### 198W1A0537 Section: A 17CS4752B SOFTWARE TESTING METHODOLOGIES LAB Sheet:

Date: 21/07/2022 Lab Session No.: 04(b)

**Task 4:** Parameterized testing for Armstrong Number using Junit.

**AIM:** To perform parameterized testing for Armstrong number using Junit.

### **Procedure**:

# **Steps**:

- 1. Creating Java project.
  - Click on File and select New project
  - Enter project name as com.vogella.JUnit.Armstrong
  - Click on Next and then on Finish
- 2. Creating java class
  - Right click on com.vogella.JUnit.Armstrong and click on New.
  - Click on class and give the class name as Armstrong
  - Click on Finish
  - Type the following code

package com.vogella.JUnit.Armstrong;

•

```
import java.lang.Math;
public class Armstrong {
  public int isArmstrong(int n)
    int sum=0,k=n;
    int 1=0:
    while(n>0)
       n=n/10;
       1++;
     }
    n=k;
    int r;
    while(n>0)
       r=n%10;
       sum+=(int)Math.pow(r, 1);
       n=n/10;
    if(sum==k)
       return 1;
    else
       return 0;
```

- 3. Creating java Test Project
  - Right click on com.vogella.JUnit.Armstrong
  - Click on properties and select tab java build path

Lab SessionNo.:4

### 198W1A0537 Section: A 17CS4752B SOFTWARE TESTING METHODOLOGIES LAB Sheet:

- Click on source and click on Create New Folder.
- Give the folder name as Test and click on next.
- Click on Finish and then on OK

## 4. Create java test class

- Right click on com.vogella.JUnit.Armstrong and click on new
- Click on Junit test case.
- Change the name of folder "src" to test in source folder "Test".
- Click on browse and select "Armstrong" class and click on Next.
- Click on Finish and then on OK.
- Add the following code

```
package com.vogella.JUnit.Armstrong;
import static org.junit.Assert.*;
import org.junit.Test;
import java.util.Arrays;
import java.util.Collection;
import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;
@RunWith (Parameterized.class)
public class ArmstrongTest {
      private int a;
      private int t;
      public ArmstrongTest(int number,int sample)
      {
            this.t=number;
            this.a=sample;
      }
      @Parameters
      public static Collection<Integer[]> Armstrongs()
            return Arrays.asList(new Integer[][] { {1,153},{1, 370},{1, 371},{1,
407},{1, 1634}});
      //198W1A0517
      @Test
      public void testArmstrong()
             Armstrong ar=new Armstrong();
             assertEquals(t,ar.isArmstrong(a));
      }
      public void testIsArmstrong()
            fail("Not yet Implemented");
      }
 }
```

### **OUTPUT:**

**CASE 1:** Pass

Lab SessionNo.:4

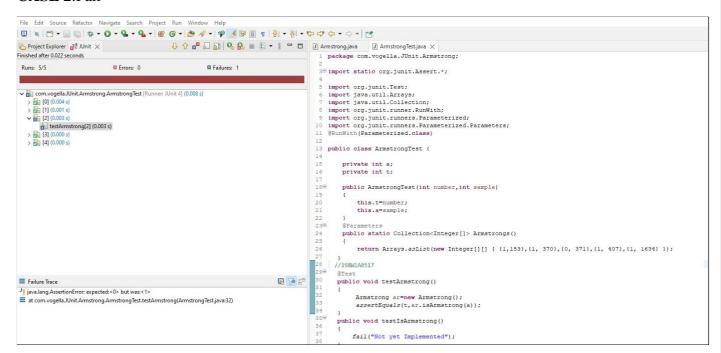
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#### 198W1A0537 Section: A 17CS4752B SOFTWARE TESTING METHODOLOGIES LAB Sheet:

```
Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer 🚜 UUnit X 👃 🗘 😅 🚨 🔠 🔍 🦺 🔳 🗒 🔻 🖰 🖸 🖸 Armstrong.java 🕡 ArmstrongTest.java X
                                                                        package com.vogella.JUnit.Armstrong;
5 import org.junit.Test;
                                                                         import java.util.Arrays;
                                                                         import java.util.Collection;
import org.junit.runner.RunWith;
import org.junit.runners.Farameterized;
                                                                      10 import org.junit.runners.Parameterized.Parameters;
11 @RunWith(Parameterized.class)
                                                                            public ArmstrongTest(int number,int sample)
                                                                                this.a=sample;
                                                                            public static Collection<Integer[]> Armstrongs()
                                                                             {
    return Arrays.asList(new Integer[][] { {1,153},{1, 370},{1, 371},{1, 407},{1, 1634} });
                                                                            //198W1A0517
                                                                            public void testArmstrong()

                                                             Failure Trace
                                                                               fail("Not yet Implemented");
```

### CASE 2:Fail



**RESULT:** To perform parameterized testing for Armstrong number using Junit is successfully completed.

Marks:	Staff Signature:

Lab SessionNo. :4

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