

# Mastering Selenium Testing Tools

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*Thomas Sundberg and Ripon Al Wasim*

Section 1

*Setting Up the Work Environment*



In this Section, we are going to take a look at...

- A small example
- Selenium architectural overview

# Mastering Selenium Testing Tools

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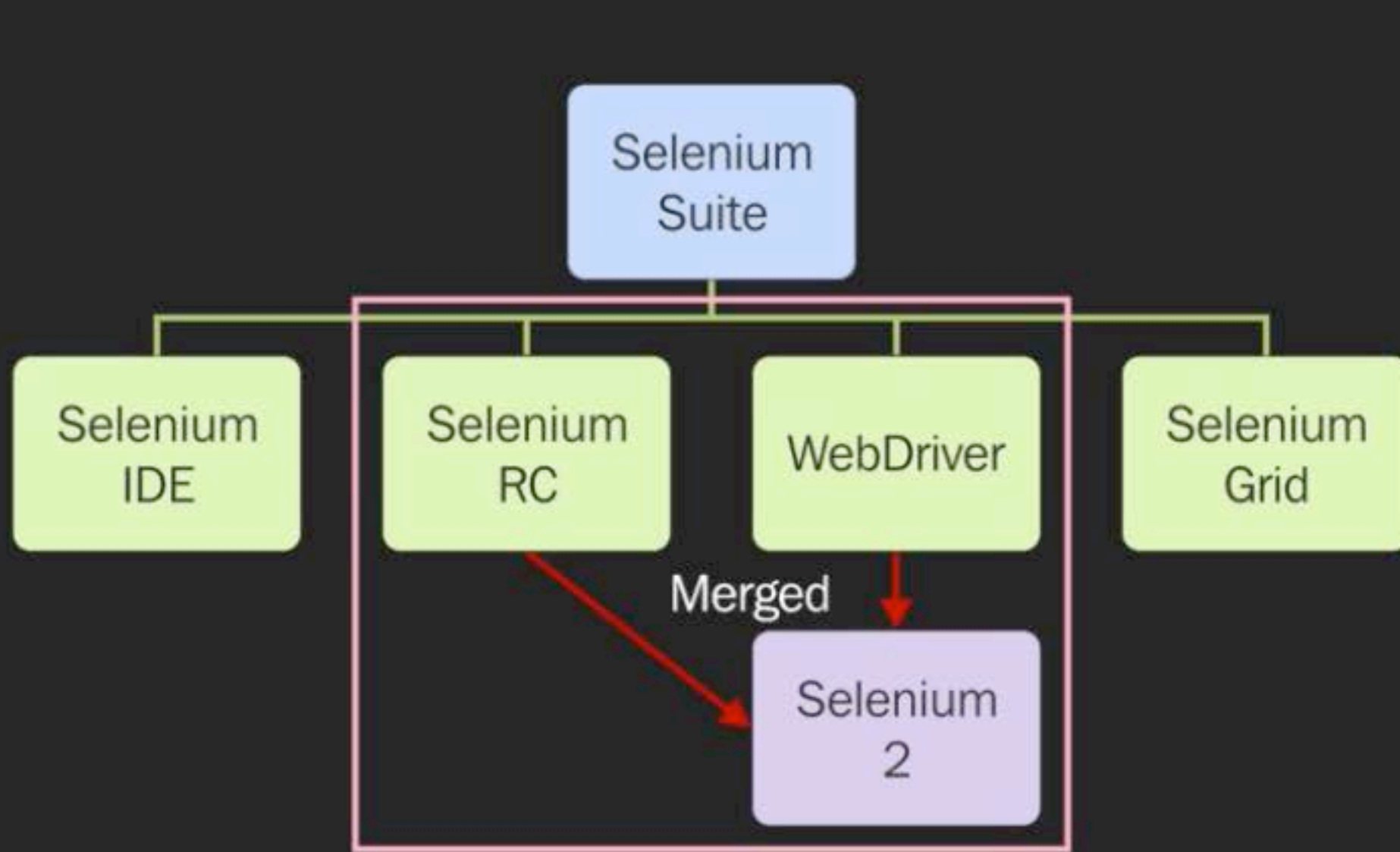
*Thomas Sundberg and Ripon Al Wasim*

