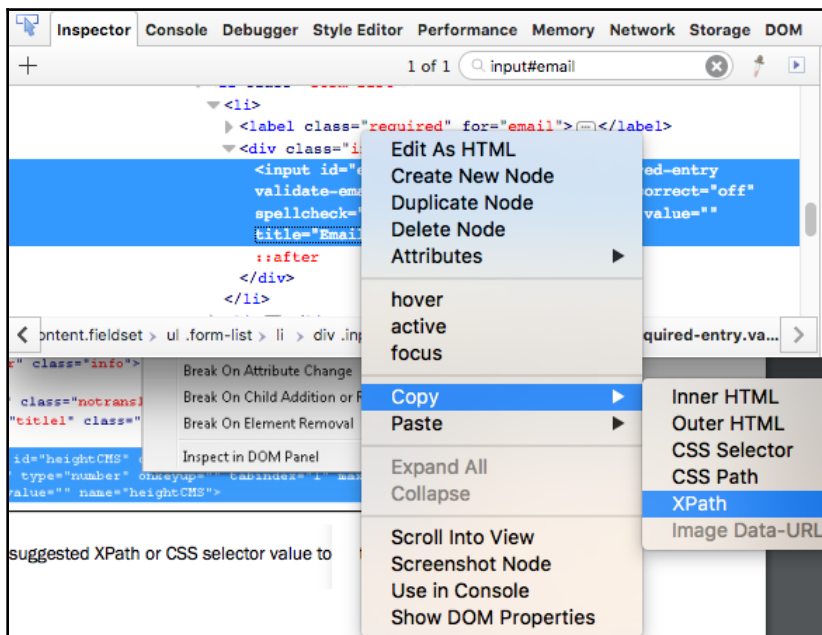
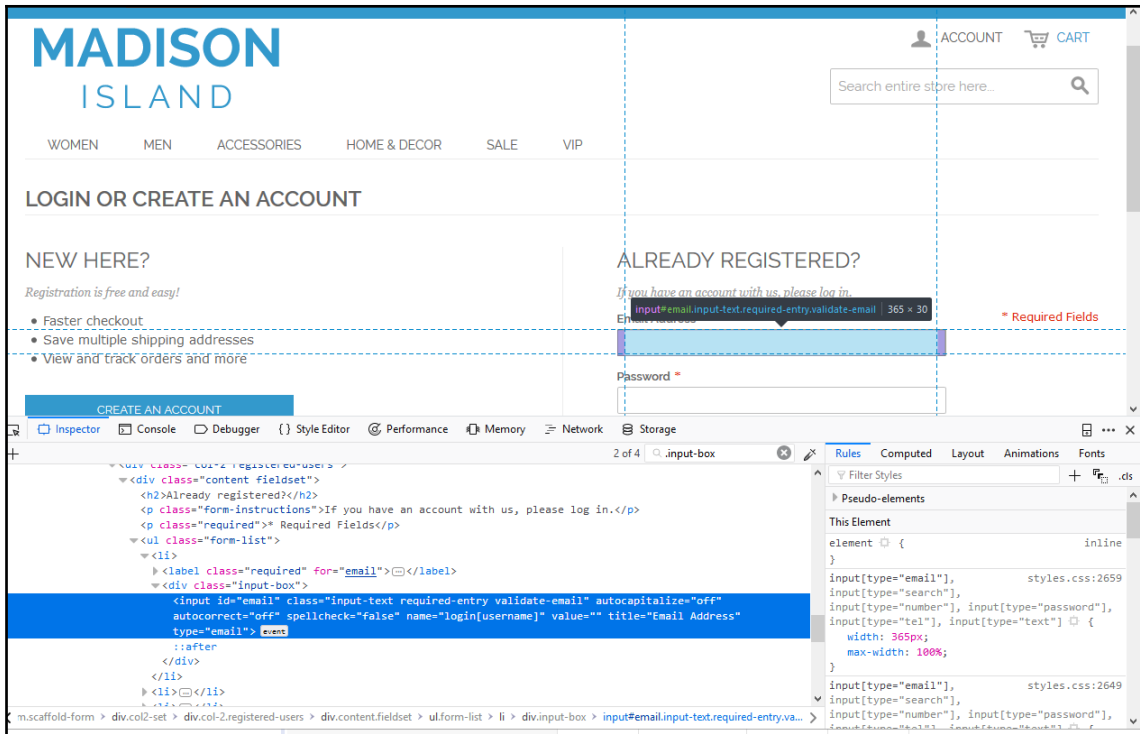
@BeforeSuite @AfterSuite

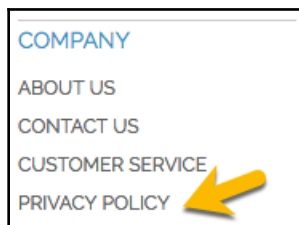
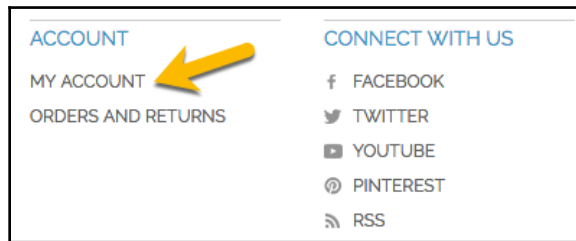
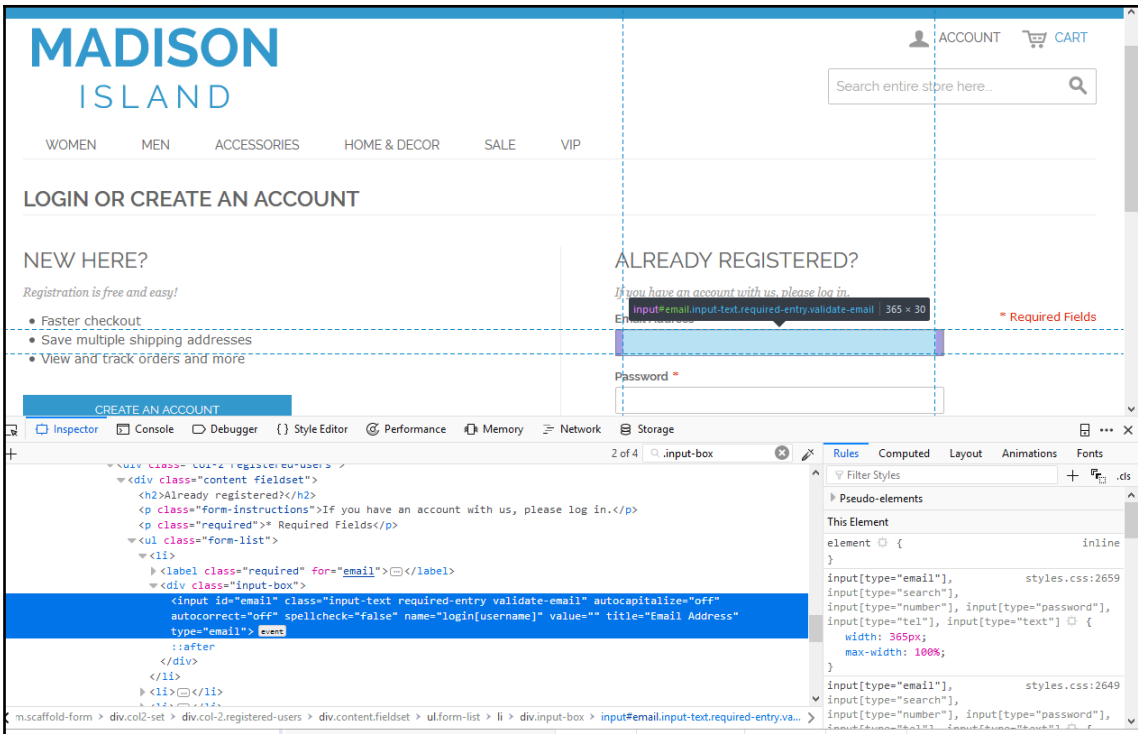
XML suite file:



