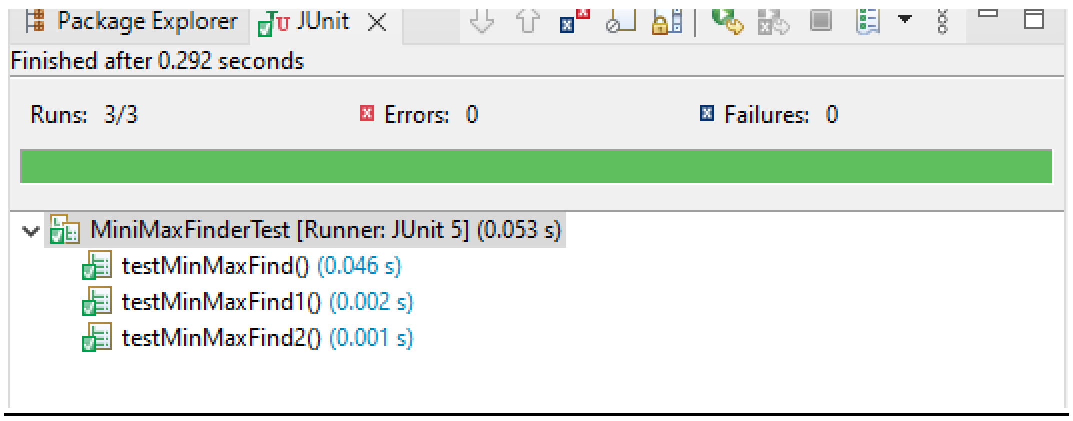
Assignments on Junit:

1.

```
package junitpractice;

import java.lang.reflect.Array;
import java.util.Arrays;

//create a class of MiniMaxFinder
public class MiniMaxFinder {

             public int[] arr(int [] numbers) {
                   Arrays.sort(numbers);

                   int [] arr1= {numbers[0],numbers[numbers.length-1]};

                   return arr1;
             }


}


//create a Junit test case of MiniMaxFind
package junitpractice;
import static org.junit.jupiter.api.Assertions.*;
import org.junit.jupiter.api.Test;

class MiniMaxFinderTest {

      @Test
      void testMinMaxFind() {
             MiniMaxFinder mnf = new MiniMaxFinder();

             int expedted[] = new int[] {3,56};

             assertArrayEquals(expedted, mnf.arr(new int[]
{56,34,7,3,54,3,34,34,53}));
      }

      @Test
      void testMinMaxFind1() {
             MiniMaxFinder mnf1 = new MiniMaxFinder();

             int expedted1[] = new int[] {0,99};

             assertArrayEquals(expedted1, mnf1.arr(new int[]
{30,1,10,25,56,99,87,45,0}));
      }

      @Test
      void testMinMaxFind2() {
             MiniMaxFinder mnf2 = new MiniMaxFinder();
```

```
		int expedted2[] = new int[] {101,999};
		
		assertArrayEquals(expedted2, mnf2.arr(new int[]
{999,101,205,665,777,854,465}));
	}
	
}
```

Output:



```
Package Explorer   JUnit
Finished after 0.292 seconds
Runs:  3/3        Errors:  0        Failures:  0

MiniMaxFinderTest [Runner: JUnit 5] (0.053 s)
    testMinMaxFind() (0.046 s)
    testMinMaxFind1() (0.002 s)
    testMinMaxFind2() (0.001 s)
```

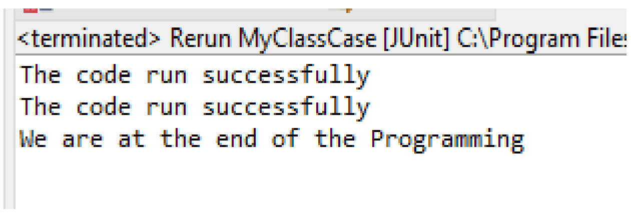
3.
```
//create a BankAccount Class
package junitpractice;

import javax.naming.InsufficientResourcesException;

public class BankAccount {
             int a;
             int BankAccountBalance = 20000;
      public String Withdraw(int a) throws InsufficientFundException  {
             if(a< BankAccountBalance) {
                    return ("wait for a momment");
             }
             else
             {
                    throw new InsufficientFundException("Insufficient Funds");
             }

      }
}
//create a BankAcoountTest Class
package junitpractice;
import static org.junit.Assert.assertEquals;
import static org.junit.Assert.assertThrows;
import static org.junit.jupiter.api.Assertions.*;

import javax.naming.InsufficientResourcesException;

import org.junit.jupiter.api.Test;

class BankAccountTest {

      @Test
      void testwithdraw() {
             BankAccount a = new BankAccount();
             assertThrows(InsufficientFundException.class, ()-> a.Withdraw(20000),"An
Exception may be occurred" );
      }


      @Test
      void testwithdraw1() throws InsufficientFundException {
             BankAccount a1 = new BankAccount();
             String expected = "wait for a momment";
             assertEquals(expected, a1.Withdraw(19999));
      }
}
```

4.

```
package junitpractice;
//create a javaUnit project
public class MyJuintProject {
	public int add (int a, int b) {
			return a+b;
		}

	public int subtraction (int a, int b) {
		return a-b;
	}
}

//create a java unit test class
package junitpractice;
import static org.junit.jupiter.api.Assertions.*;
import org.junit.jupiter.api.AfterAll;
import org.junit.jupiter.api.AfterEach;
import org.junit.jupiter.api.BeforeAll;
import org.junit.jupiter.api.BeforeEach;
import org.junit.jupiter.api.Test;

class MyClassCase {

	MyJuintProject junit;

	@BeforeAll
	static void beforeAllInit() {
		System.out.println("this nedds to run before all");
	}

	@AfterAll
	static void afterAll() {
		System.out.println("We are at the end of the Programming");
	}

	@BeforeEach
	void init() {
		 junit = new MyJuintProject();

	}
	@AfterEach
	void afterEach() {
		System.out.println("The code run successfully");
	}

	@Test
	void addtest() {
		int result = junit.add(10, 20);
		assertEquals(30, result);
	}

	@Test
```

```
        void subtracttest() {
                int result = junit.subtraction(10, 9);
                assertEquals(1, result);
        }

}
```

Output:



```
<terminated> Rerun MyClassCase [JUnit] C:\Program File
The code run successfully
The code run successfully
We are at the end of the Programming
```