Video 1.2

*Selenium Tools Suite*



# A Look Behind Selenium





# List of Things, We Are Going to Look at in This Course

Frameworks



Languages

Plugins



1x



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# List of Things, We Are Going to Look at in This Course

**Selenium IDE**



**Selenium WebDriver**



**Selenium Server**



# List of Things, We Are Going to Look at in This Course

Selenium IDE



Selenium WebDriver



Selenium Server



JUnit



Firebug



FirePath

Next Video

Preparing Your Environment



# Mastering Selenium Testing Tools

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*Thomas Sundberg and Ripon Al Wasim*

Video 1.3

*Preparing Your Environment*

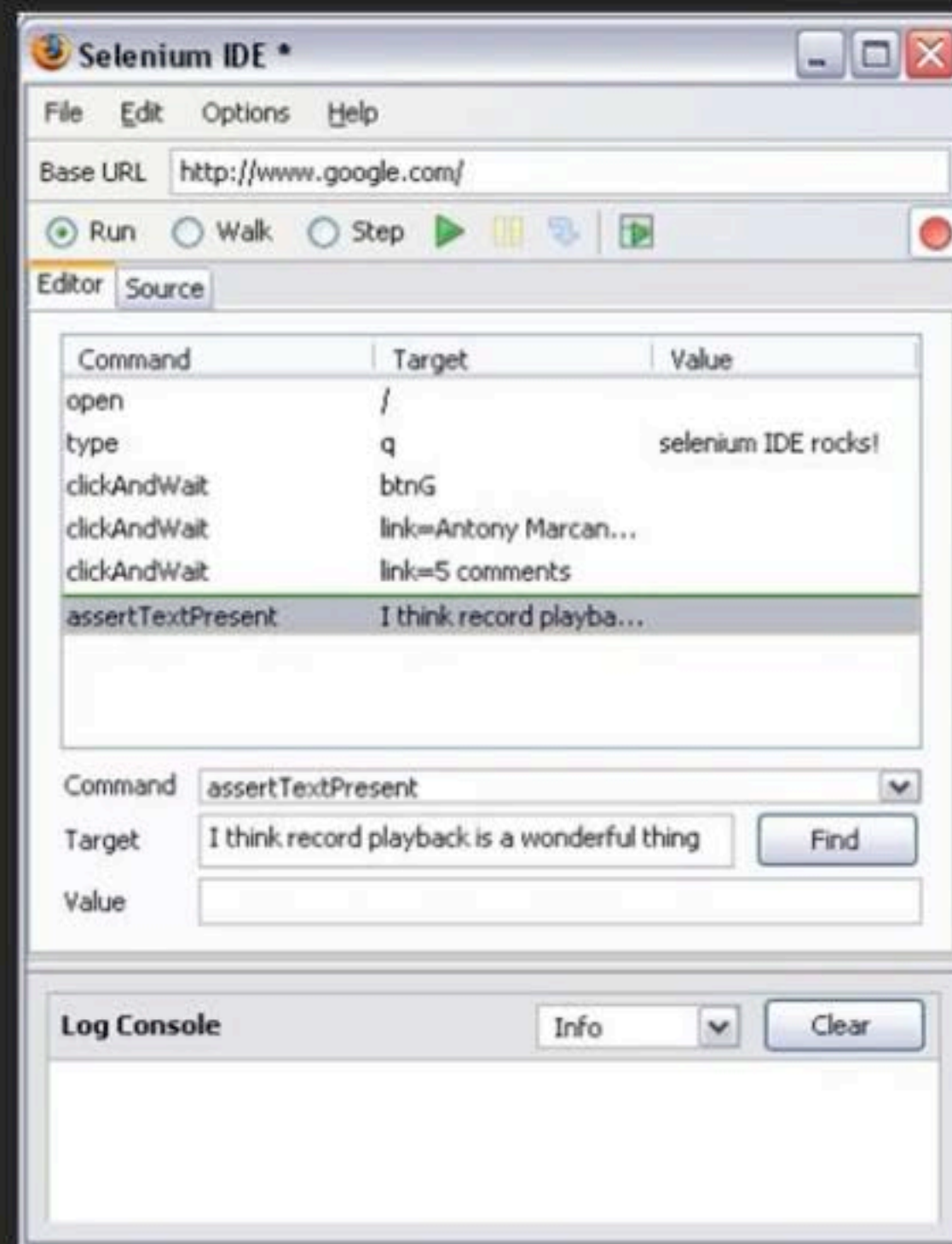


## In this Video, we are going to take a look at...

- Preparation of environment
  - Selenium IDE
  - Selenium WebDriver
  - Selenium Server
  - Programming languages
  - Verification framework
  - Maven
  - IntelliJ IDEA

# Selenium IDE

## Selenium IDE



# Selenium WebDriver and Selenium Server

Selenium WebDriver: For Local execution

Selenium Server: For Remote execution

## **Selenium WebDriver**





# Programming Languages

- Java
  - C#
  - Ruby
  - Python
  - Perl
  - PHP
  - JavaScript
- abbreviated as 3P

