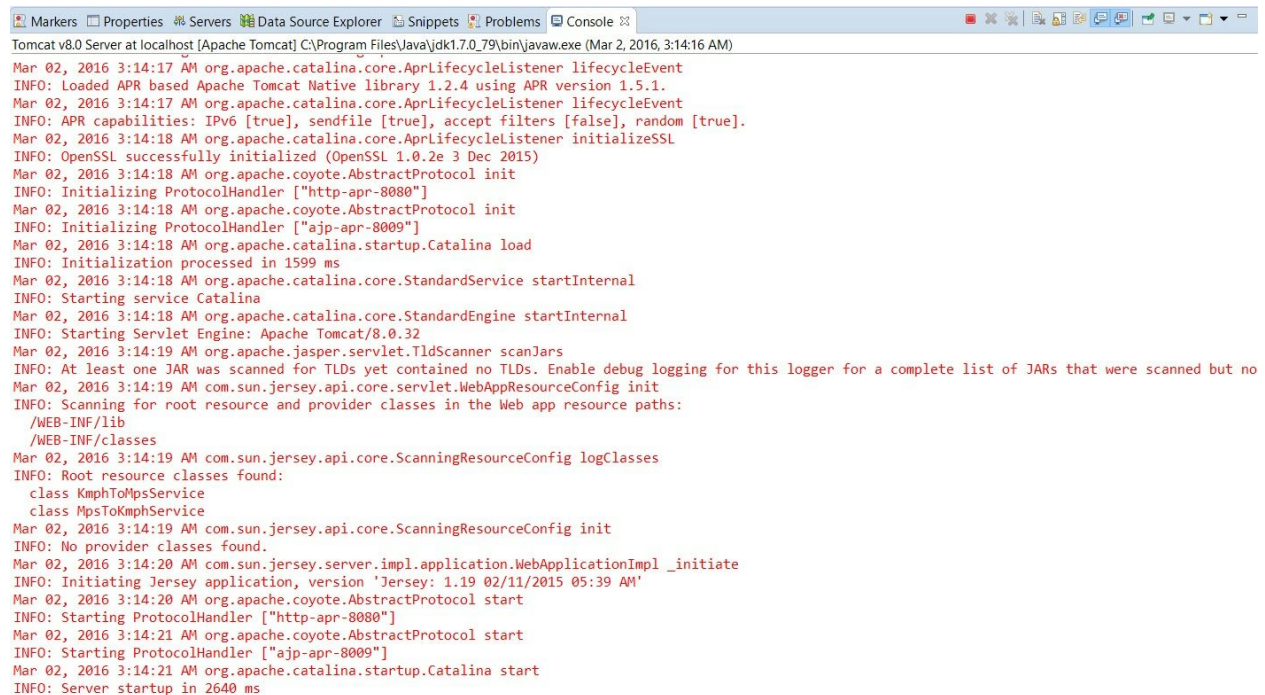# LAB ASSIGNMENT - 6

1. Creating a web proxy server to integrate data from REST services for speed conversion i.e from metre/sec to km/hr and from km/hr to meter/sec

-> Create a dynamic web project and create two classes with the code for the conversion of speed units

-> Convert the project to Maven project and build the project. After the build gets success run on the server
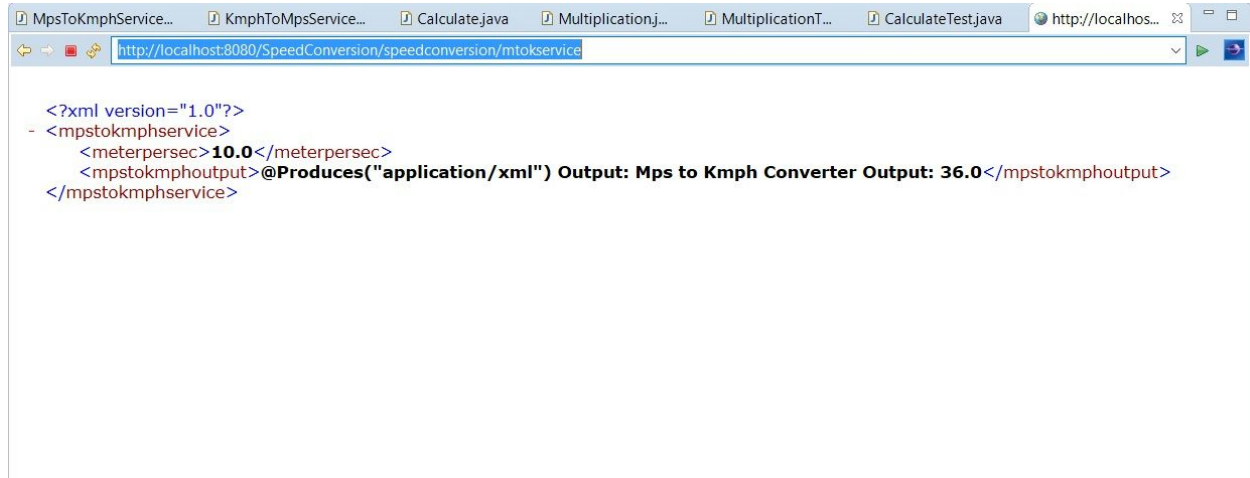
-> A server window gets opened and now specify the path assigned in the code then the output will be published on to the server