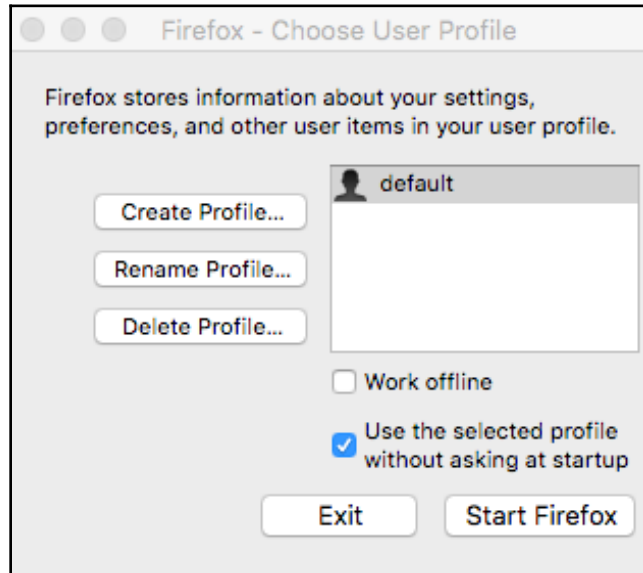


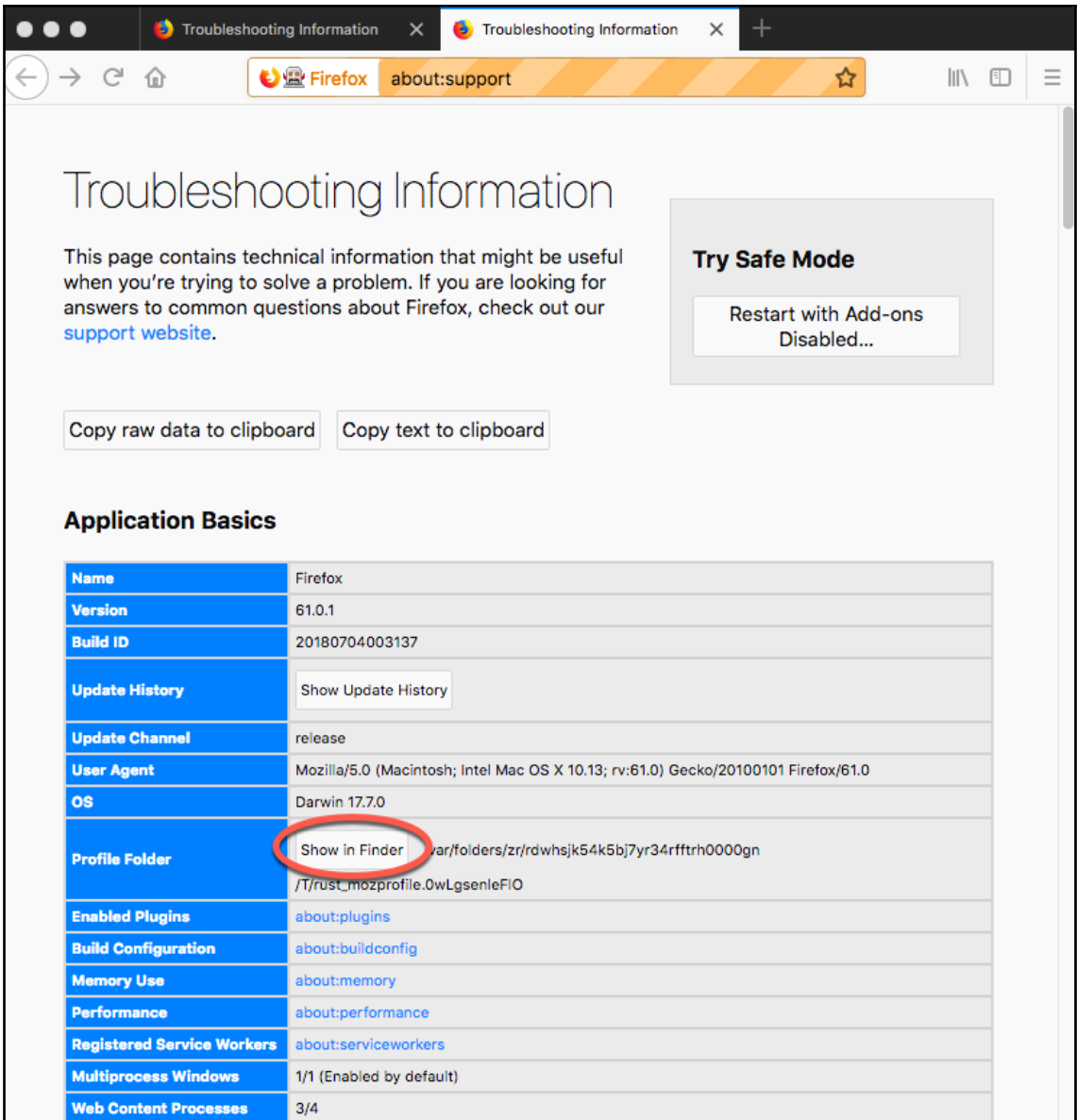


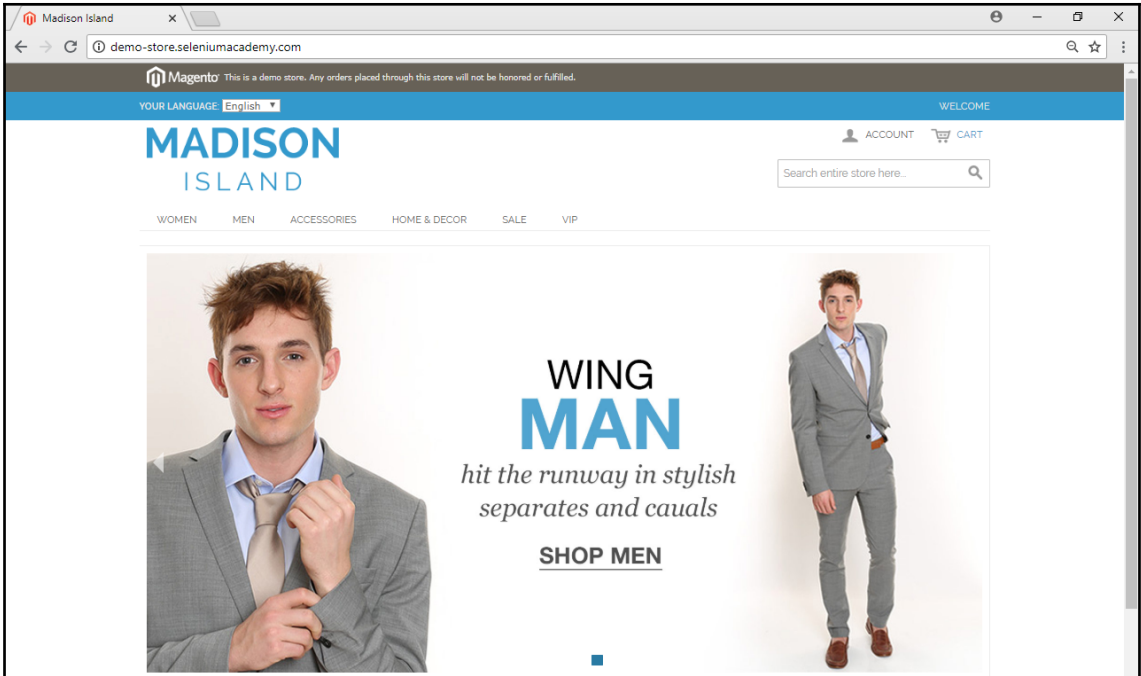
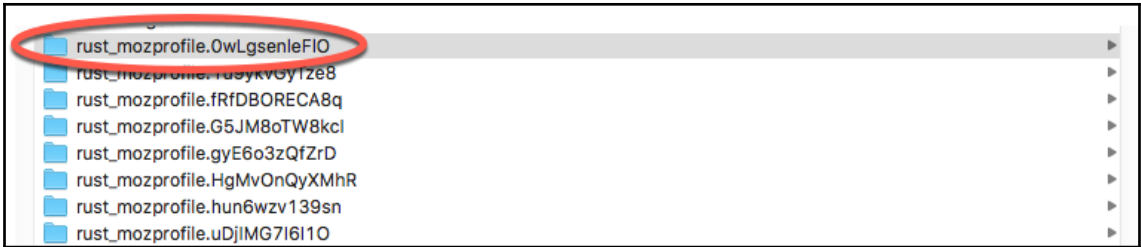