# Programming Languages

- Java
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# Java...



Java Book: The Complete Reference by Herbert Schildt

<http://www.tutorialspoint.com/java/>  
<http://www.learnjavaonline.org/>

# Verification Framework

- Junit
  - TestNG
  - Spock
- } For Java
- Rspec in Ruby
  - Nose in Python
  - PHP
  - NUnit and MSTest for C#



JUnit...

# JUnit

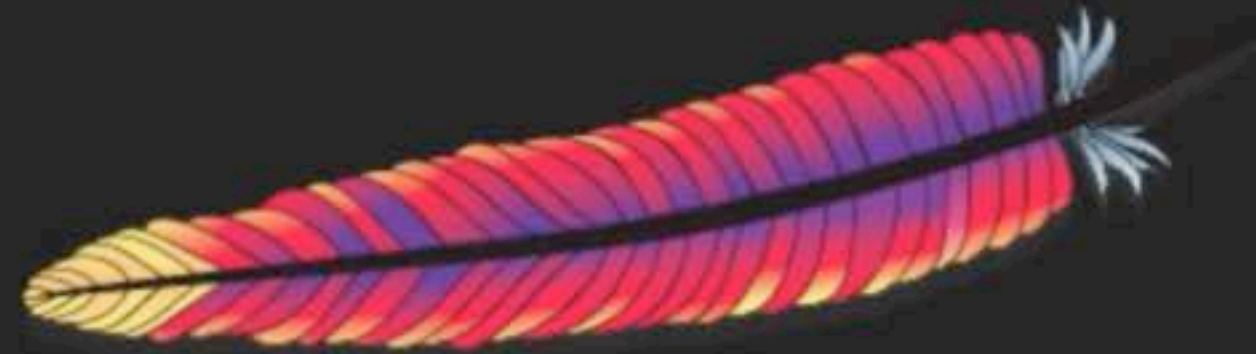
To know details about Maven you can go through

<http://maven.apache.org/guides/getting-started/maven-in-five-minutes.html>

Another one is

<http://www.tutorialspoint.com/maven/>

# Maven...



# *Maven*<sup>TM</sup>

To know details about Maven you can go through

<http://maven.apache.org/guides/getting-started/maven-in-five-minutes.html>

Another one is

<http://www.tutorialspoint.com/maven/>

# IntelliJ IDEA...



Two Editions:

- 1) Community Edition (Free) and
- 2) Ultimate Edition (Paid)

You can download from the following site:  
<https://www.jetbrains.com/idea/download/>

Next Video

Inspecting the Web Elements



# Mastering Selenium Testing Tools

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Thomas Sundberg and Ripon Al Wasim

Video 1.4

*Inspecting the Web Elements*



In this Video, we are going to take a look at...