Output for meterpersec to kmperhour conversion :


```
<?xml version="1.0"?>
- <mpstokmphservice>
    <meterpersec>10.0</meterpersec>
    <mpstokmphoutput>@Produces("application/xml") Output: Mps to Kmph Converter Output: 36.0</mpstokmphoutput>
  </mpstokmphservice>
```

Output for kmperhour to meterpersec conversion :


```
<?xml version="1.0"?>
- <kmphtompsservice>
    <kmperhour>36.0</kmperhour>
    <kmphtompsoutput>@Produces("application/xml") Output: Kmph to Mps Converter Output: 10.0</kmphtompsoutput>
  </kmphtompsservice>
```

2. Create a class Calculate with the conversion function and create a new JUnit test case on the Calculate class.

Test case 1 (success) :


```java
import static org.junit.Assert.*;

public class CalculateTest {

    Calculate object = new Calculate();
    double result = object.kmphToMps(36.0);
    double testresult = 10.0;

    @Test
    public void test() {
        System.out.println("@Test Result() : "+result+" = "+testresult);
        assertEquals(result,testresult,0);
    }

}
```
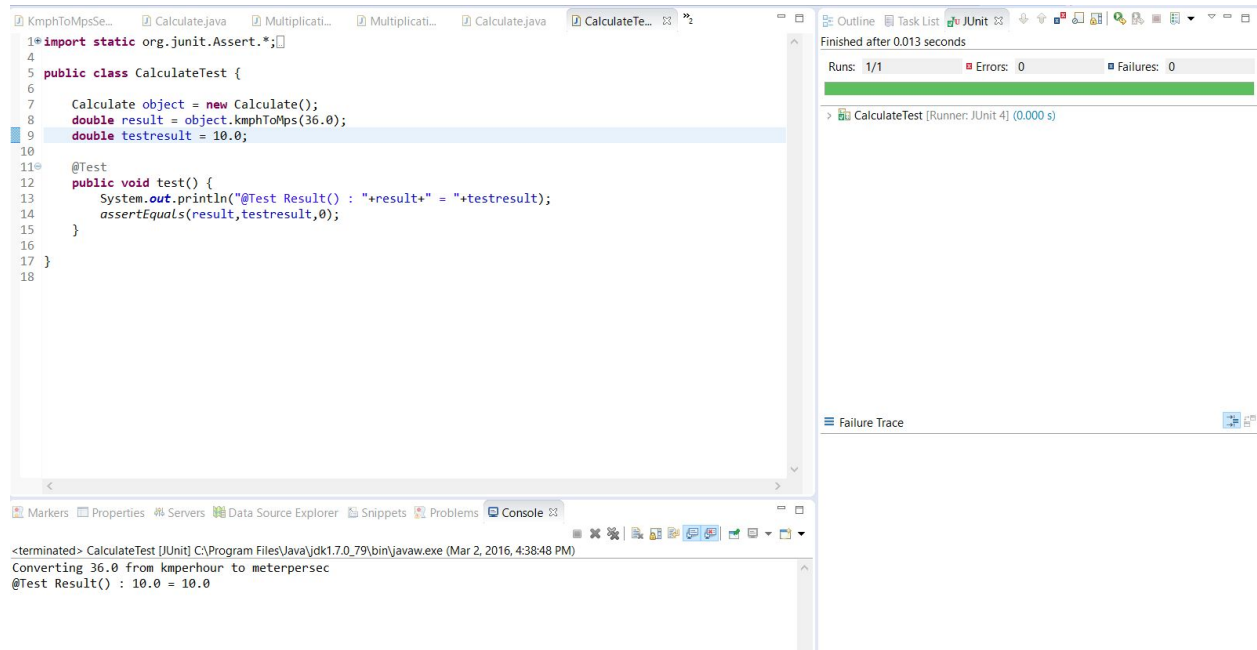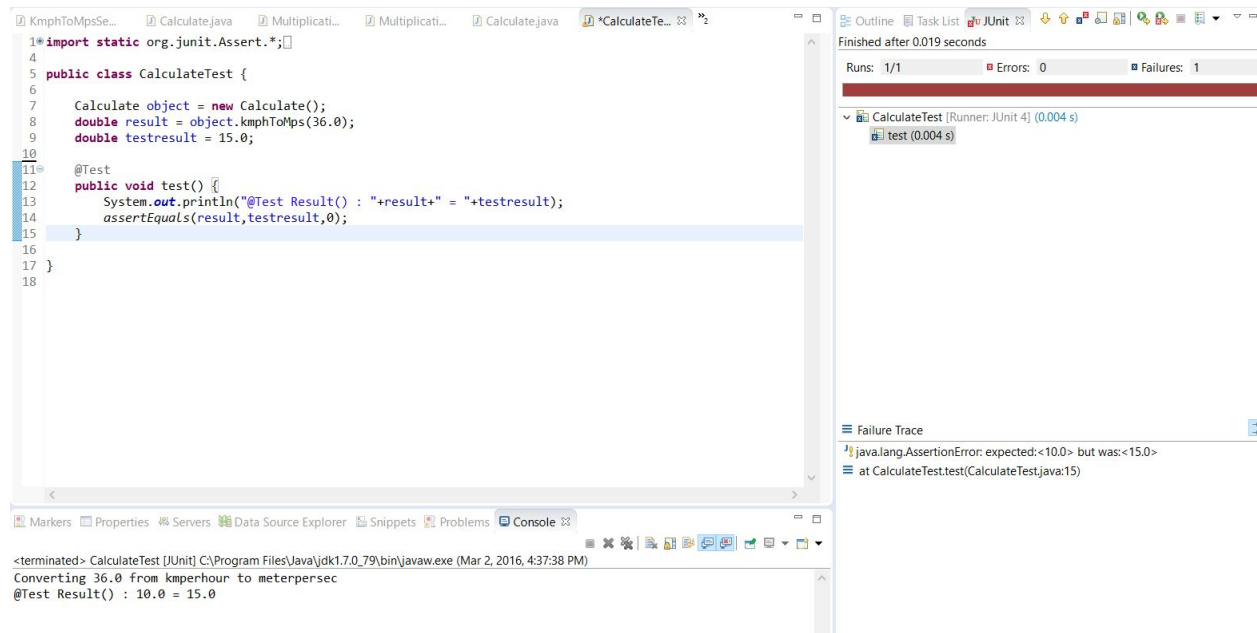
Console:
```
<terminated> CalculateTest [JUnit] C:\Program Files\Java\jdk1.7.0_79\bin\javaw.exe (Mar 2, 2016, 4:38:48 PM)
Converting 36.0 from kmperhour to meterpersec
@Test Result() : 10.0 = 10.0
```

Test case 2 (failure) :


```java
import static org.junit.Assert.*;

public class CalculateTest {

    Calculate object = new Calculate();
    double result = object.kmphToMps(36.0);
    double testresult = 15.0;

    @Test
    public void test() {
        System.out.println("@Test Result() : "+result+" = "+testresult);
        assertEquals(result,testresult,0);
    }

}
```

Failure Trace:
```
java.lang.AssertionError: expected:<10.0> but was:<15.0>
    at CalculateTest.test(CalculateTest.java:15)
```

Console:
```
<terminated> CalculateTest [JUnit] C:\Program Files\Java\jdk1.7.0_79\bin\javaw.exe (Mar 2, 2016, 4:37:38 PM)
Converting 36.0 from kmperhour to meterpersec
@Test Result() : 10.0 = 15.0
```