Introduction to Selenium Web Driver
- Open source, free
- Used to test web applications
- Supported Browsers: Firefox, IE, Chrome, Safari, Opera, Android, iPhone
- Supported O/S: Windows, OS/X, Linux, Solaris
- Supported Languages: Java, C#, Ruby, Python, JavaScript
- Easy, fast automation development

How to download and install selenium web driver:
1- Go to https://www.seleniumhq.org/
2- Download tab
3- Selenium Client & WebDriver Language Bindings (Which we need the *java* programming language)
   a. We need to download the selenium web driver library and use it along with a programming language to create a test automation test scripts
4- Click on download and **unzip** the zip file (**selenium-java-x.y.z.zip**)
   a. Note that x,y,z are version numbers, depends on the current version of your web driver
5- Go to the java project under test, include the web driver to the project.
   a. Go to project properties
   b. Go to Java build path
   c. Add external jars in the library tab
   d. Select the all the jar files from the **selenium-java-x.y.z** directory (from step 4)
   e. Select the all the jar files from the **selenium-java-x.y.z/lib** directory as well
   f. Click apply and ok. (Something around 12 jar files should be added to your project library)
6- Go to the http://chromedriver.chromium.org/downloads and download the latest version of the chromedriver executable file.
   a. Locate it inside the project workspace folder

Example test plan:
1- Open a Wikipedia page
2- Select to English language
3- Search for keyword "software"
4- Observe the software page
5- Close the page

Example junit test in eclipse:

```java
import org.junit.*;
import org.openqa.selenium.*;
import org.openqa.selenium.chrome.ChromeDriver;

public class WikipediaTest {

        WebDriver driver;

        @Before
        public void openWikipediaEnglishPage() throws InterruptedException{
                System.setProperty("webdriver.chrome.driver","chromedriver");
                driver = new ChromeDriver();
                driver.get("https://www.wikipedia.org");
                Assert.assertEquals("Wikipedia", driver.getTitle());
        }
        @Test
        public void testEnglishLink() throws InterruptedException{
                WebElement link = driver.findElement(By.id("js-link-box-en"));
                link.click();
                Thread.sleep(5000);
                Assert.assertEquals("Wikipedia, the free encyclopedia", driver.getTitle());
        }
        @Test
        public void testSearchBox() throws InterruptedException{
                WebElement searchBox = driver.findElement(By.id("searchInput"));;
                searchBox.sendKeys("Software testing");
                Thread.sleep(5000);
                searchBox.submit();
                Thread.sleep(5000);
                Assert.assertEquals("Software testing - Wikipedia", driver.getTitle());
        }
        @After
        public void closePage(){
                driver.quit();
        }
}
```