- Firebug and Firepath
- A small example
- Architectural overview of Selenium

## Firebug and Firepath...



**Firebug**



*FirePath*

# A Small Program Run on 2 Browsers...

Run Google Search on



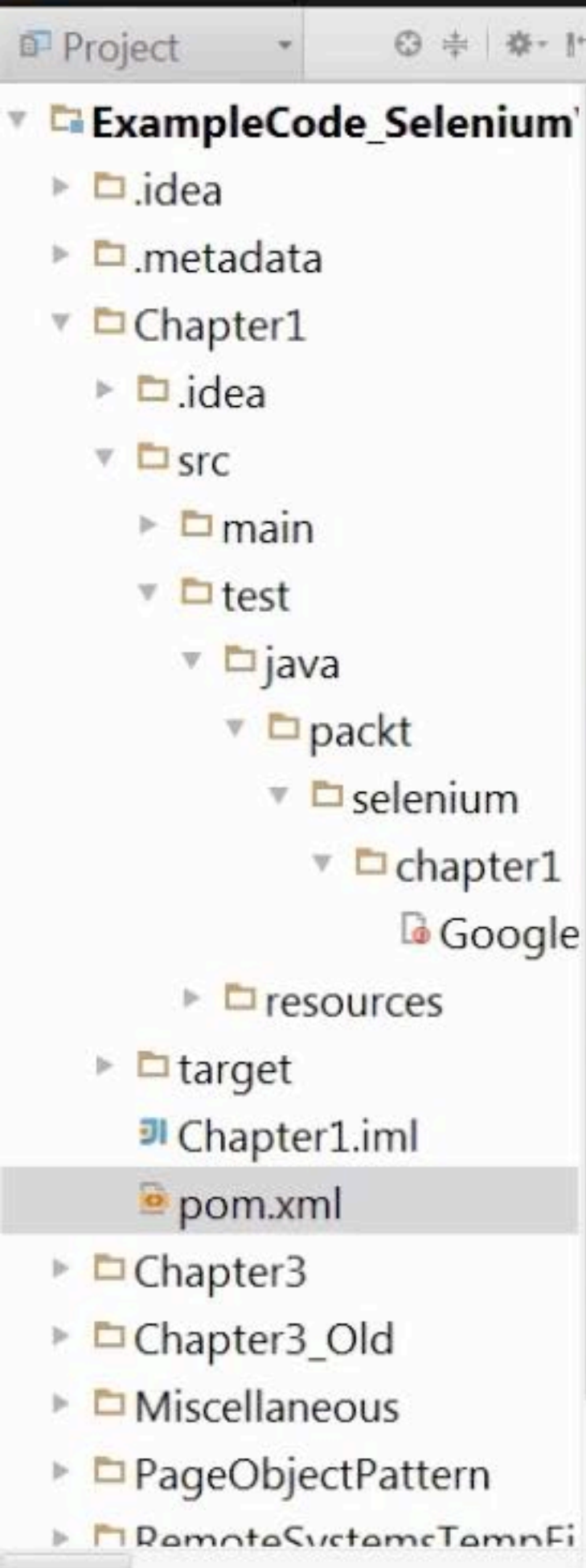
Google Chrome

and



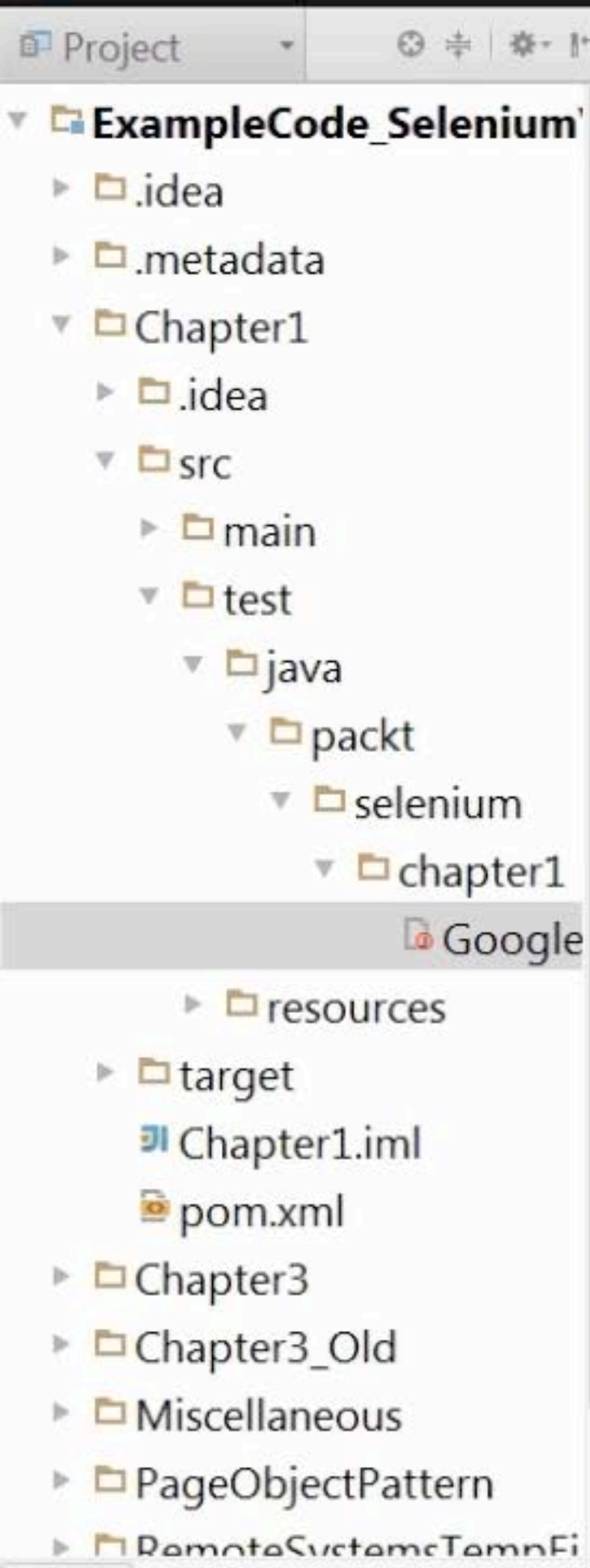
Firefox





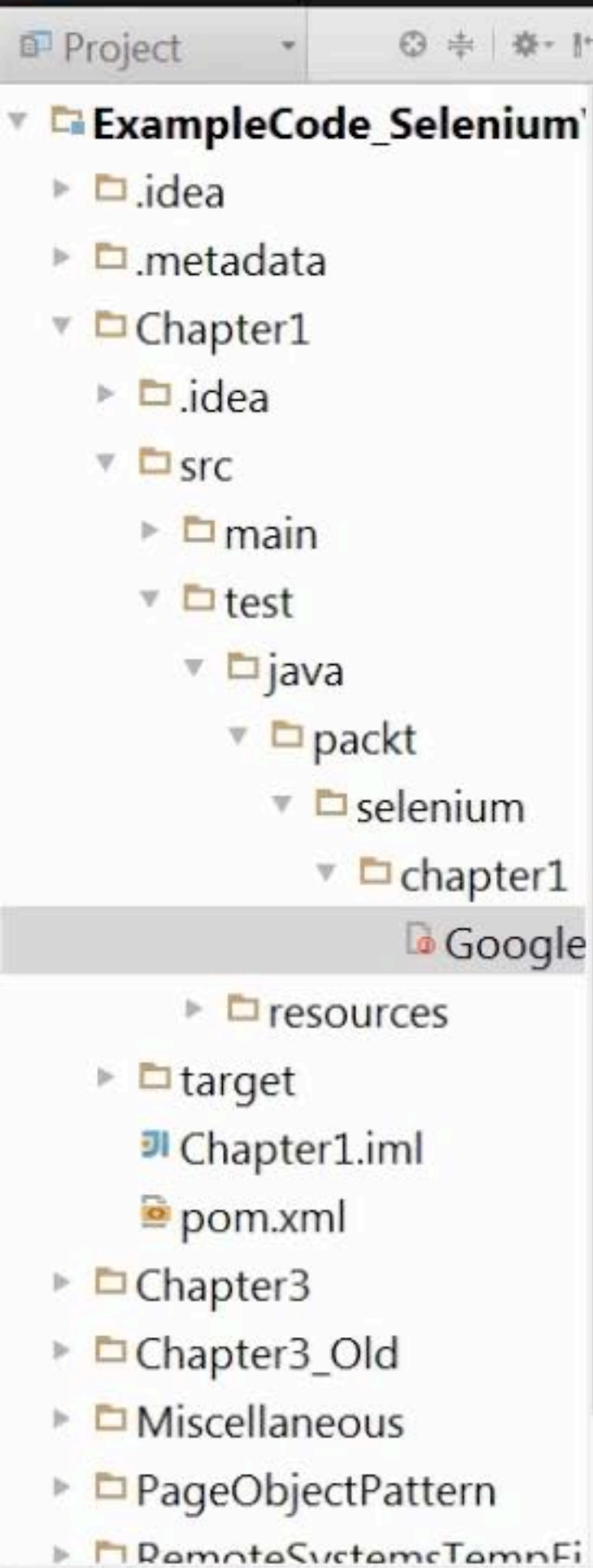
```
2 <project xmlns="http://maven.apache.org/POM/4.0.0"
3       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4       xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
5   <modelVersion>4.0.0</modelVersion>
6
7   <groupId>MasteringSeleniumTestingTools</groupId>
8   <artifactId>Chapter1</artifactId>
9   <version>1.0-SNAPSHOT</version>
10  <name>Chapter1</name>
11
12  <dependencies>
13    <dependency>
14      <groupId>org.seleniumhq.selenium</groupId>
15      <artifactId>selenium-java</artifactId>
16      <version>2.45.0</version>
17    </dependency>
18    <dependency>
19      <groupId>junit</groupId>
20      <artifactId>junit</artifactId>
21      <version>4.12</version>
22      <scope>test</scope>
23    </dependency>
24  </dependencies>
25</project>
```





```
1 package packt.selenium.chapter1;
2
3 /**
4  * Created by Ripon on 5/6/2015.
5  */
6 import ...
15 public class GoogleSearch_FF_ChromeTest {
16     private WebDriver driver;
17     private String baseUrl;
18     private boolean acceptNextAlert = true;
19     private StringBuffer verificationErrors = new StringBuffer();
20
21     @Before
22     public void setUp() throws Exception {
23         baseUrl = "https://www.google.com/";
24         //driver.manage().timeouts().implicitlyWait(30, TimeUnit.S
25     }
26
27     @Test
28     public void testFirefox() throws Exception {
29         driver = new FirefoxDriver();
30         ...
```





