

Performing White box and Black box testing on currency converter

Code

Main code:-

```
package abhivikas;

import javax.swing.*.*;
import java.awt.event.*;

public class CurrConvert {

    static double a=75.72;

    public static void converter()
    {

        JFrame f = new JFrame("CONVERTER");

        JLabel l1, l2;

        JTextField t1, t2;

        JButton b1, b2, b3;

        l1 = new JLabel("Rupees:");
        l1.setBounds(20, 40, 60, 30);
        l2 = new JLabel("Dollars:");
        l2.setBounds(170, 40, 60, 30);

        t1 = new JTextField("0");
        t1.setBounds(80, 40, 50, 30);
        t2 = new JTextField("0");
        t2.setBounds(240, 40, 50, 30);
```

```
b1 = new JButton("INR");
b1.setBounds(50, 80, 60, 15);
b2 = new JButton("Dollar");
b2.setBounds(190, 80, 60, 15);
b3 = new JButton("close");
b3.setBounds(150, 150, 60, 30);
```

```
b1.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e)
    {

        double d
            = Double.parseDouble(t1.getText());

        double d1 = (d / a);

        String str1 = String.valueOf(d1);

        t2.setText(str1);
    }
});
```

```
b2.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e)
    {

        double d2
            = Double.parseDouble(t2.getText());

        double d3 = (d2 * a);

        String str2 = String.valueOf(d3);

        t1.setText(str2);
    }
});
```

```
b3.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e)
```

```

        {
            f.dispose();
        }
    });

    f.addWindowListener(new WindowAdapter() {
        public void windowClosing(WindowEvent e)
        {
            System.exit(0);
        }
    });

    // Adding the created objects
    // to the form
    f.add(l1);
    f.add(t1);
    f.add(l2);
    f.add(t2);
    f.add(b1);
    f.add(b2);
    f.add(b3);

    f.setLayout(null);
    f.setSize(400, 300);
    f.setVisible(true);
}

public double div(double x) {
    return x/a;
}

public double mul(double x) {
    return x*a;
}

public static void main(String args[])
{
    converter();
}
}

```

Unit Testing :-

Rupee to Dollar :-

```

package abhivikas;

import static org.junit.Assert.*;

import org.junit.Test;

public class RupToDollarTest {

    @Test
    public void testDiv() {
        double a=1;
        CurrConvert junit=new CurrConvert();
        double result=junit.div(75.72);
        assertEquals(Double.compare(a, result),0);

    }

}

```

Dollar to Ruppe :-

```

package abhivikas;

import static org.junit.Assert.*;

import org.junit.Test;

public class DollarToRupeeTest {

    @Test
    public void testMul() {
        CurrConvert junit=new CurrConvert();
        double result=junit.mul(1);
        assertEquals(Double.compare(75.72, result),0);

    }

}

```

Regression Testing:-

```

package abhivikas;

import org.junit.runner.RunWith;
import org.junit.runners.Suite;
import org.junit.runners.Suite.SuiteClasses;