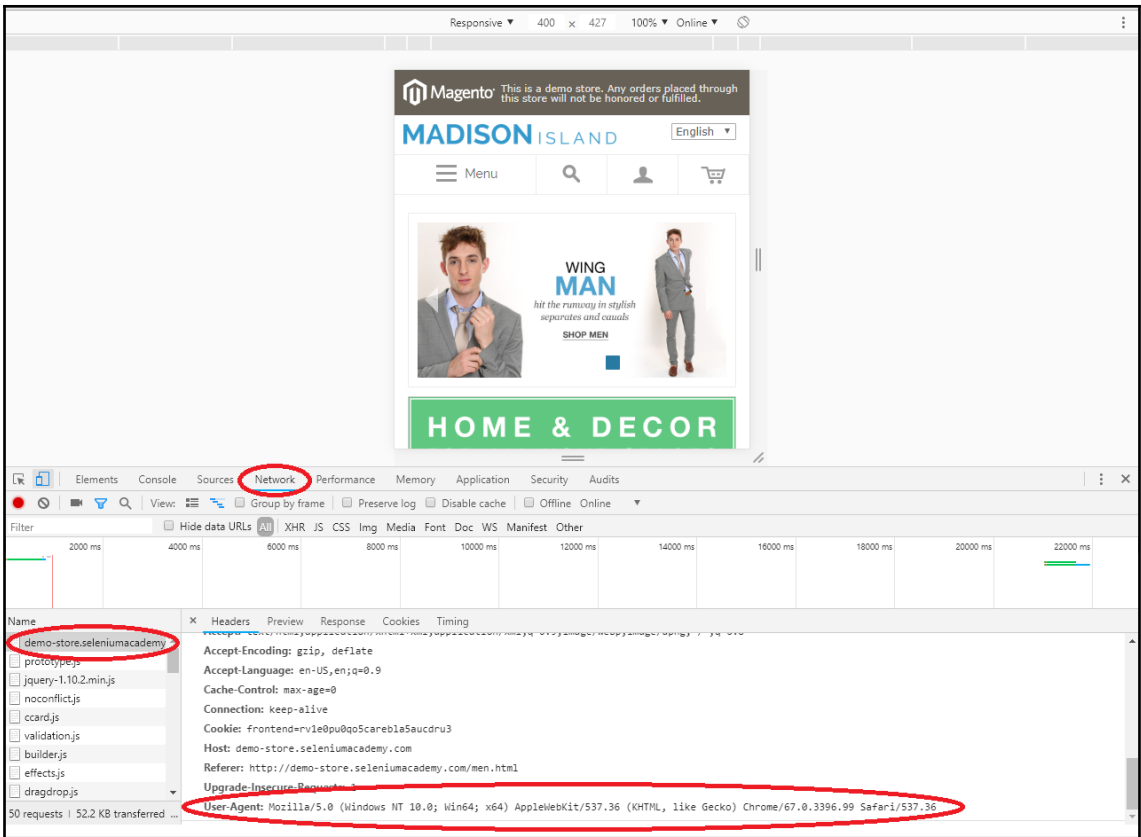


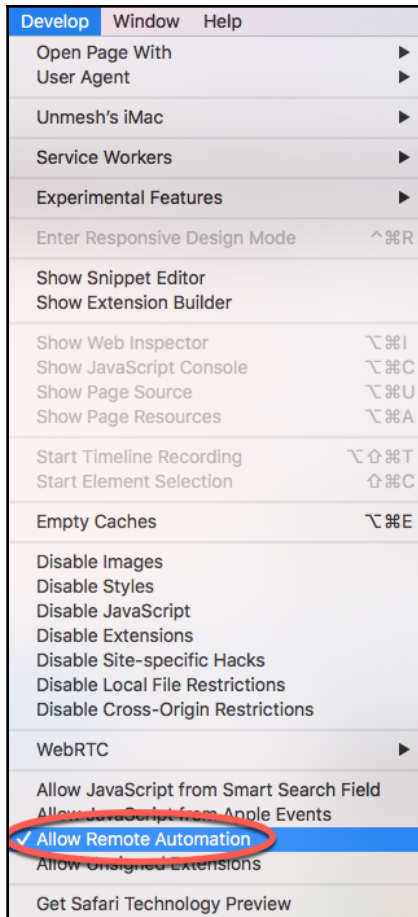
Chapter 02: Working with Browser Drivers



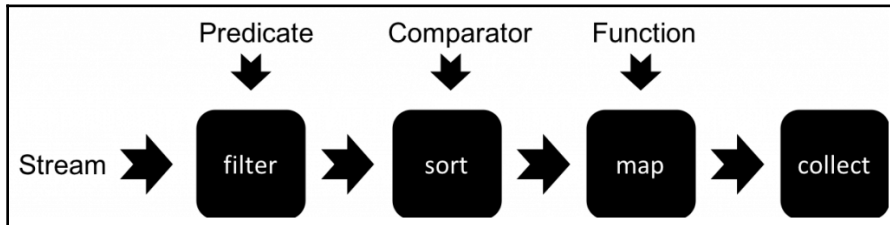








Chapter 03 : Using Java 8 features along with Selenium

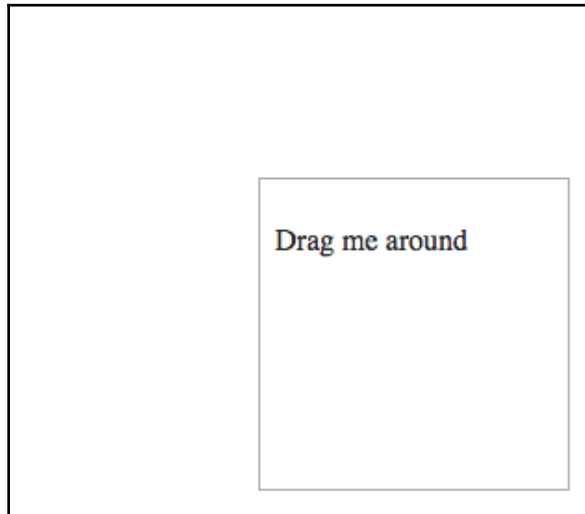


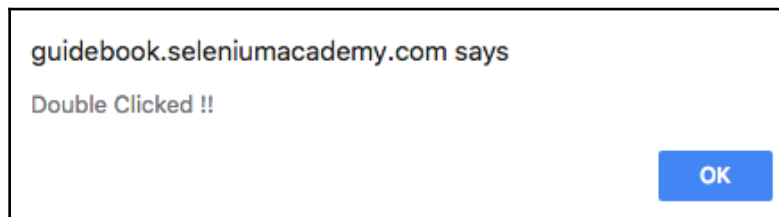
Chapter 05: Exploring Advanced Interactions of WebDriver

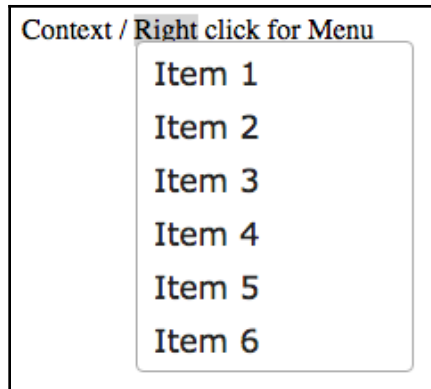
1	2	3	4
5	6	7	8
9	10	11	12

1	2	3	4
5	6	7	8
9	10	11	12

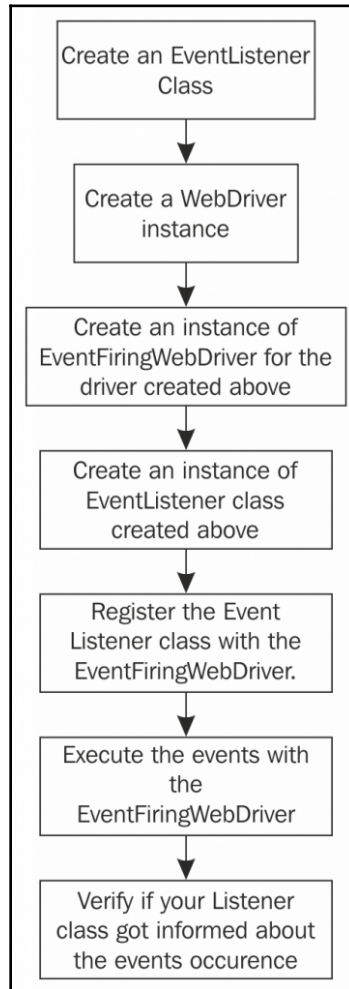
1	2	3	4
5	6	7	8
9	10	11	12



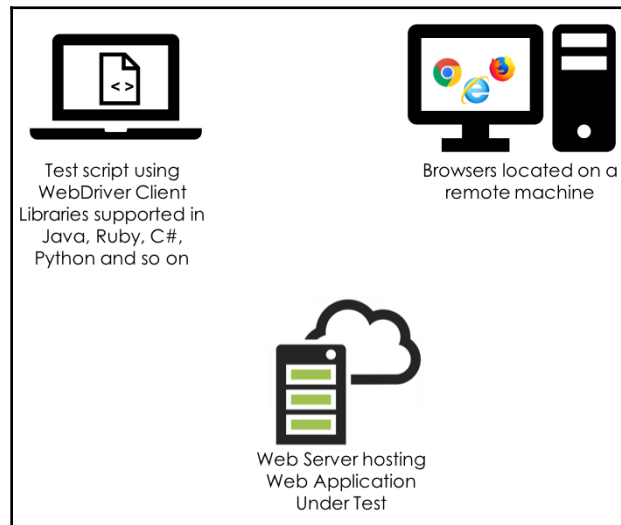
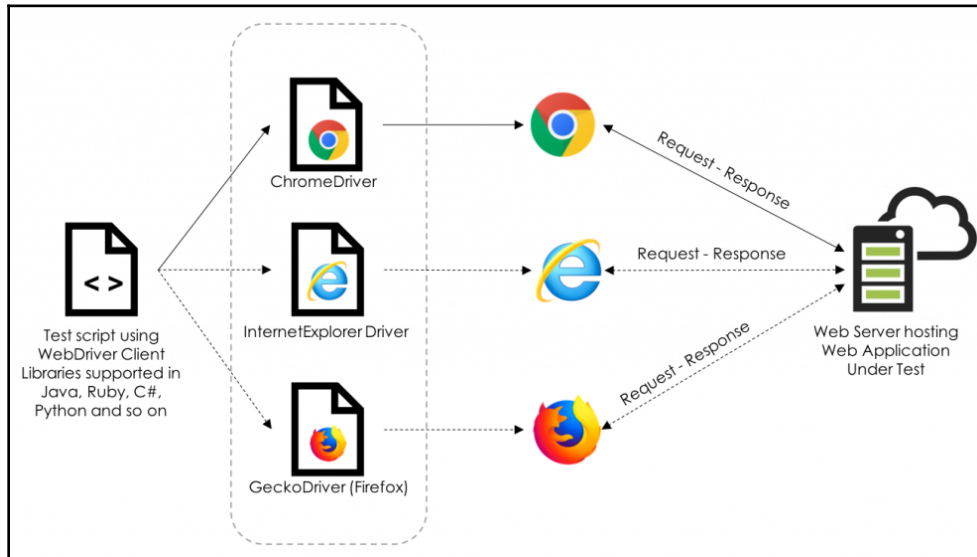




