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 :-

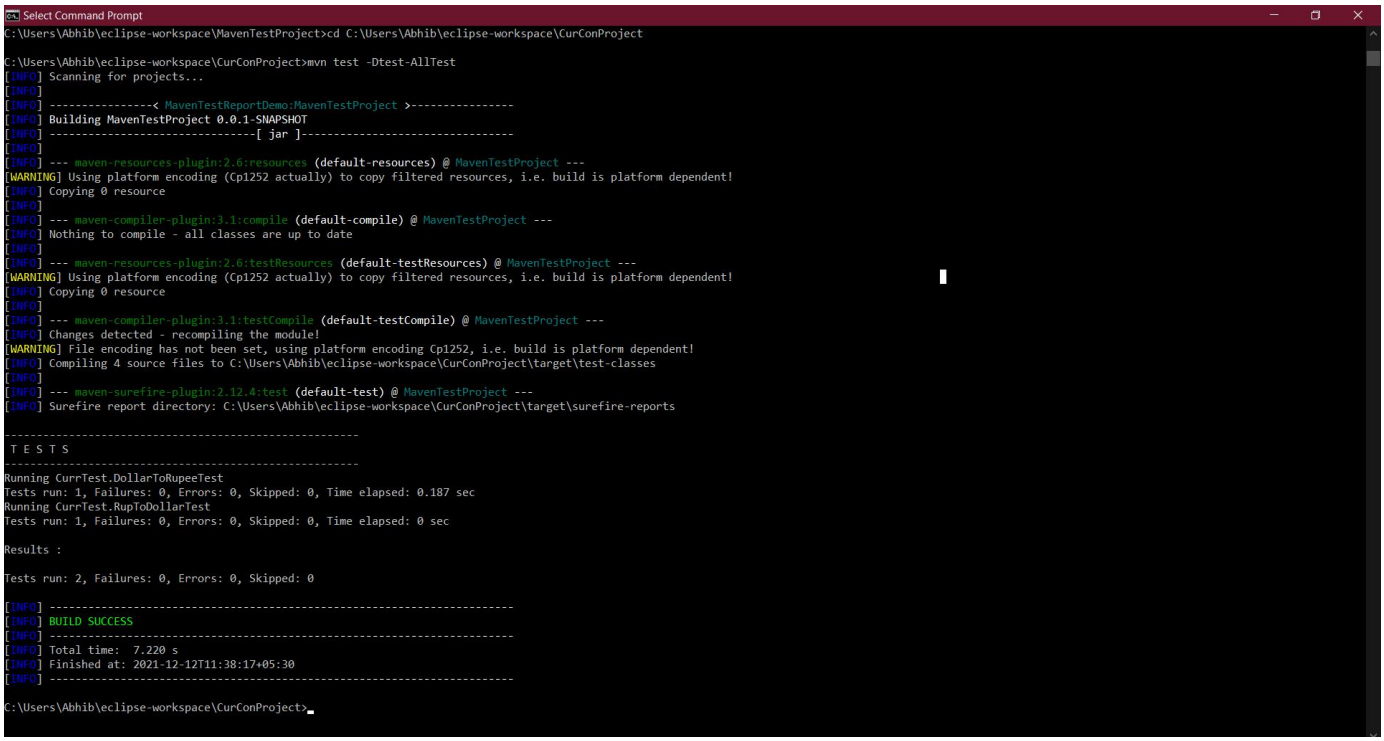
```
package abhivikas;

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;
```

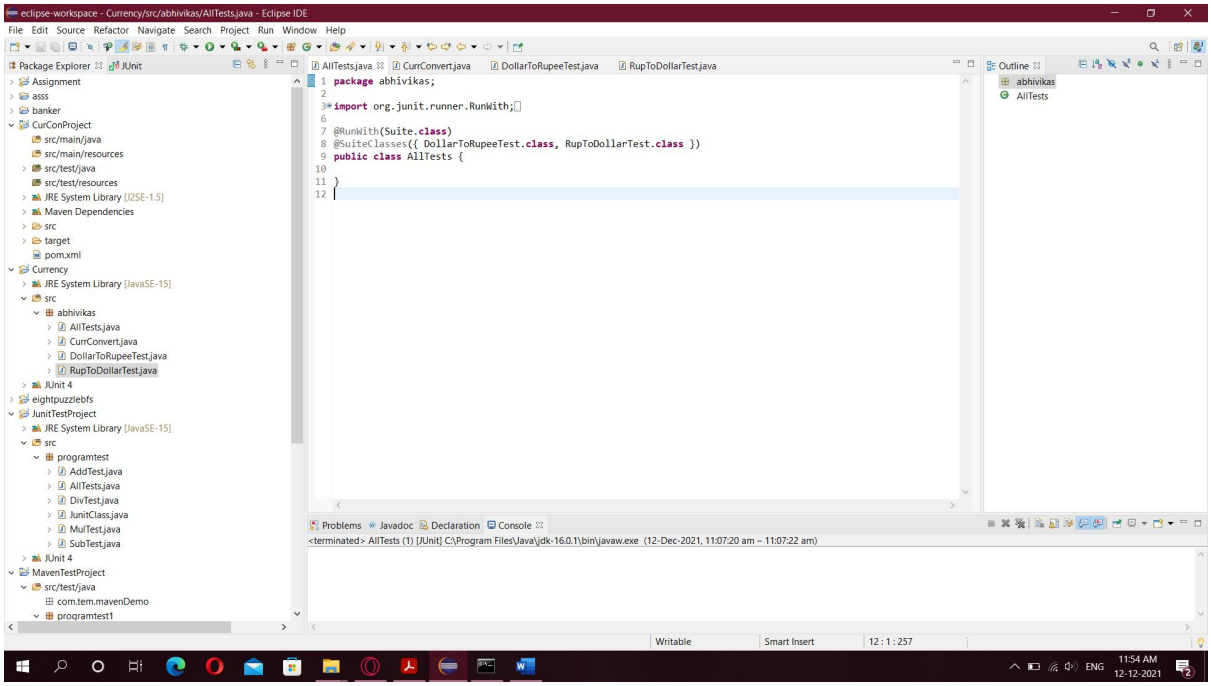
```
@RunWith(Suite.class)
@SuiteClasses({ DollarToRupeeTest.class, RupToDollarTest.class })
public class AllTests {

}
```