27  
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```
@Test
public void testFirefox() throws Exception {
    driver = new FirefoxDriver();
    driver.manage().window().maximize();
    driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
    driver.get(baseUrl + "?gws_rd=cr,ssl&ei=ziAqVtGnIcWdugTG65");
    driver.findElement(By.id("lst-ib")).clear();
    driver.findElement(By.id("lst-ib")).sendKeys("Selenium");
    driver.findElement(By.name("btnG")).click();
}

@Test
public void tesChrome() throws Exception {
    System.setProperty("webdriver.chrome.driver", "D:\\Packt P");
    driver = new ChromeDriver();
    driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
    driver.manage().window().maximize();
    driver.get(baseUrl + "?gws_rd=cr,ssl&ei=ziAqVtGnIcWdugTG65");
    driver.findElement(By.id("lst-ib")).clear();
    driver.findElement(By.id("lst-ib")).sendKeys("Selenium");
    driver.findElement(By.name("btnG")).click();
}
```





C:\Windows\system32\cmd.exe - mvn clean test

```
D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1>mvn clean test
[INFO] Scanning for projects...
[INFO]
[INFO] -----
[INFO] Building Chapter1 1.0-SNAPSHOT
[INFO] -----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ Chapter1 ---
[INFO] Deleting D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1\target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ Chapter1 ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ Chapter1 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ Chapter1 ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ Chapter1 ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1\target\test-classes
```



C:\Windows\system32\cmd.exe

```
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ Chapter1 ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ Chapter1 ---
[INFO] Surefire report directory: D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1\target\surefire-reports

-----
T E S T S
-----
Running packt.selenium.chapter1.GoogleSearch_FF_ChromeTest
Starting ChromeDriver 2.15.322448 (52179c1b310fec1797c81ea9a20326839860b7d3) on port 22351
Only local connections are allowed.
Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 21.142 sec

Results :