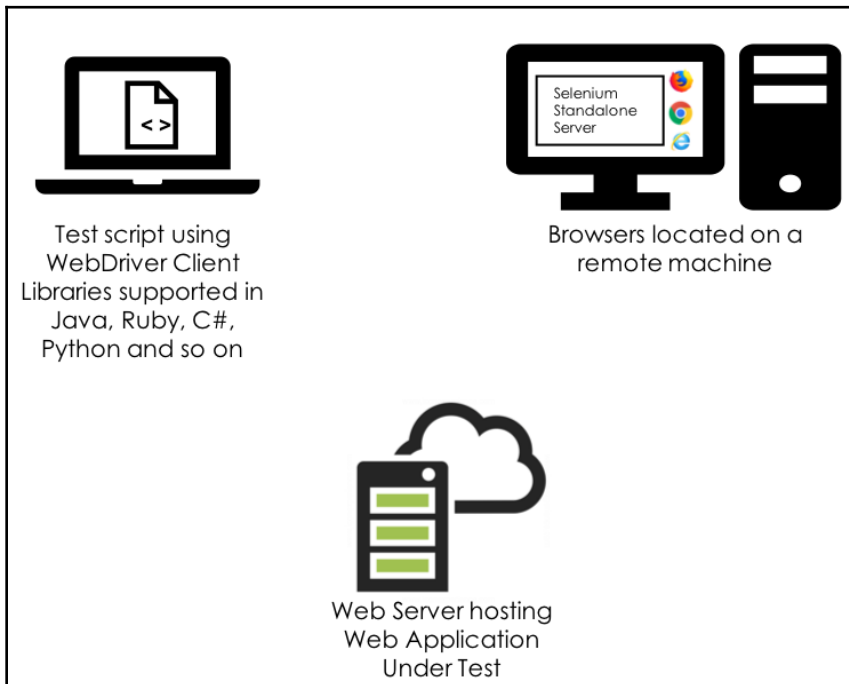
Chapter 06: Understanding WebDriver Events



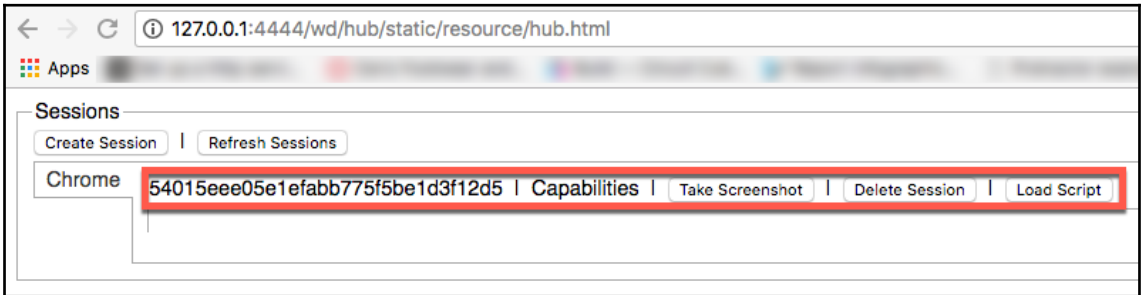
Chapter 07 : Exploring RemoteWebDriver

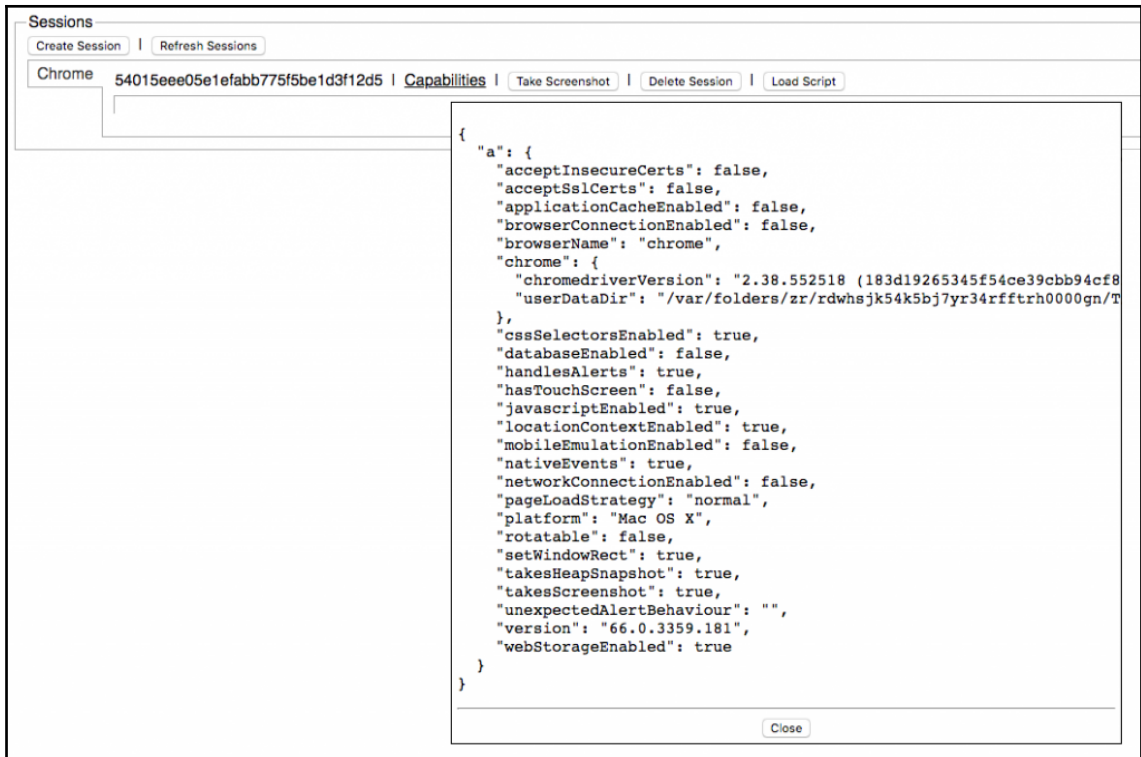


```
1. java -jar selenium-server-standalone-3.12.0.jar (java)
upgundecha@Unmeshs-iMac ~/Downloads java -jar selenium-server-standalone-3.12.0.jar
16:27:41.623 INFO [GridLauncherV3.launch] - Selenium build info: version: '3.12.0', revision: '7c6e0b3'
16:27:41.624 INFO [GridLauncherV3$1.launch] - Launching a standalone Selenium Server on port 4444
2018-06-02 16:27:41.742:INFO::main: Logging initialized @443ms to org.seleniumhq.jetty9.util.log.StdErrLog
16:27:42.044 INFO [SeleniumServer.boot] - Selenium Server is up and running on port 4444
```



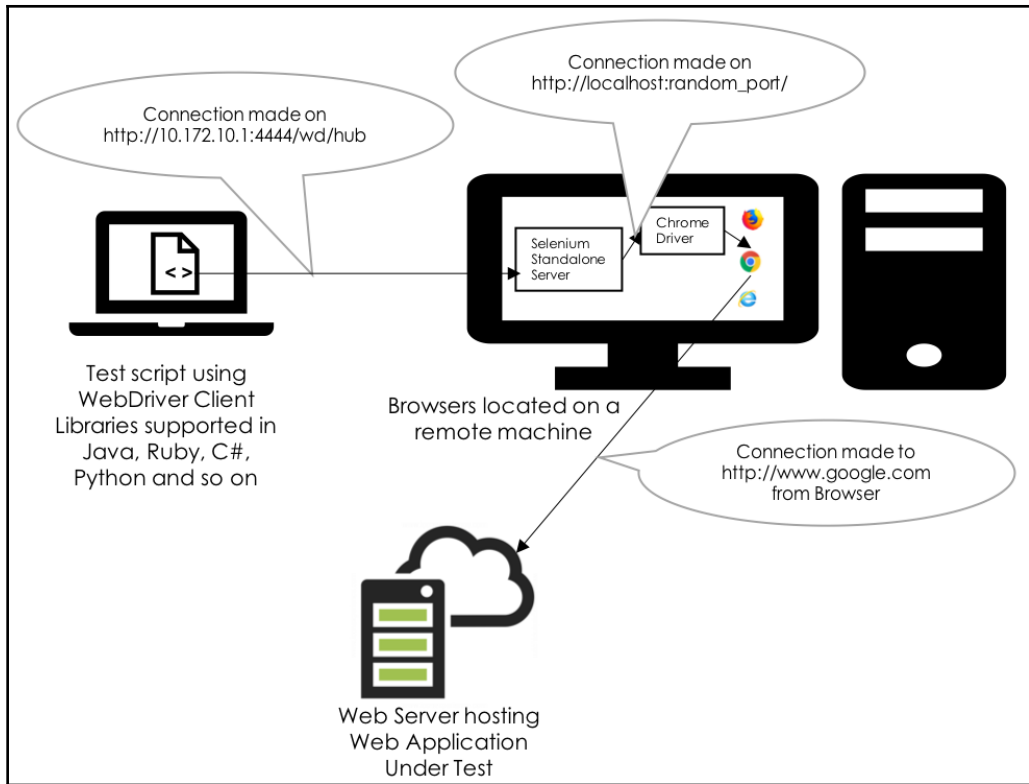
```
18:25:32.155 INFO [ActiveSessionFactory.apply] - Capabilities are: Capabilities {
browserName: chrome}
18:25:32.157 INFO [ActiveSessionFactory.lambda$apply$11] - Matched factory org.op
enqa.selenium.remote.server.ServicedSession$Factory (provider: org.openqa.seleniu
m.chrome.ChromeDriverService)
Starting ChromeDriver 2.38.552518 (183d19265345f54ce39cbb94cf81ba5f15905011) on p
ort 3315
Only local connections are allowed.
18:25:52.564 INFO [ProtocolHandshake.createSession] - Detected dialect: OSS
18:25:58.340 INFO [RemoteSession$Factory.lambda$performHandshake$0] - Started new
session 3cb5c118e1a5b2bdd7bc568bf147beed (org.openqa.selenium.chrome.ChromeDrive
rService)
```