BlackBox Testing:-

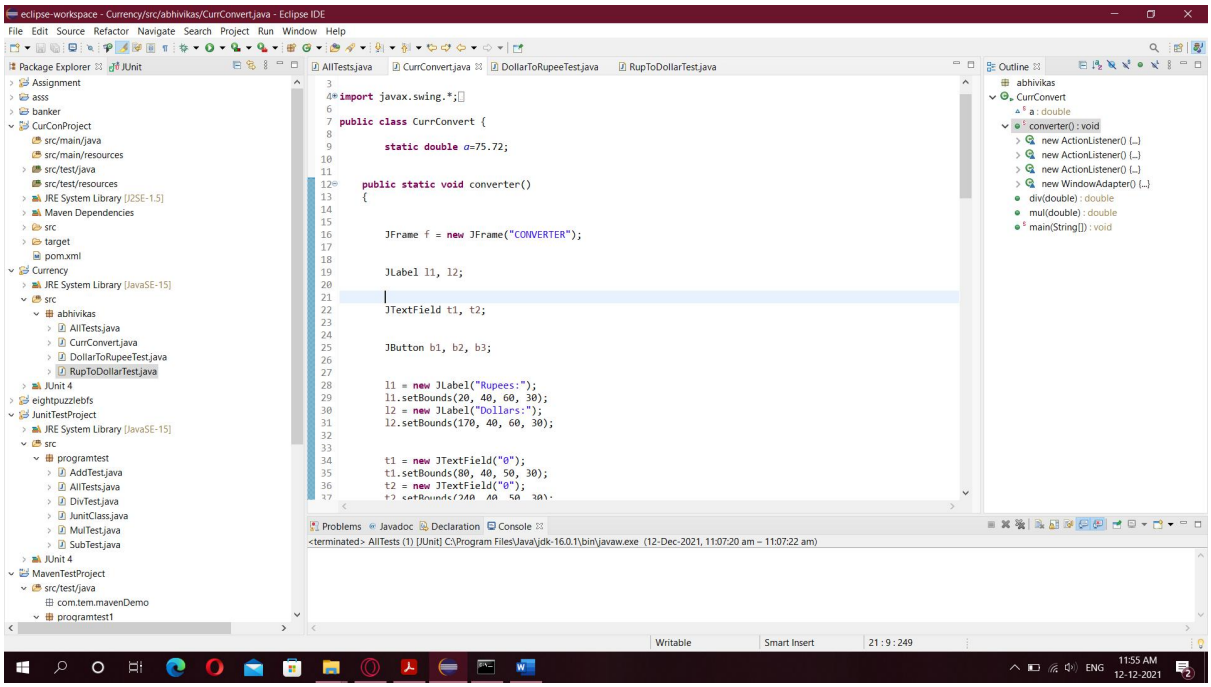


Extra Screen shots

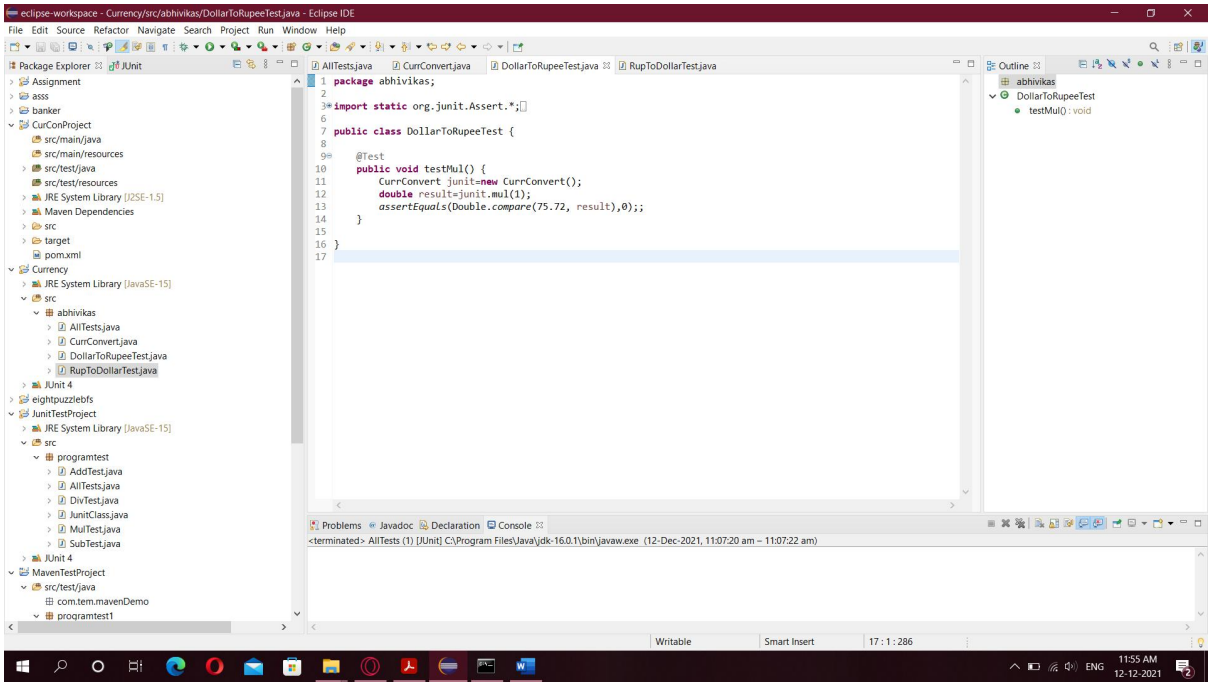
