CS551 Advanced Software Engineering

LAB ASSIGNMENT #6

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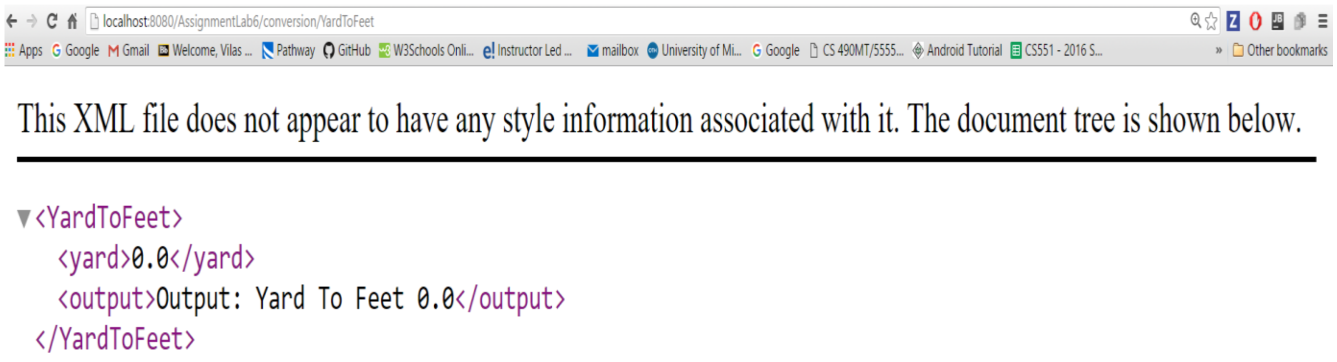
1. Implement a web server proxy (related to your own project) to integrate data from at least two Rest services.

In this assignment, I have created two Rest services for the calculation of feet to yard and yard to feet. I used JUnit testing for testing my source code. And also i created a local web server by using the tomcat 8.0.

First Rest service

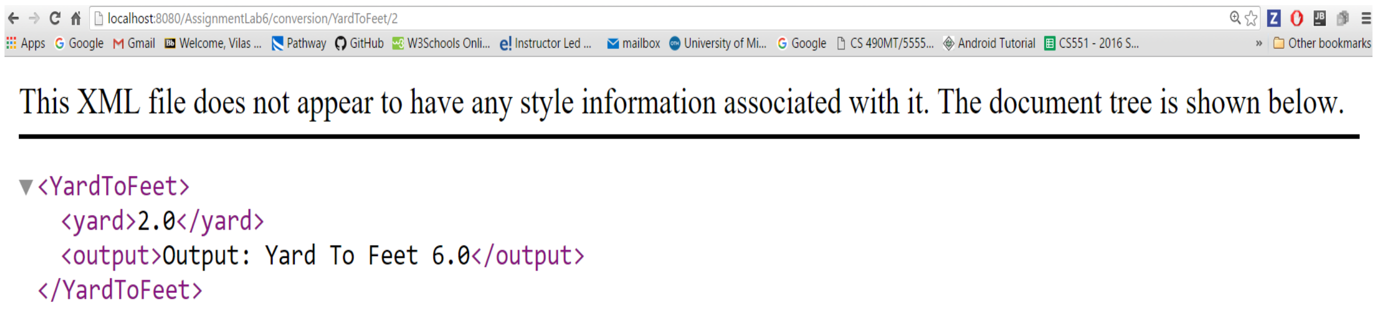
The below screenshot shows the default value for the yard to feet conversation and it's initially set as 0.



