LAB # 11

INTRODUCTION TO TEST SUITE

OBJECTIVE

Grouping the multiple Junit test cases and constructing a Test Suite program.

Lab Task

1)- Make a class having four functions for determining:

1) Whether the input integer is odd
2) Whether the input integer is even
3) Whether the input integer is prime
4) For calculating the factorial of the input integer.

Write their test cases and execute then in a single test suite class. Follow all the steps mentioned above in the manual.

SOURCE CODE

TEST SUITE OPERATION CLASS

```
package test;
class NumberOperations{

	public boolean isPrime(int inputNumber) {
		boolean flag = false;
		for(int i=2; i<inputNumber; i++) {
			if(inputNumber % i == 0) {
				flag = true;
				break;
			}
		}
		if(flag) {
			return true;
		}
		else {
			return false;
		}
	}
	public boolean isEven(int inputNumber) {
		if(inputNumber % 2 == 0) {
			return true;
```

```
		}
		return false;

	}
	public boolean isOdd(int inputNumber) {
		if(inputNumber % 2 != 0) {
			return true;
		}

		return false;
	}
	public int factorial(int number) {
		if(number == 0) {
			return 1;
		}

		return (number * factorial(number-1));
	}
}

public class Operations {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

	}
}
```

UNIT TEST CASE 1

```
package test;

import static org.junit.Assert.*;

import org.junit.Test;


public class PrimeNumberTest {


	@Test

	public void test() {

		boolean expectedValue=true;

		int inputNumber=5;

		Operations operations  =new Operations();
```

```
                boolean actualValue=operations.isPrime( inputNumber);
                assertEquals(expectedValue, actualValue);
        }

}
```

UNIT TEST CASE 2

```
package test;
import static org.junit.Assert.*;
import org.junit.Test;
public class OddNumberTest {
        @Test
        public void test() {
                boolean expectedValue=true;
                int inputNumber=5;
                Operations operations  =new Operations();
                boolean actualValue=operations.isPrime( inputNumber);
                assertEquals(expectedValue, actualValue);
        }
}
```

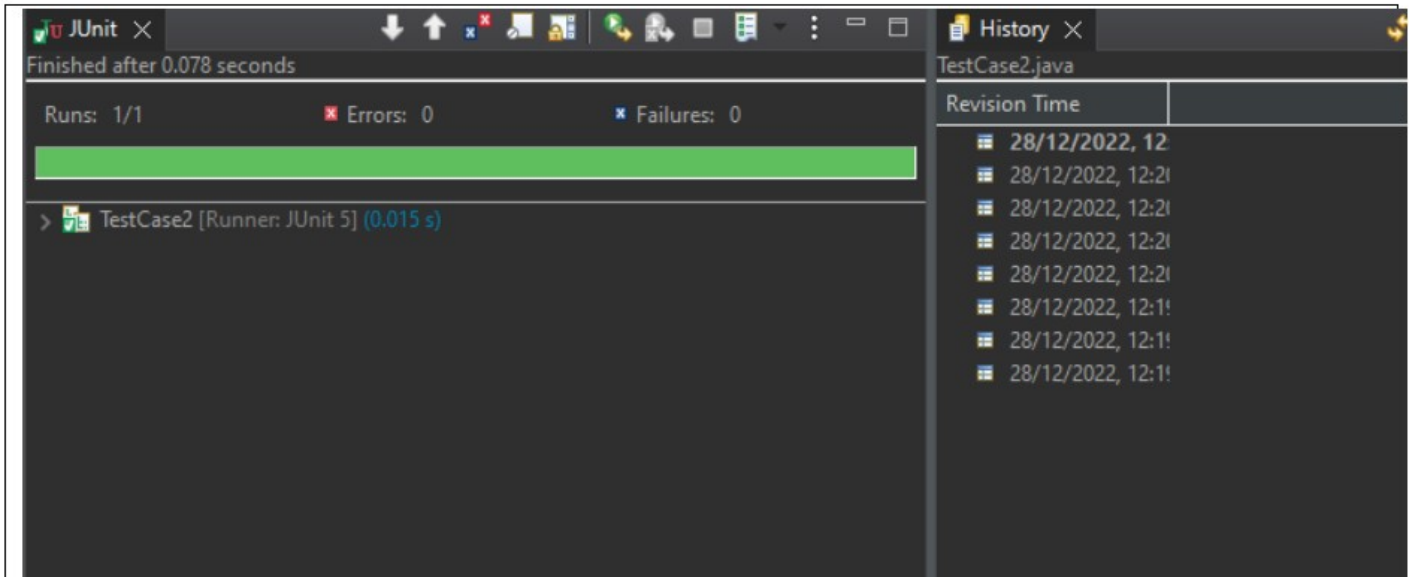
UNIT TEST CASE 3

```
package test;
import static org.junit.Assert.*;
import org.junit.Test;
public class FactorialTest {
        @Test
        public void test() {
                int expectedValue=120;
                int inputNumber=5;
                Operations operations  =new Operations();
```

```
                boolean actualValue=operations.isPrime( inputNumber);
                assertEquals(expectedValue, actualValue);
        }
}
```

UNIT TEST CASE 4

```
package test;
import static org.junit.Assert.*;
import org.junit.Test;
public class EvenNumberTest {
        @Test
        public void test() {
                boolean expectedValue=true;
                int inputNumber=4;
                Operations operations  =new Operations();
                boolean actualValue=operations.isPrime(inputNumber);
                assertEquals(expectedValue, actualValue);
        }
}
```



TEST SUITE

```
package test;


import org.junit.runner.RunWith;

import org.junit.runners.Suite;

import org.junit.runners.Suite.SuiteClasses;

@RunWith(Suite.class)

@SuiteClasses({ EvenNumberTest.class, FactorialTest.class, OddNumberTest.class,
PrimeNumberTest.class })

public class AllTests {

}
```