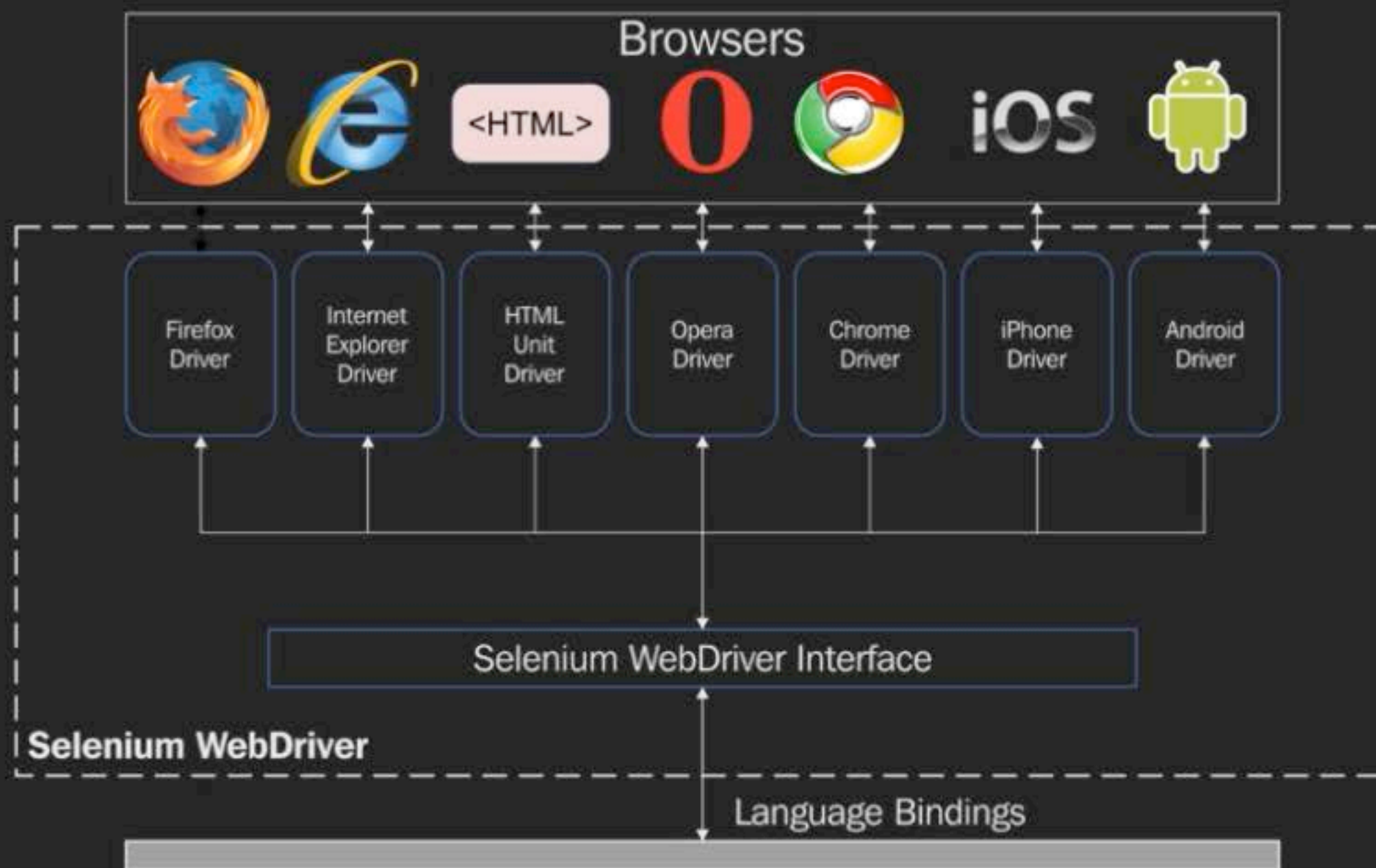
Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 24.524 s
[INFO] Finished at: 2015-10-26T18:44:57-07:00
[INFO] Final Memory: 16M/80M
[INFO] -----