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<YardToFeet>
   <yard>0.0</yard>
   <output>Output: Yard To Feet 0.0</output>
 </YardToFeet>
```

As shown in the below screenshot, the value assigned for the yard as 2 and then determine the feet value, that's 6.



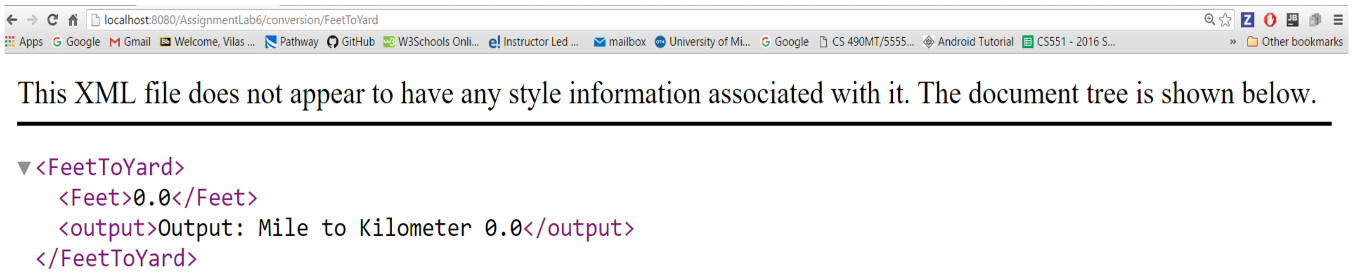
localhost:8080/AssignmentLab6/conversion/YardToFeet/2

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<YardToFeet>
   <yard>2.0</yard>
   <output>Output: Yard To Feet 6.0</output>
 </YardToFeet>
```

Second Rest service

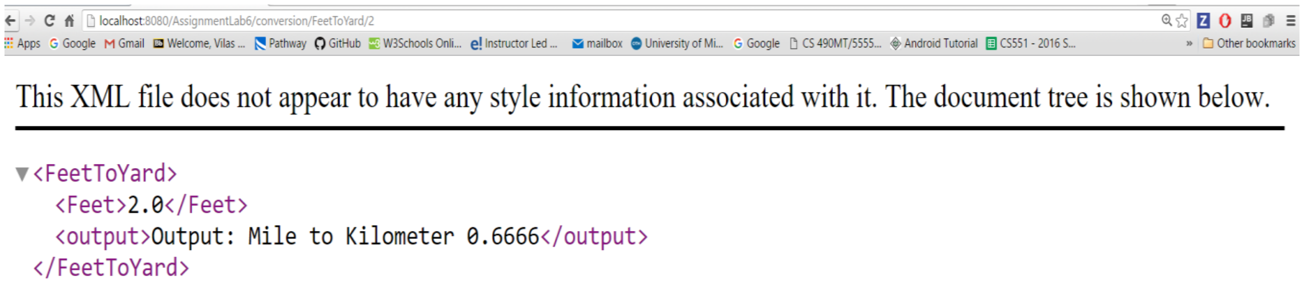
The second rest service is calculating the feet to yard value as shown in the below screenshots.