```

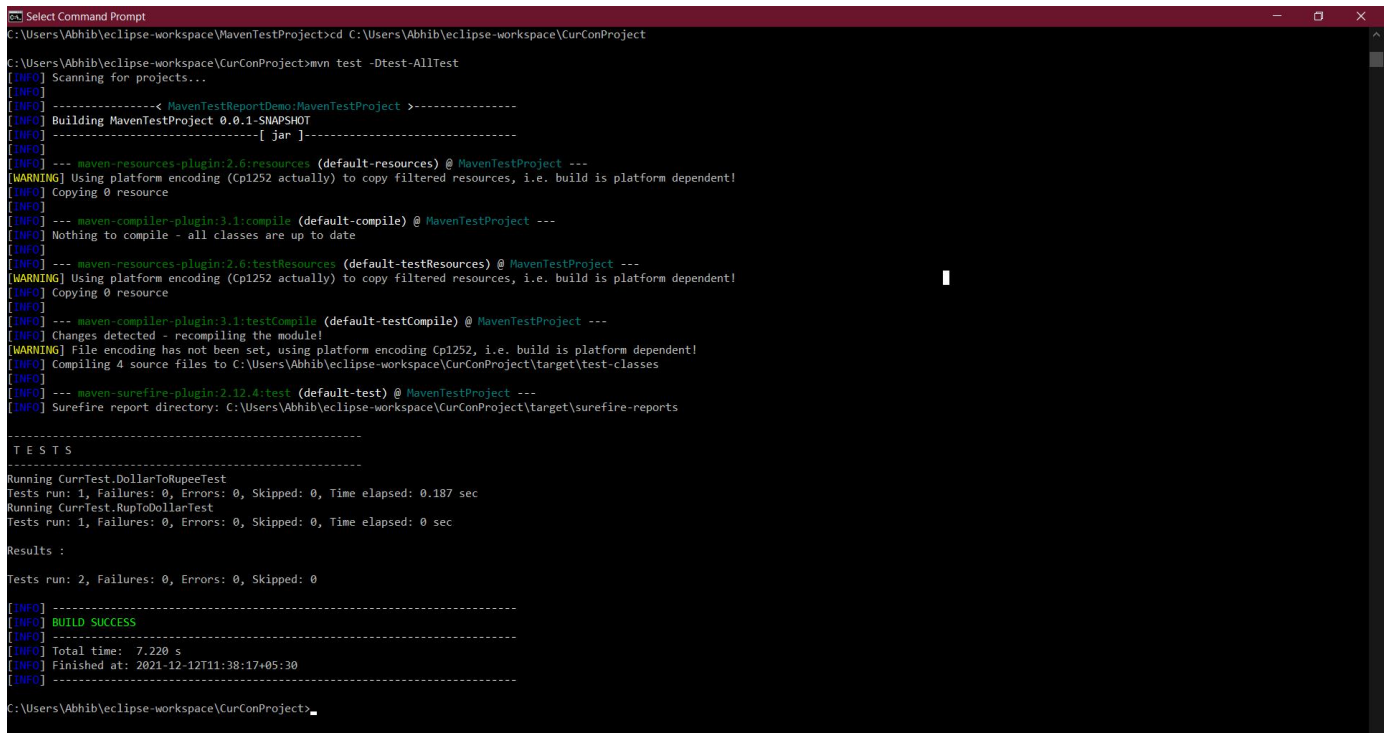
```

@RunWith(Suite.class)
@SuiteClasses({ DollarToRuppeeTest.class, RupToDollarTest.class })
public class AllTests {

}