D:\Packt Publishing\Mastering Selenium Testing Tools_Video\ExampleCode_SeleniumVideo\Chapter1>
```



# Architectural Overview...

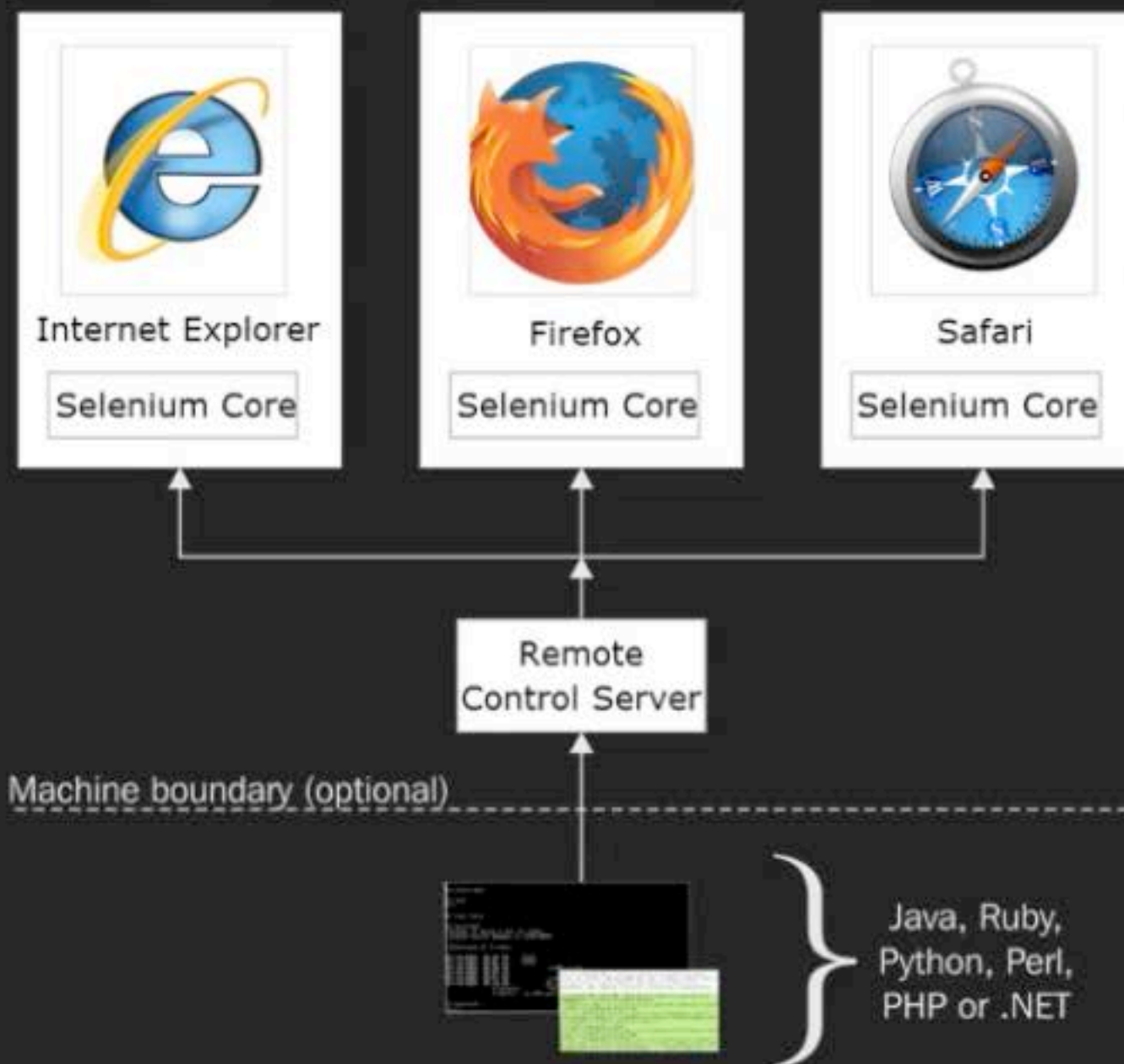


# Architectural Overview...



## Selenium Architecture

Windows, Linux, or Mac (as appropriate)..



# Summary

## Top Level:

- Selenium IDE
- Selenium WebDriver
- Selenium Server

## 2<sup>nd</sup> Order Citizen:

- Java
- JUnit
- Maven
- IDEA
- Firebug and Firepath

Next Section

Selenium IDE