localhost:8080/AssignmentLab6/conversion/FeetToYard

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
▼<FeetToYard>
   <Feet>0.0</Feet>
   <output>Output: Mile to Kilometer 0.0</output>
 </FeetToYard>
```



localhost:8080/AssignmentLab6/conversion/FeetToYard/2

This XML file does not appear to have any style information associated with it. The document tree is shown below.

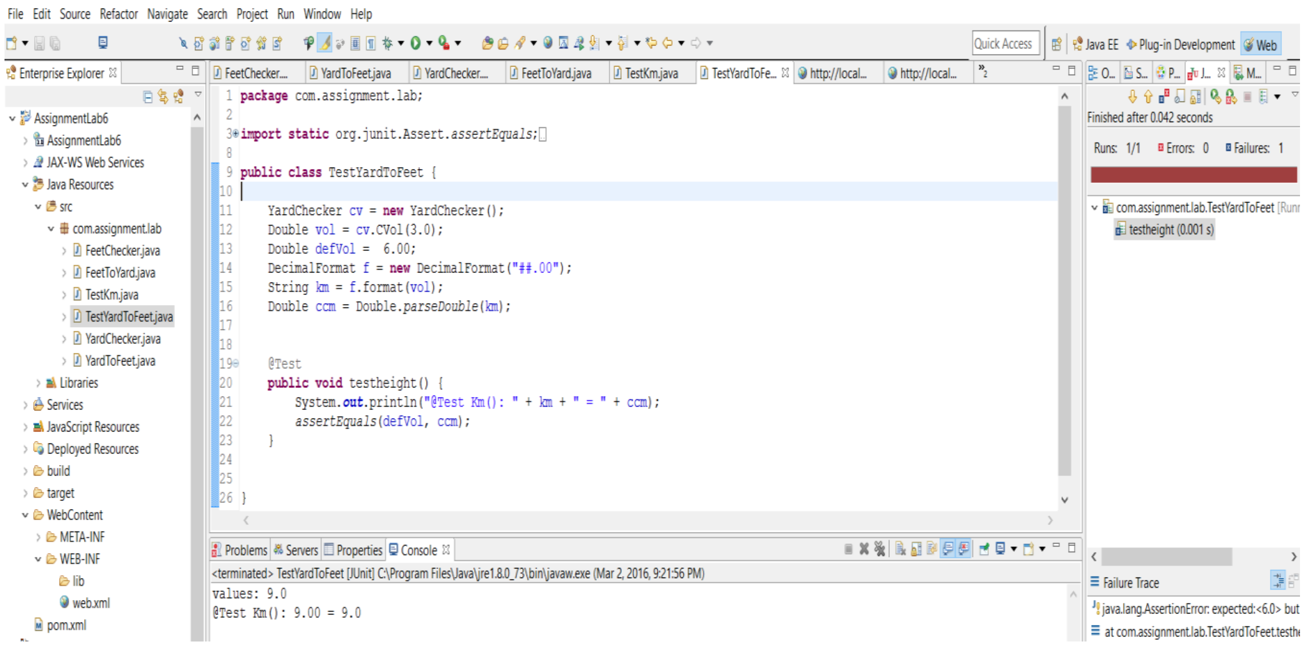