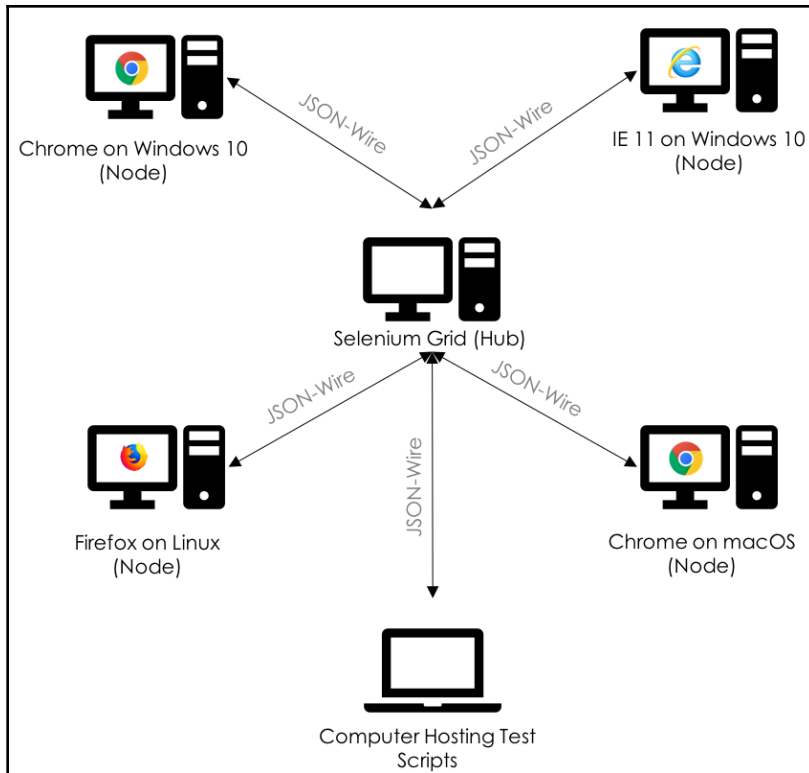
The screenshot displays a web application interface for managing browser sessions. At the top, there is a 'Sessions' header with buttons for 'Create Session' and 'Refresh Sessions'. Below this, a specific session is identified as 'Chrome' with a long alphanumeric ID: '54015eee05e1efabb775f5be1d3f12d5'. A 'Capabilities' tab is active, showing a list of browser capabilities and their status. A 'Close' button is located at the bottom right of the capabilities list.

```
{
  "a": {
    "acceptInsecureCerts": false,
    "acceptSslCerts": false,
    "applicationCacheEnabled": false,
    "browserConnectionEnabled": false,
    "browserName": "chrome",
    "chrome": {
      "chromedriverVersion": "2.38.552518 (183d19265345f54ce39cbb94cf8
      "userDataDir": "/var/folders/zr/rdwhsjk54k5bj7yr34rfftrh0000gn/T
    },
    "cssSelectorsEnabled": true,
    "databaseEnabled": false,
    "handlesAlerts": true,
    "hasTouchScreen": false,
    "javascriptEnabled": true,
    "locationContextEnabled": true,
    "mobileEmulationEnabled": false,
    "nativeEvents": true,
    "networkConnectionEnabled": false,
    "pageLoadStrategy": "normal",
    "platform": "Mac OS X",
    "rotatable": false,
    "setWindowRect": true,
    "takesHeapSnapshot": true,
    "takesScreenshot": true,
    "unexpectedAlertBehaviour": "",
    "version": "66.0.3359.181",
    "webStorageEnabled": true
  }
}
```



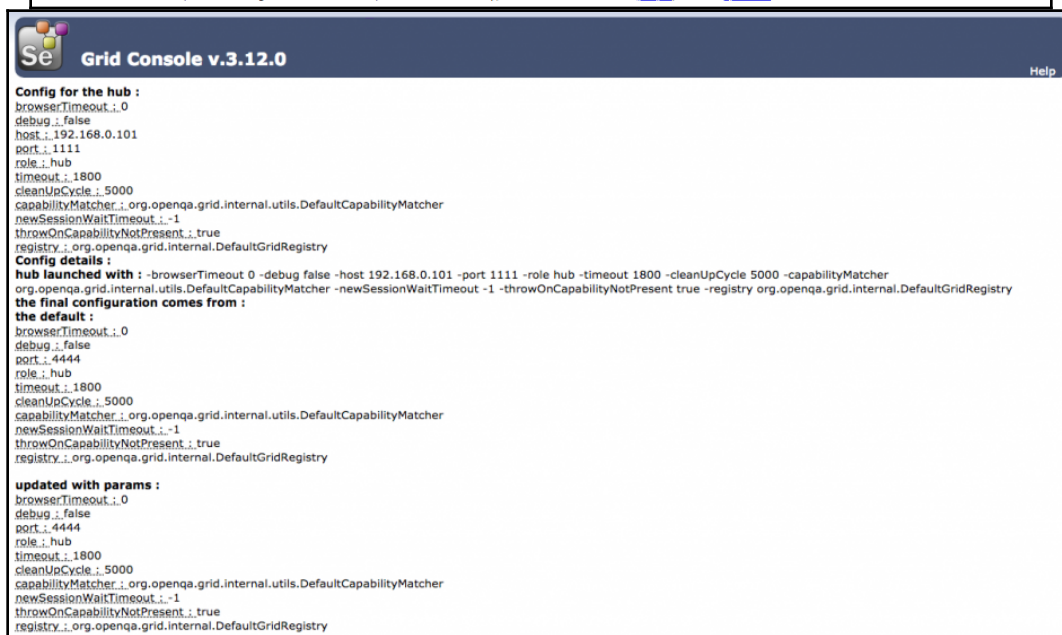
Chapter 08: Setting up Selenium Grid

```
upgundecha@Unmeshs-iMac ~/Downloads java -jar selenium-server-standalone-3.12.0.jar -help
Usage: <main class> [options]
Options:
  --debug, -debug
    <Boolean> : enables LogLevel.FINE.
    Default: false
  --version, -version
    Displays the version and exits.
    Default: false
  -browserTimeout
    <Integer> in seconds : number of seconds a browser session is allowed to hang while a WebDriver command is running (example: driver.get(url)). If the timeout is reached while a WebDriver command is still processing, the session will quit. Minimum value is 60. An unspecified, zero, or negative value means wait indefinitely.
  -config
    <String> filename : JSON configuration file for the standalone server. Overrides default values
  -host
    <String> IP or hostname : usually determined automatically. Most commonly useful in exotic network configurations (e.g. network with VPN)
  -jettyThreads, -jettyMaxThreads
    <Integer> : max number of threads for Jetty. An unspecified, zero, or negative value means the Jetty default value (200) will be used.
  -log
    <String> filename : the filename to use for logging. If omitted, will log to STDOUT
  -port
    <Integer> : the port number the server will use.
  -role
    <String> options are [hub], [node], or [standalone].
  -timeout, -sessionTimeout
    <Integer> in seconds : Specifies the timeout before the server automatically kills a session that hasn't had any activity in the last X seconds. The test slot will then be released for another test to use. This is typically used to take care of client crashes. For grid hub/node roles. cleanUpCycle must also be set.
```



```

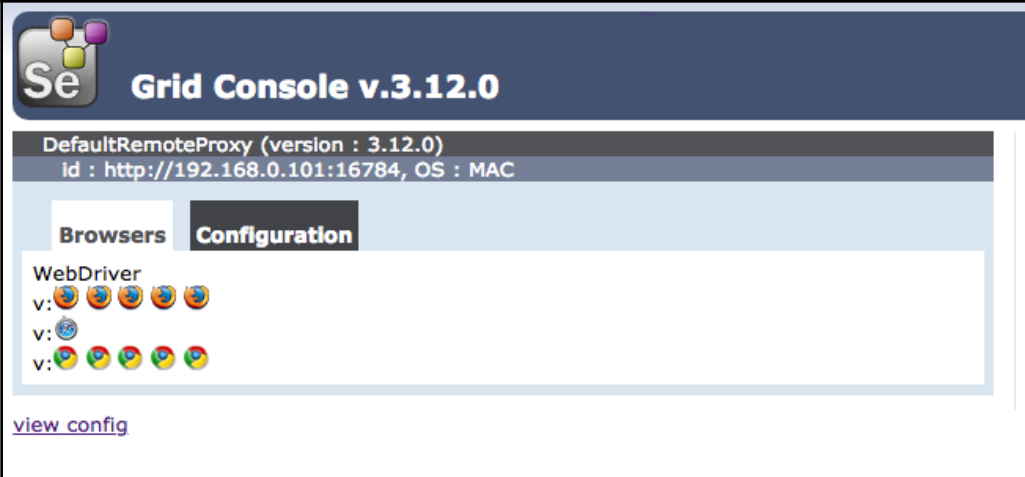
upgundecha@Unmeshs-iMac ~/Downloads java -jar selenium-server-standalone-3.12.0.jar -
role hub -port 1111
11:55:33.681 INFO [GridLauncherV3.launch] - Selenium build info: version: '3.12.0', revisi
on: '7c6e0b3'
11:55:33.684 INFO [GridLauncherV3$2.launch] - Launching Selenium Grid hub on port 1111
2018-06-10 11:55:34.243:INFO::main: Logging initialized @1093ms to org.seleniumhq.jetty9.u
til.log.StdErrLog
11:55:34.615 INFO [Hub.start] - Selenium Grid hub is up and running
11:55:34.616 INFO [Hub.start] - Nodes should register to http://192.168.0.101:1111/grid/re
gister/
11:55:34.617 INFO [Hub.start] - Clients should connect to http://192.168.0.101:1111/wd/hub
    
```

```

upgundecha@Unmeshs-iMac ~/Downloads ▶ java -jar -Dwebdriver.chrome.driver=chromedriver selenium-server-standalone-3.12.0.jar -role node -hub http://192.168.0.101:1111/grid/register
12:06:59.722 INFO [GridLauncherV3.launch] - Selenium build info: version: '3.12.0', revision: '7c6e0b3'
12:06:59.748 INFO [GridLauncherV3$3.launch] - Launching a Selenium Grid node on port 16784
2018-06-10 12:06:59.890:INFO:main: Logging initialized @621ms to org.seleniumhq.jetty9.util.log.StdErrLog
12:07:00.086 INFO [SeleniumServer.boot] - Selenium Server is up and running on port 16784
12:07:00.086 INFO [GridLauncherV3$3.launch] - Selenium Grid node is up and ready to register to the hub
12:07:00.096 INFO [SelfRegisteringRemote$1.run] - Starting auto registration thread. Will try to register every 5000 ms.
12:07:00.096 INFO [SelfRegisteringRemote.registerToHub] - Registering the node to the hub: http://192.168.0.101:1111/grid/register
12:07:00.449 INFO [SelfRegisteringRemote.registerToHub] - Updating the node configuration from the hub
12:07:00.498 INFO [SelfRegisteringRemote.registerToHub] - The node is registered to the hub and ready to use












