Assignment No -: 7

Purpose: Understand the concept of Test driven Development

**********BussinesLogicPackage**********

1) Project.java

```
package BusinessLogic;
import java.util.ArrayList;

		public class Project {
			private String title;
			private ArrayList<Student> studentGroup;

			public Project(String title) {
					super();
					this.title = title;
					this.studentGroup = new ArrayList<Student>();
				}

			public String getTitle() {
				return title;
			}

			public void setTitle(String title) {
				this.title = title;
			}

			public ArrayList<Student> getStudentGroup() {
				return studentGroup;
			}

			public void setStudentGroup(ArrayList<Student> studentGroup) {
				this.studentGroup = studentGroup;
			}

			public void addStudent(Student s1)
			{
				this.studentGroup.add(s1);
			}

			@Override
			public String toString() {
				return "Project [title=" + title + ", studentGroup=" + studentGroup
						+ "]";
			}


}
```

2) Student.java

```
package BusinessLogic;

public class Student {
	private int rollNo;
	private String name;


	public Student(int rollNo, String name) {
		super();
		this.rollNo = rollNo;
		this.name = name;
	}
	public String getName() {
		return name;
	}
	public void setName(String name) {
		this.name = name;
	}
	public int getRollNo() {
		return rollNo;
	}
	public void setRollNo(int rollNo) {
		this.rollNo = rollNo;
	}
	@Override
	public String toString() {
		return "Student [RollNo : " + rollNo + ", Name : " + name + "]";
	}
}
```

3)TestProject.java

```
package BusinessLogic;

import static org.junit.Assert.*;
import java.util.ArrayList;

import org.junit.Test;

public class TestProject {

	/*@Test
	public void test() {
		fail("Not yet implemented");
	}*/

	Student s1,s2,s3,s4,s5;

	@Test
	public void testProject()
```

```
	{
		Project firstProject = new Project("FirstProject");
		assertEquals("FirstProject", firstProject.getTitle());
		assertTrue(firstProject.getStudentGroup()instanceof
				ArrayList);
	}

	public void setUp()
	{
		s1 = new Student(01,"Ramesh");
		s2 = new Student(02,"Suresh");
		s3 = new Student(03,"Mahesh");
		s4 = new Student(04,"Ganesh");
		s5 = new Student(05,"Umesh");
	}

	@Test
	public void testAddStudent(){
		// create test objects
		setUp();
		//test initial size
		Project first = new Project("First");
		assertEquals(0, first.getStudentGroup().size());
		System.out.println("Size of student group : "+first.getStudentGroup().size());
		first.addStudent(s1);

		assertEquals(1, first.getStudentGroup().size());
		System.out.println("Size of student group : "+first.getStudentGroup().size());
		first.addStudent(s2);

		assertEquals(2, first.getStudentGroup().size());
		System.out.println("Size of student group : "+first.getStudentGroup().size());
		first.addStudent(s3);

		assertEquals(3, first.getStudentGroup().size());
		System.out.println("Size of student group : "+first.getStudentGroup().size());
		first.addStudent(s4);

		assertEquals(4, first.getStudentGroup().size());
		System.out.println("Size of student group : "+first.getStudentGroup().size());
		first.addStudent(s5);

		System.out.println(first);
	}


	public void test() {
		fail("Not yet implemented");
	}
}
```

4)AllTests.java

```
package BusinessLogic;

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

@RunWith(Suite.class)
@SuiteClasses({ TestProject.class })
public class AllTests {

}

/*
```

Output -

```
Size of student group : 0
Size of student group : 1
Size of student group : 2
Size of student group : 3
Size of student group : 4
Project [title=First, studentGroup=[Student [RollNo : 1, Name : Ramesh], Student [RollNo : 2,
Name : Suresh], Student [RollNo : 3, Name : Mahesh], Student [RollNo : 4, Name : Ganesh],
Student [RollNo : 5, Name : Umesh]]]
*/
```