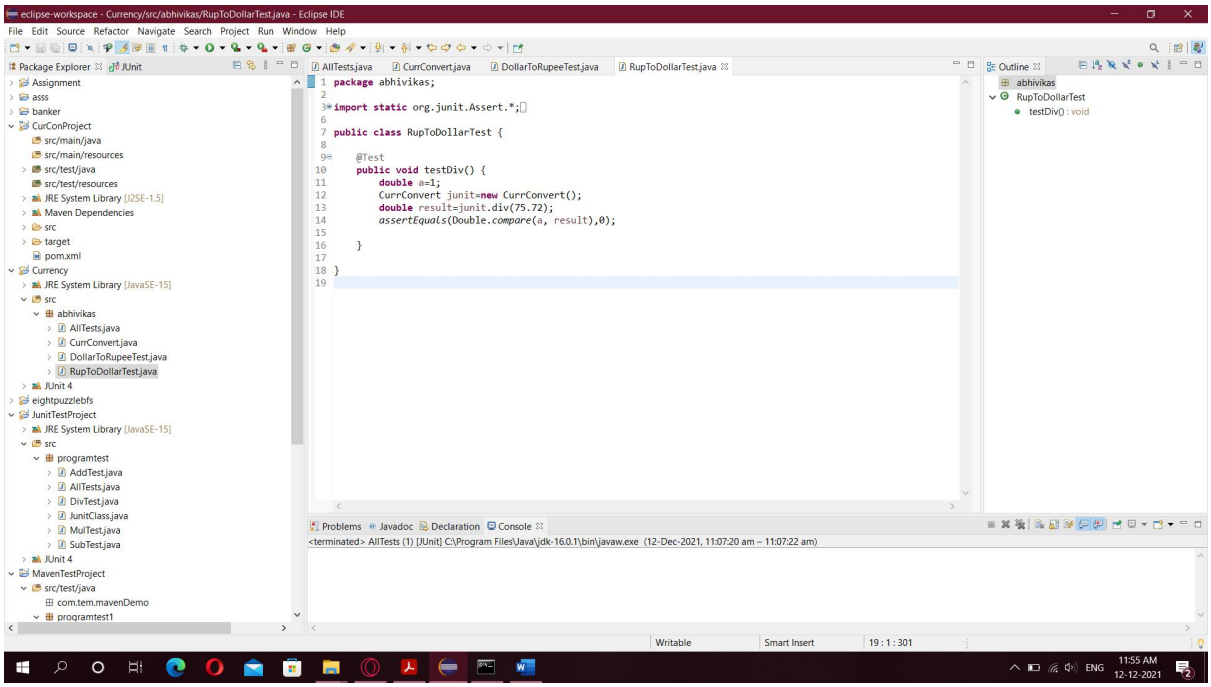
All Tests



Main Code



Dollar to rupee



Rupee to Dollar