```

BlackBox Testing:-



```

Select Command Prompt
C:\Users\Abhib\workspace\CurConProject>cd C:\Users\Abhib\workspace\CurConProject
C:\Users\Abhib\workspace\CurConProject>mvn test -Dtest=AllTest
[INFO] Scanning for projects...
[INFO] -----< MavenTestReportDemo:MavenTestProject >-----
[INFO] Building MavenTestProject 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ MavenTestProject ---
[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) @ MavenTestProject ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ MavenTestProject ---
[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:testCompile (default-testCompile) @ MavenTestProject ---
[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 4 source files to C:\Users\Abhib\workspace\CurConProject\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ MavenTestProject ---
[INFO] Surefire report directory: C:\Users\Abhib\workspace\CurConProject\target\surefire-reports

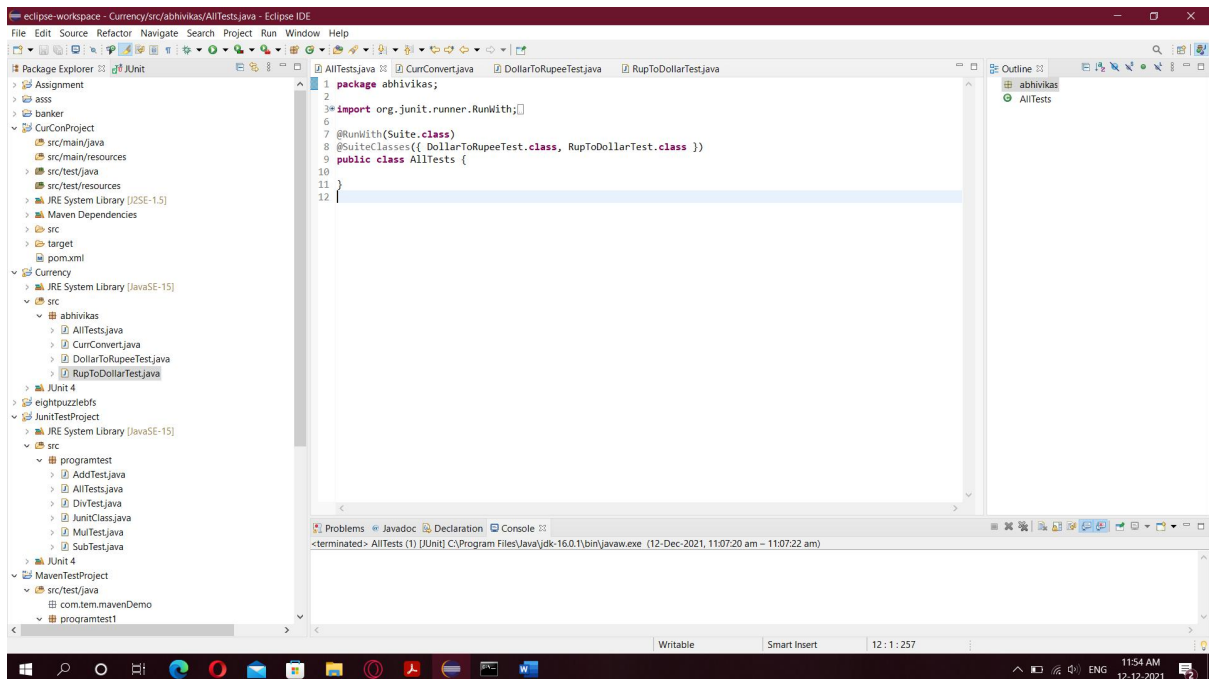
-----
T E S T S
-----
Running CurrTest.DollarToRuppeeTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.187 sec
Running CurrTest.RupToDollarTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0 sec
Results :
Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.220 s
[INFO] Finished at: 2021-12-12T11:38:17+05:30
[INFO] -----
C:\Users\Abhib\workspace\CurConProject>

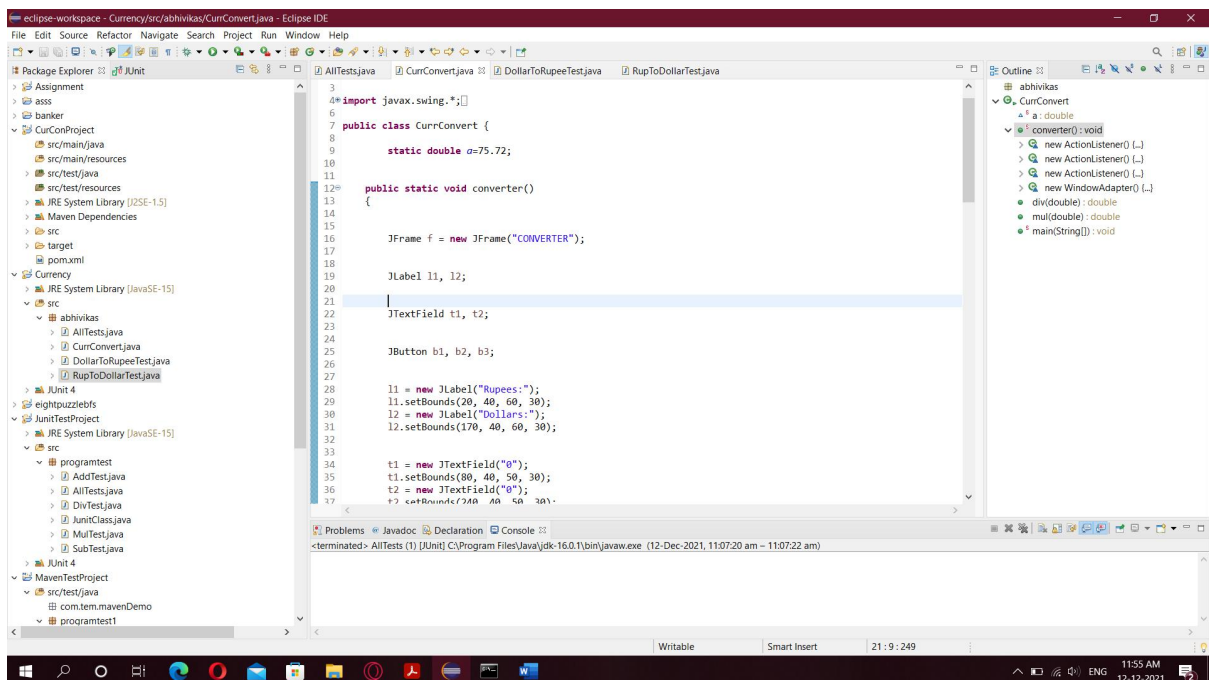
```