```
▼<FeetToYard>
   <Feet>2.0</Feet>
   <output>Output: Mile to Kilometer 0.6666</output>
 </FeetToYard>
```

2. Write at least two suitable Junit Test cases for the classes created

The Junit test cases have been created and then tested for two cases as failure and success case.

First Rest service test case

Failure case test



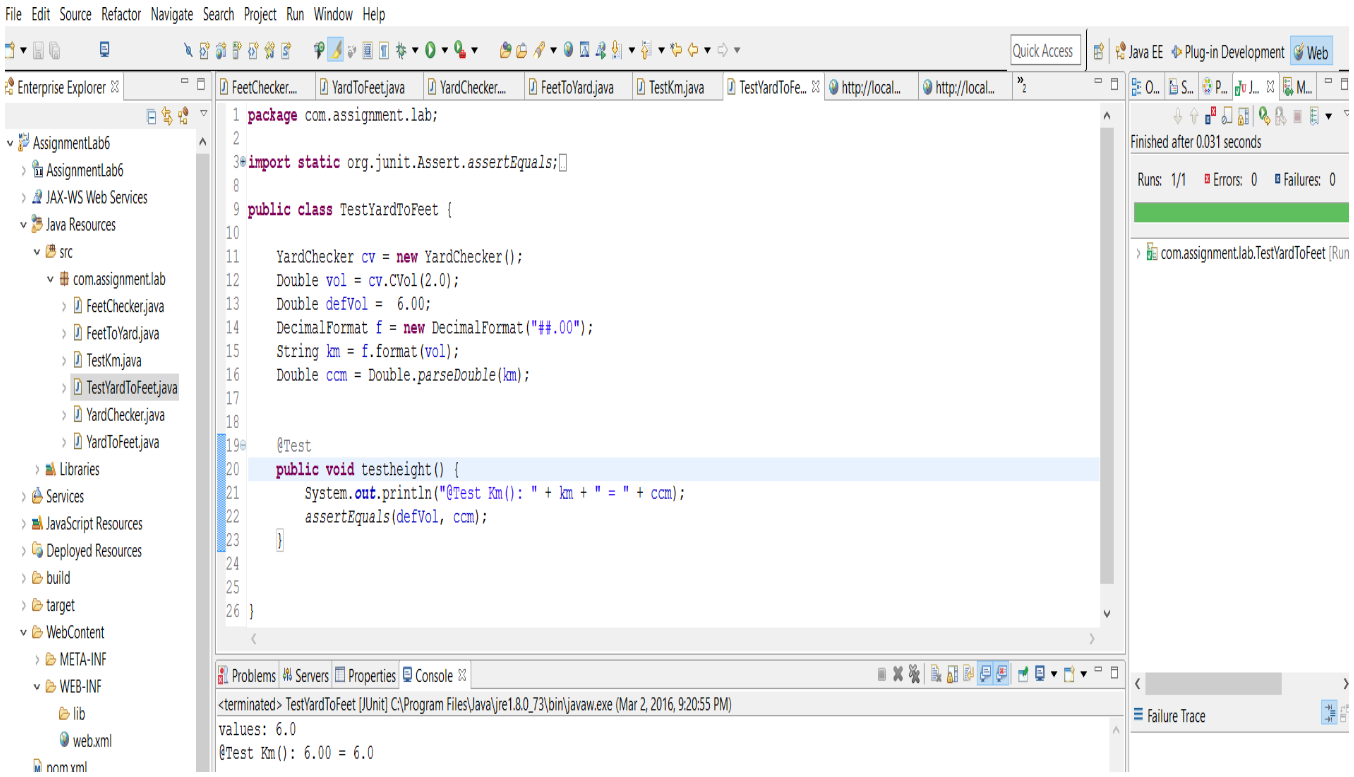
```java
package com.assignment.lab;