```



Se Grid Console v.3.12.0

DefaultRemoteProxy (version : 3.12.0)
id : http://192.168.0.101:16784, OS : MAC

Browsers **Configuration**


WebDriver
v:     
v: 
v:     

[view config](#)

```
12:21:19.197 INFO [ActiveSessionFactory.apply] - Capabilities are: Capabilities {browserName: chrome, platform: MAC}
12:21:19.197 INFO [ActiveSessionFactory.lambda$apply$11] - Matched factory org.openqa.selenium.remote.server.ServicedSessionFactory (provider: org.openqa.selenium.chrome.ChromeDriverService)
Starting ChromeDriver 2.38.552518 (183d19265345f54ce39cbb94cf81ba5f15905011) on port 39474
Only local connections are allowed.
12:21:20.034 INFO [ProtocolHandshake.createSession] - Detected dialect: OSS
12:21:20.102 INFO [RemoteSession$Factory.lambda$performHandshake$0] - Started new session c9b6c5f5cf8f97312faadbedf56bbb73 (org.openqa.selenium.chrome.ChromeDriverService)
12:21:25.202 INFO [ActiveSessions$1.onStop] - Removing session c9b6c5f5cf8f97312faadbedf56bbb73 (org.openqa.selenium.chrome.ChromeDriverService)
```

```
12:21:19.181 INFO [RequestHandler.process] - Got a request to create a new session: Capabilities {browserName: chrome, platform: MAC}
12:21:19.182 INFO [TestSlot.getNewSession] - Trying to create a new session on test slot {server:CONFIG_UUID=4a2dbc4a-ae28-4398-897c-27ff56f71b99, seleniumProtocol=WebDriver, browserName=chrome, maxInstances=5, platformName=MAC, platform=MAC}
```

```
12:28:59.965 INFO [RequestHandler.process] - Got a request to create a new session: Capabilities {browserName: opera, platform: MAC}
12:28:59.966 INFO [RequestHandler.process] - Error forwarding the new session cannot find : Capabilities {browserName: opera, platform: MAC}
org.openqa.grid.common.exception.CapabilityNotPresentOnTheGridException: cannot find : Capabilities {browserName: opera, platform: MAC}
    at org.openqa.grid.internal.ProxySet.verifyAbilityToHandleDesiredCapabilities(ProxySet.java:153)
    at org.openqa.grid.internal.DefaultGridRegistry.addNewSessionRequest(DefaultGridRegistry.java:217)
    at org.openqa.grid.web.servlet.handler.RequestHandler.process(RequestHandler.java:111)
    at org.openqa.grid.web.servlet.DriverServlet.process(DriverServlet.java:86)
    at org.openqa.grid.web.servlet.DriverServlet.doPost(DriverServlet.java:70)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:707)
```



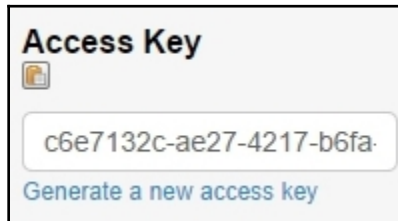
Se Grid Console v.3.12.0

DefaultRemoteProxy (version : 3.12.0)
id : http://192.168.0.101:46213, OS : MAC


Browsers **Configuration**

WebDriver
v: 
v: 
v: 

[view config](#)

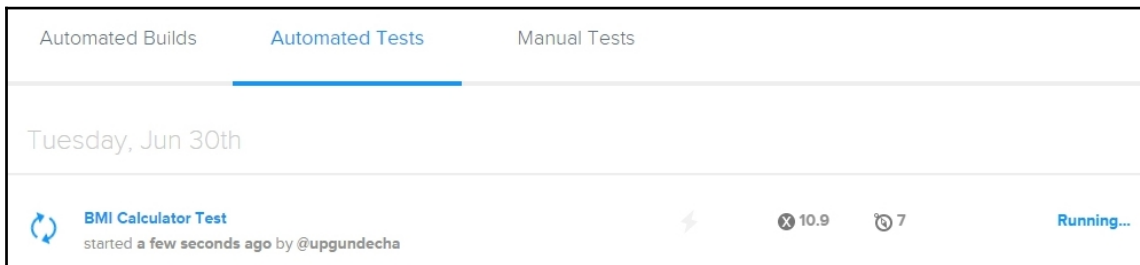


Access Key






c6e7132c-ae27-4217-b6fa

[Generate a new access key](#)



Automated Builds **Automated Tests** Manual Tests

Tuesday, Jun 30th

 **BMI Calculator Test** ⚡  10.9  7 **Running...**

started a few seconds ago by @upgundecha

Chapter 09 : The PageObject Pattern

The image displays two parts: HTML code at the top and a WordPress admin interface at the bottom, both annotated with red boxes and arrows.

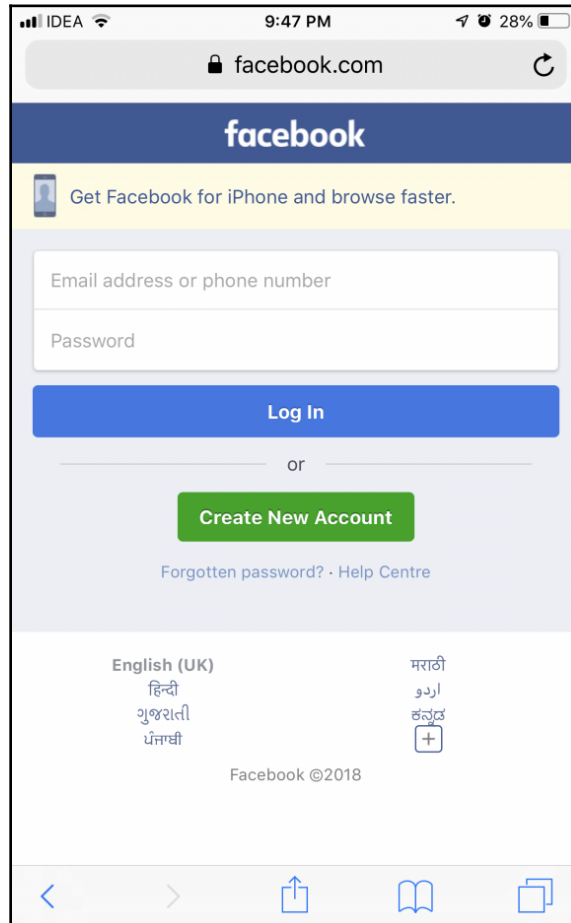
HTML Code Annotations:

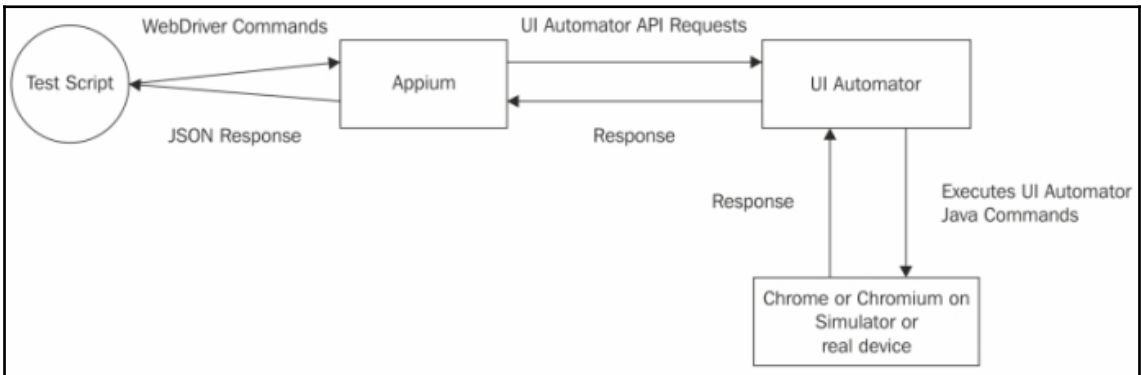
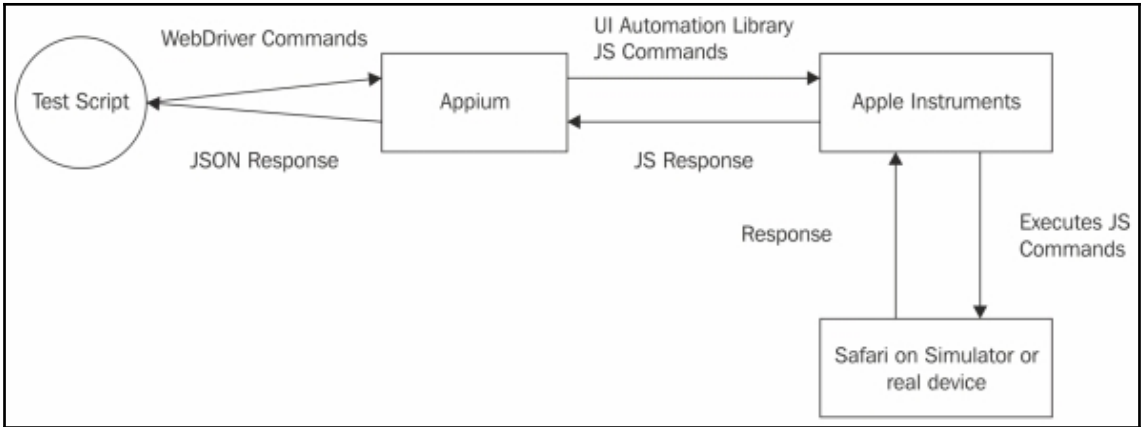
- `<tbody id="the-list">` is boxed and labeled **postsContainer**.
- `<tr id="post-46" class="post-46 type-post status-publish format-standard hentry category-uncategorized alternate iedit author-self" valign="top">` is boxed and labeled **Post 1**.
- `<tr id="post-44" class="post-44 type-post status-publish format-standard hentry category-uncategorized iedit author-self" valign="top">` is boxed and labeled **Post 2**.
- `<tr id="post-31" class="post-31 type-post status-publish format-standard hentry category-uncategorized alternate iedit author-self" valign="top">` is boxed and labeled **Post 3**.

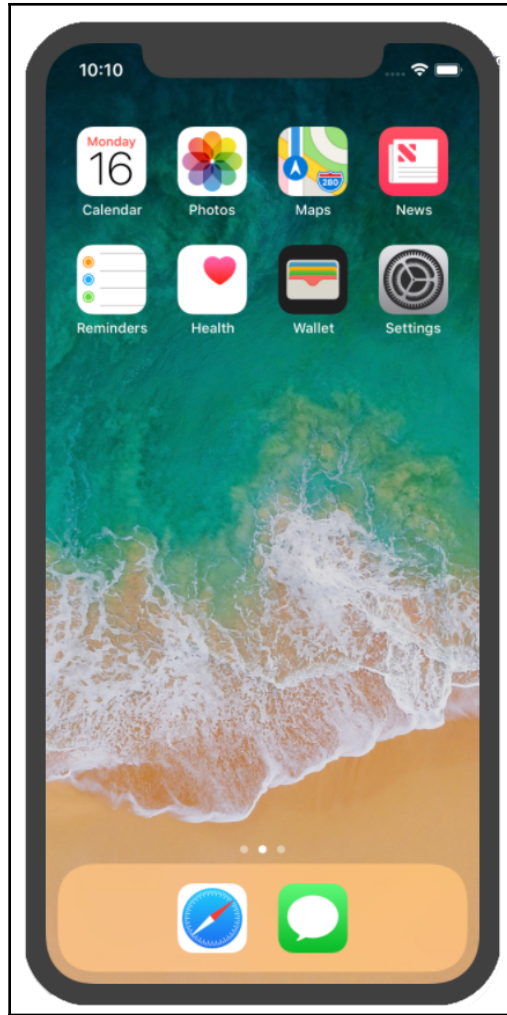
WordPress Admin Interface Annotations:

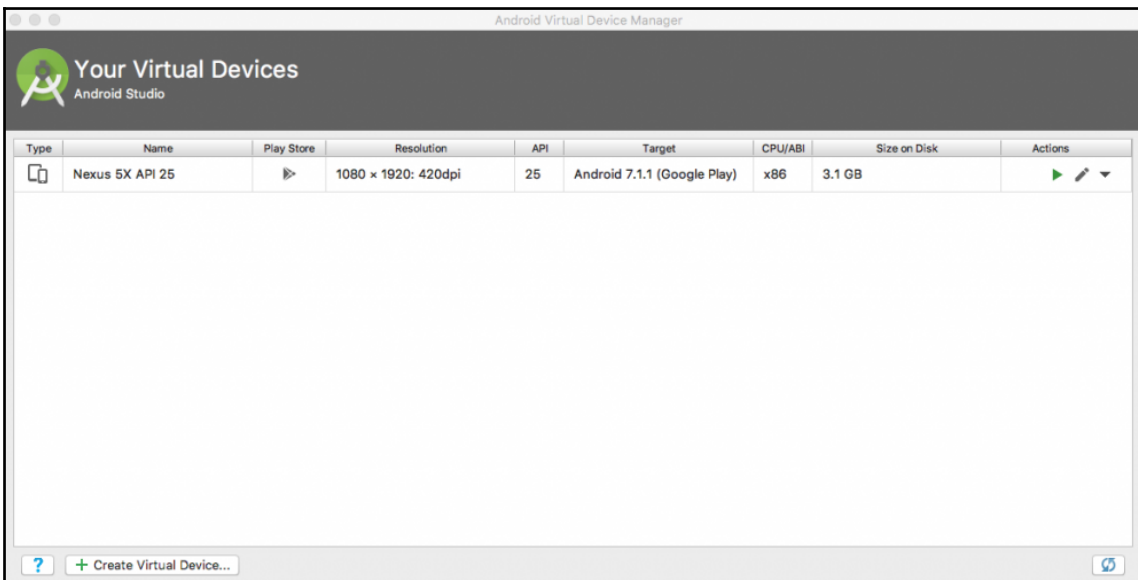
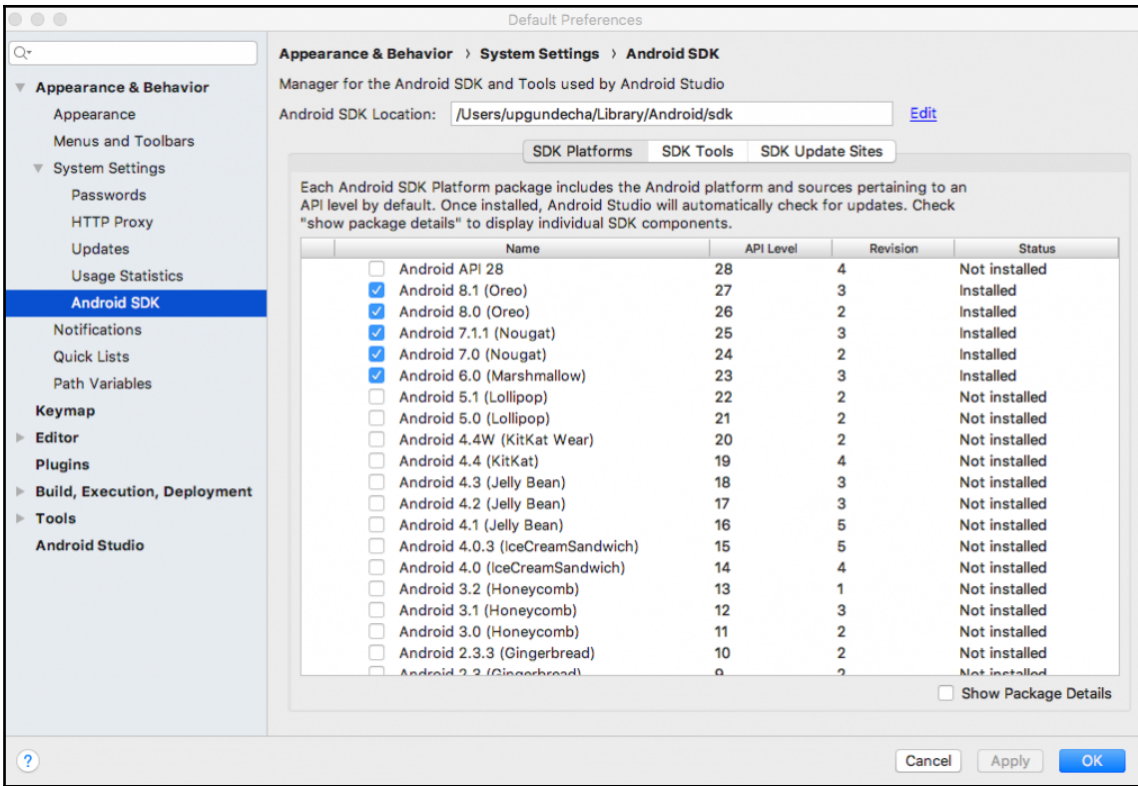
- Add New** button is boxed and labeled **1**.
- Search Posts** input field is boxed and labeled **5**.
- View all categories** dropdown menu is boxed and labeled **4**.
- Edit** button for the first post is boxed and labeled **2**.
- Trash** button for the first post is boxed and labeled **3**.