Extra Screen shots

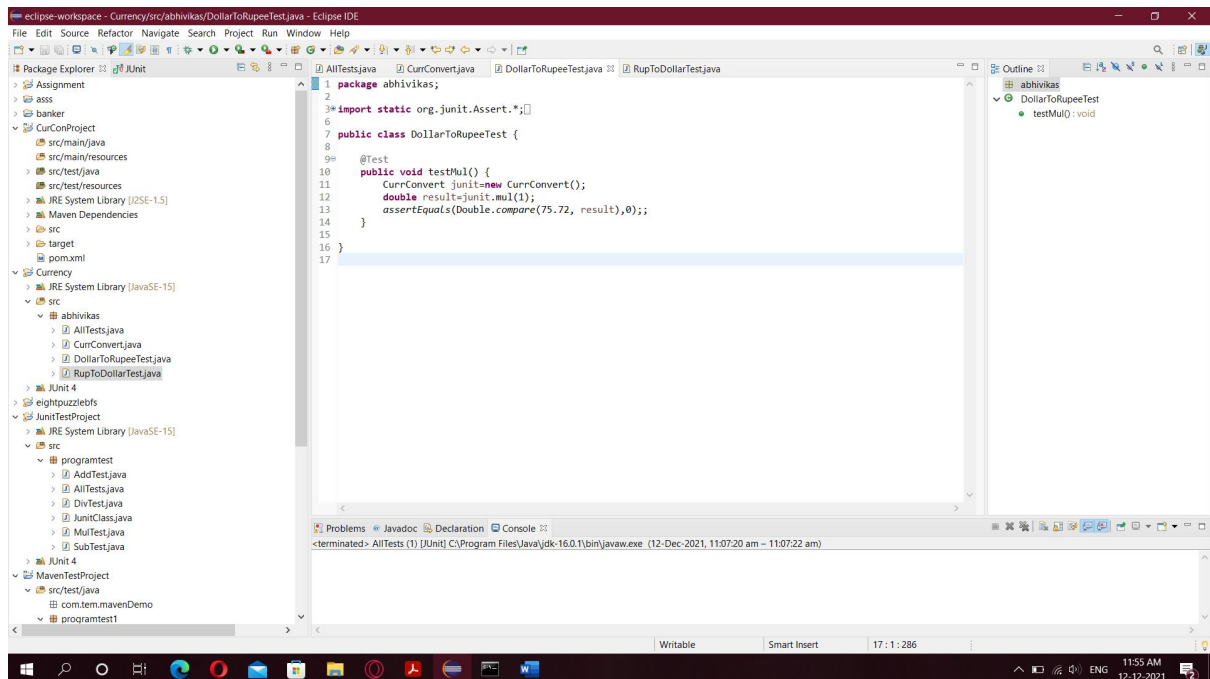
All Tests



Main Code



Dollar to rupee



Rupee to Dollar