import static org.junit.Assert.assertEquals;

public class TestYardToFeet {

    YardChecker cv = new YardChecker();
    Double vol = cv.CVol(3.0);
    Double defVol =  6.00;
    DecimalFormat f = new DecimalFormat("##.00");
    String km = f.format(vol);
    Double ccm = Double.parseDouble(km);


    @Test
    public void testheight() {
        System.out.println("@Test Km(): " + km + " = " + ccm);
        assertEquals(defVol, ccm);
    }


}
```

```
Finished after 0.042 seconds
Runs: 1/1    Errors: 0    Failures: 1
com.assignment.lab.TestYardToFeet [Runr
    testheight (0.001 s)
```

```
<terminated> TestYardToFeet [JUnit] C:\Program Files\Java\jre1.8.0_73\bin\javaw.exe (Mar 2, 2016, 9:21:56 PM)
values: 9.0
@Test Km(): 9.00 = 9.0
```

```
java.lang.AssertionError: expected:<6.0> but
at com.assignment.lab.TestYardToFeet.testhe
```

Success case test



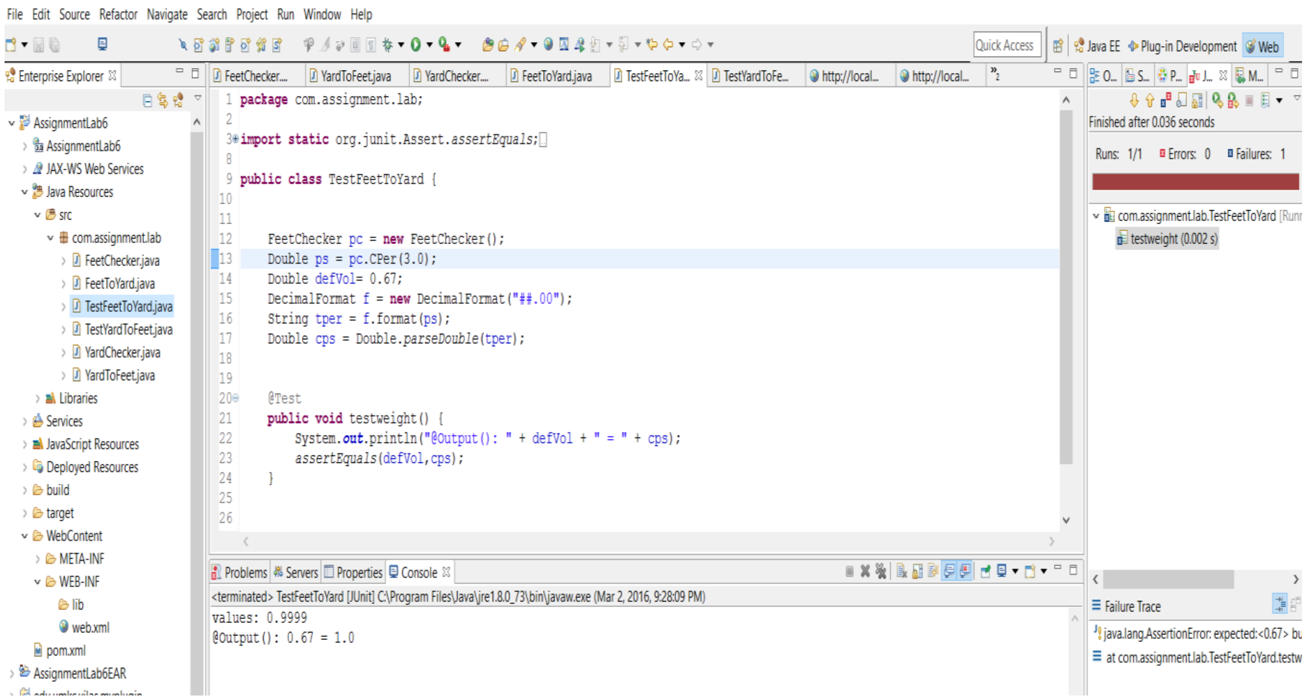
```java
package com.assignment.lab;

import static org.junit.Assert.assertEquals;

public class TestYardToFeet {

    YardChecker cv = new YardChecker();
    Double vol = cv.CVol(2.0);
    Double defVol =  6.00;
    DecimalFormat f = new DecimalFormat("##.00");
    String km = f.format(vol);
    Double ccm = Double.parseDouble(km);


    @Test
    public void testheight() {
        System.out.println("@Test Km(): " + km + " = " + ccm);
        assertEquals(defVol, ccm);
    }


}
```

```
Finished after 0.031 seconds
Runs: 1/1    Errors: 0    Failures: 0
com.assignment.lab.TestYardToFeet [Run
```