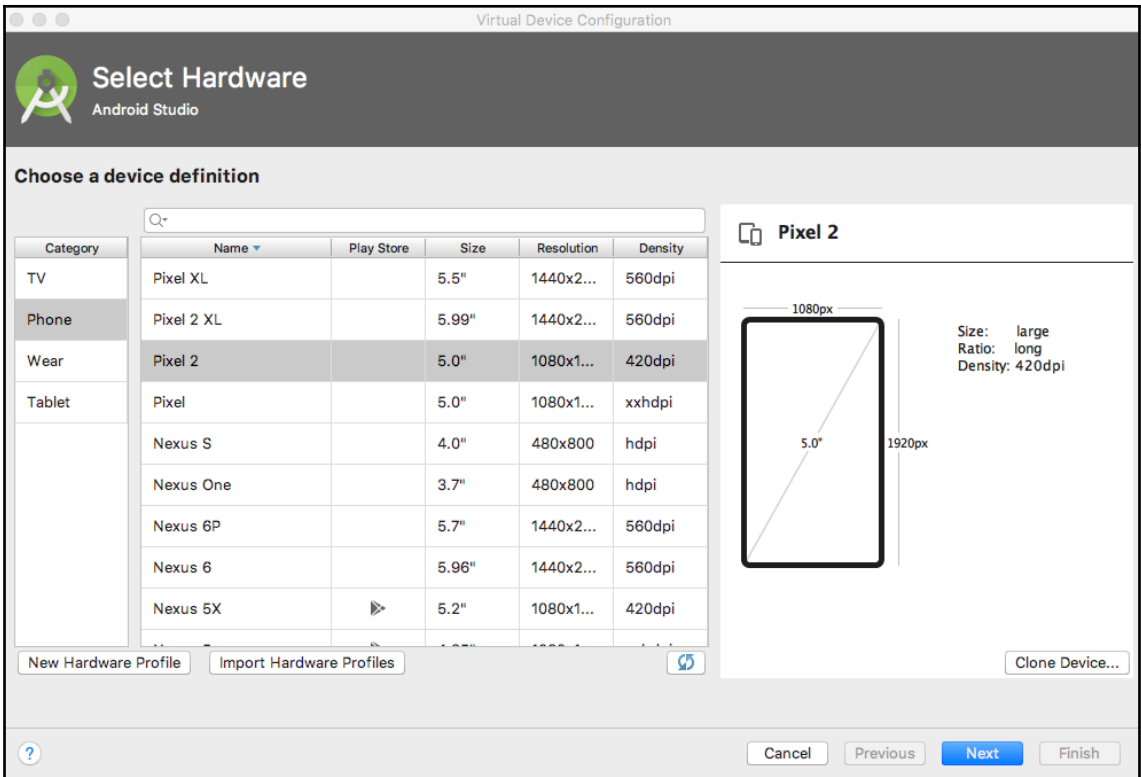
Chapter 10: Mobile Testing on iOS and Android using Appium

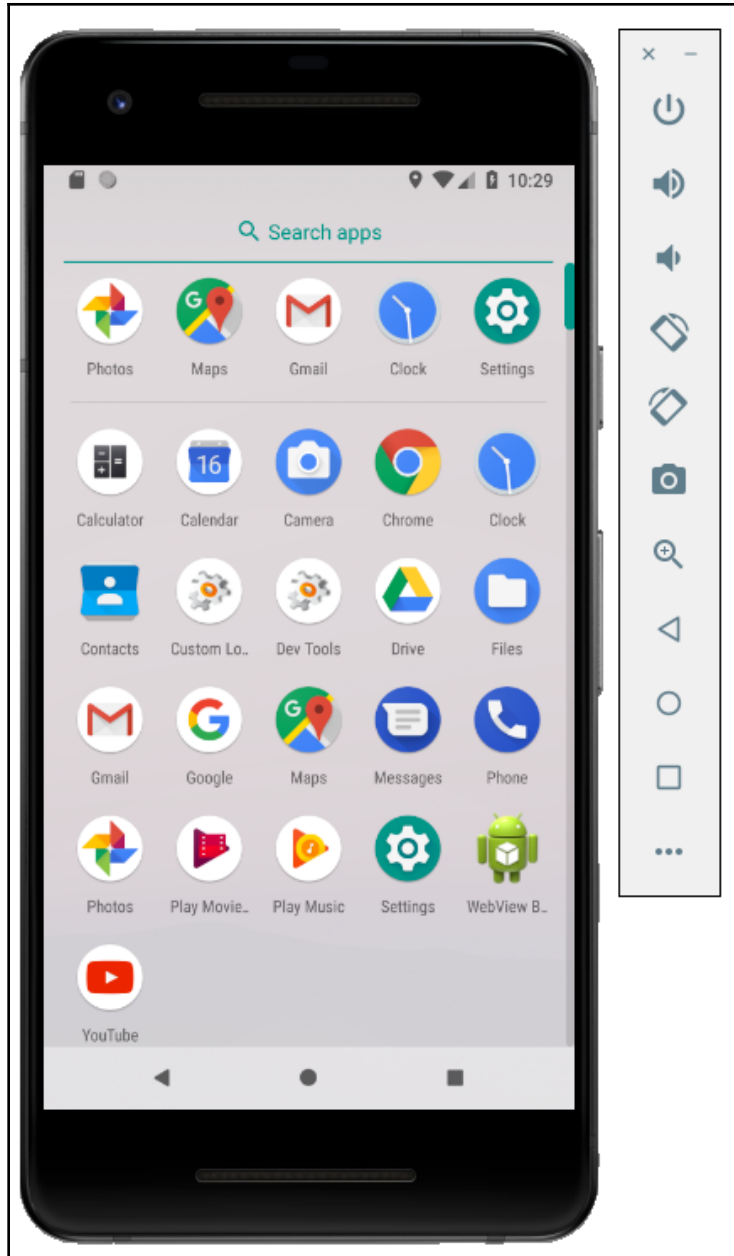


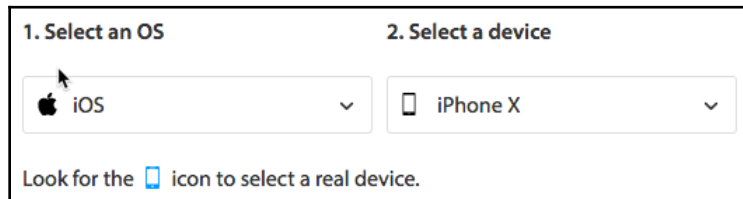












```
import org.openqa.selenium.By;
import org.openqa.selenium.Platform;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.remote.DesiredCapabilities;
import org.openqa.selenium.remote.RemoteWebDriver;

import java.net.URL;

public class JavaSample {

    public static final String USERNAME = "i";
    public static final String AUTOMATE_KEY = "i";
    public static final String URL = "https://" + USERNAME + ":" + AUTOMATE_KEY + "@hub-cloud.browserstack.com/wd/hub";

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

        DesiredCapabilities caps = new DesiredCapabilities();
        caps.setCapability("browserName", "iPhone");
        caps.setCapability("device", "iPhone X");
        caps.setCapability("realMobile", "true");
        caps.setCapability("os_version", "11.0");

        WebDriver driver = new RemoteWebDriver(new URL(URL), caps);
        driver.get("http://www.google.com");
        WebElement element = driver.findElement(By.name("q"));

        element.sendKeys("BrowserStack");
        element.submit();

        System.out.println(driver.getTitle());
        driver.quit();

    }
}
```

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Check out our New REST API, which now includes the ability to update your Project, Build and Session names. [Find out more](#)

iPhone X, iOS 11.2

[Report issue with session](#) | [Delete Session](#)

Status ✔ **Completed**

Session ID [REDACTED]

Started 15:00 UTC 23 Jul 2018

Duration 34 secs

Real device iPhone X

Local testing ✗ False

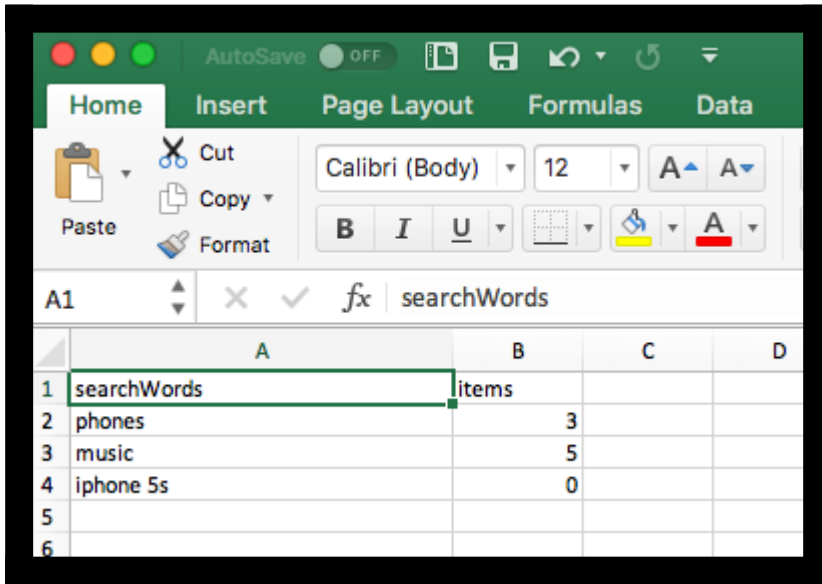
User name [REDACTED]

Capabilities [Input Capabilities](#) [Browser Capabilities](#)

Text Logs | Visual Logs | Console Logs | Network Logs | Appium Logs | [Raw Logs](#)

Start	Duration	Action	Expand All +
00:00	15	Starting Browser	
00:15	2	Open URL http://demo-store.seleniumacademy.com/	

Chapter 11: Data Driven Testing with TestNG



Index