```
<terminated> TestYardToFeet [JUnit] C:\Program Files\Java\jre1.8.0_73\bin\javaw.exe (Mar 2, 2016, 9:20:55 PM)
values: 6.0
@Test Km(): 6.00 = 6.0
```

Second Rest service test case

Failure case test

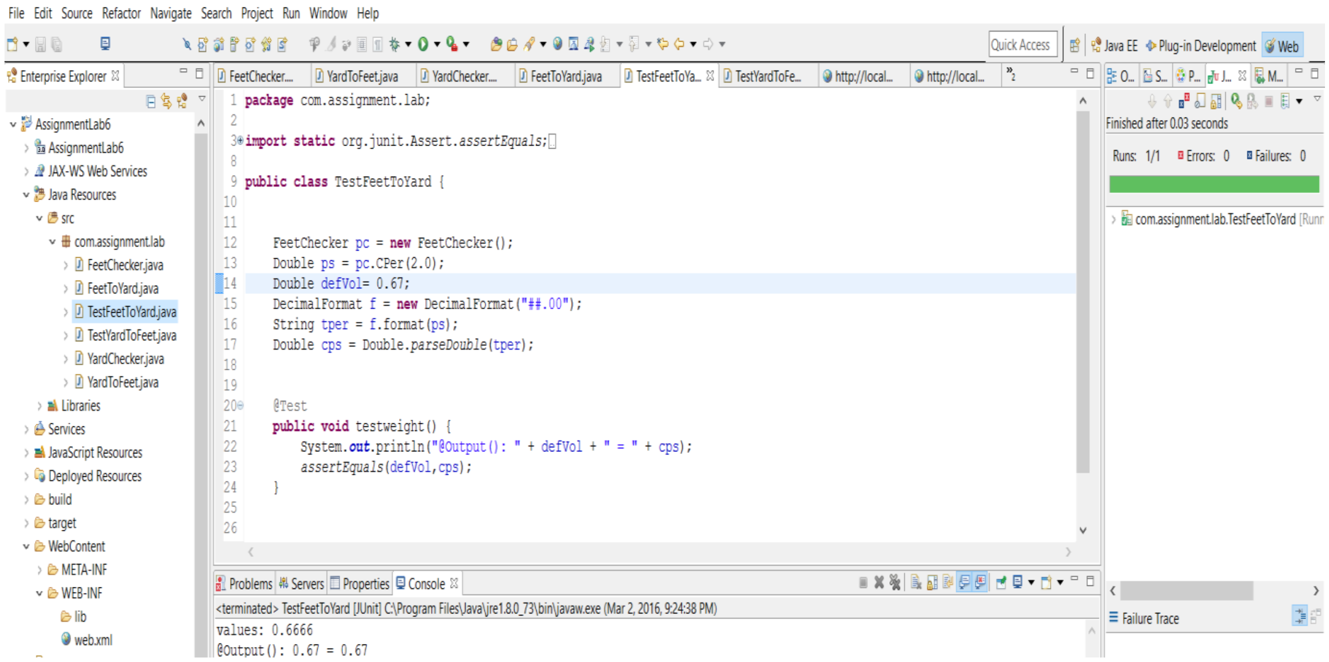


```
package com.assignment.lab;

import static org.junit.Assert.assertEquals;

public class TestFeetToYard {


    FeetChecker pc = new FeetChecker();
    Double ps = pc.CPer(3.0);
    Double defVol= 0.67;
    DecimalFormat f = new DecimalFormat("##.00");
    String tper = f.format(ps);
    Double cps = Double.parseDouble(tper);


    @Test
    public void testweight() {
        System.out.println("@Output(): " + defVol + " = " + cps);
        assertEquals(defVol,cps);
    }


```

```
<terminated> TestFeetToYard [JUnit] C:\Program Files\Java\jre1.8.0_73\bin\javaw.exe (Mar 2, 2016, 9:28:09 PM)
values: 0.9999
@Output(): 0.67 = 1.0
```

```
Finished after 0.036 seconds
Runs: 1/1   Errors: 0   Failures: 1
com.assignment.lab.TestFeetToYard [Runr
  testweight (0.002 s)
Failure Trace
java.lang.AssertionError: expected:<0.67> bu
at com.assignment.lab.TestFeetToYard.testw
```

Success case test



```
package com.assignment.lab;

import static org.junit.Assert.assertEquals;

public class TestFeetToYard {


    FeetChecker pc = new FeetChecker();
    Double ps = pc.CPer(2.0);
    Double defVol= 0.67;
    DecimalFormat f = new DecimalFormat("##.00");
    String tper = f.format(ps);
    Double cps = Double.parseDouble(tper);


    @Test
    public void testweight() {
        System.out.println("@Output(): " + defVol + " = " + cps);
        assertEquals(defVol,cps);
    }


```

```
<terminated> TestFeetToYard [JUnit] C:\Program Files\Java\jre1.8.0_73\bin\javaw.exe (Mar 2, 2016, 9:24:38 PM)
values: 0.6666
@Output(): 0.67 = 0.67
```

```
Finished after 0.03 seconds
Runs: 1/1   Errors: 0   Failures: 0
com.assignment.lab.TestFeetToYard [Runr
Failure Trace
```