

**Date:-** 09/10/2020**Practical no 5**

**AIM:** Write and test a program to select the number of students who have scored more than 60 in any one subject

**Theory****What is testNG**

TestNG is a testing framework for the Java programming language created by Cédric Beust and inspired by JUnit and NUnit. The design goal of TestNG is to cover a wider range of test categories: unit, functional, end-to-end, integration, etc., with more powerful and easy-to-use functionalities.

**Annotations in TestNG**

**@BeforeSuite:** The annotated method will be run before all tests in this suite have run.

**@AfterSuite:** The annotated method will be run after all tests in this suite have run.

**@BeforeTest:** The annotated method will be run before any test method belonging to the classes inside the `@test` tag is run.

**@AfterTest:** The annotated method will be run after all the test methods belonging to the classes inside the `@test` tag have run.

**@Test:** Marks a class or a method as part of the test.

**Jxl Library Functions :**

**Workbook :** Represents a Workbook. Contains the various factory methods and provides a variety of accessors which provide access to the work sheets.

**WritableWorkbook :** A writable workbook.

**Sheet :** Represents a sheet within a workbook. Provides a handle to the individual cells, or lines of cells (grouped by Row or Column).

**WriteableSheet** : Interface for a worksheet that may be modified. The most important modification for a sheet is to have cells added to it

**Label** : A cell containing text which may be created by user applications.

### **Steps to install TestNG**

Step-1 :- Create a new Project and give it a name.

Step-2 :- After the initialization create a new package inside the project and give it a name.

Step-3 :- To include the libraries and ".jar" files, Unzip the zipped archives, next "right click on the project icon → Build Path → Configure Build Path.."

Step-4 :- Here we will choose "Add External JARs..." button and navigate to the ".jar" file we downloaded/extracted and select them to include in our project.

Step-5 :- To add TestNG to eclipse navigate to help → Install New Software...

Step-6 :- Next add the TestNG URL

<http://dl.bintray.com/testng-team/testng-eclipse-release/> and save it as a new source in eclipse.

Step-7 :- Wait for the software repository to fetch all the package data.

Step-8 :- Select TestNG package and all of its sub-packages /dependencies.

Step-9 :- Let the package manager calculate and download the dependencies and requirements.

Step-10 :- Accept the License agreement and finish the installation.

Step-11 :- Next to add a TestNG window to eclipse click on window → showview → java → TestNG.

Step-12 :- Right click on the project and add a new TestNG class to the project with a suitable name.

Step-13 :- Add the TestNG Library to your project as well.

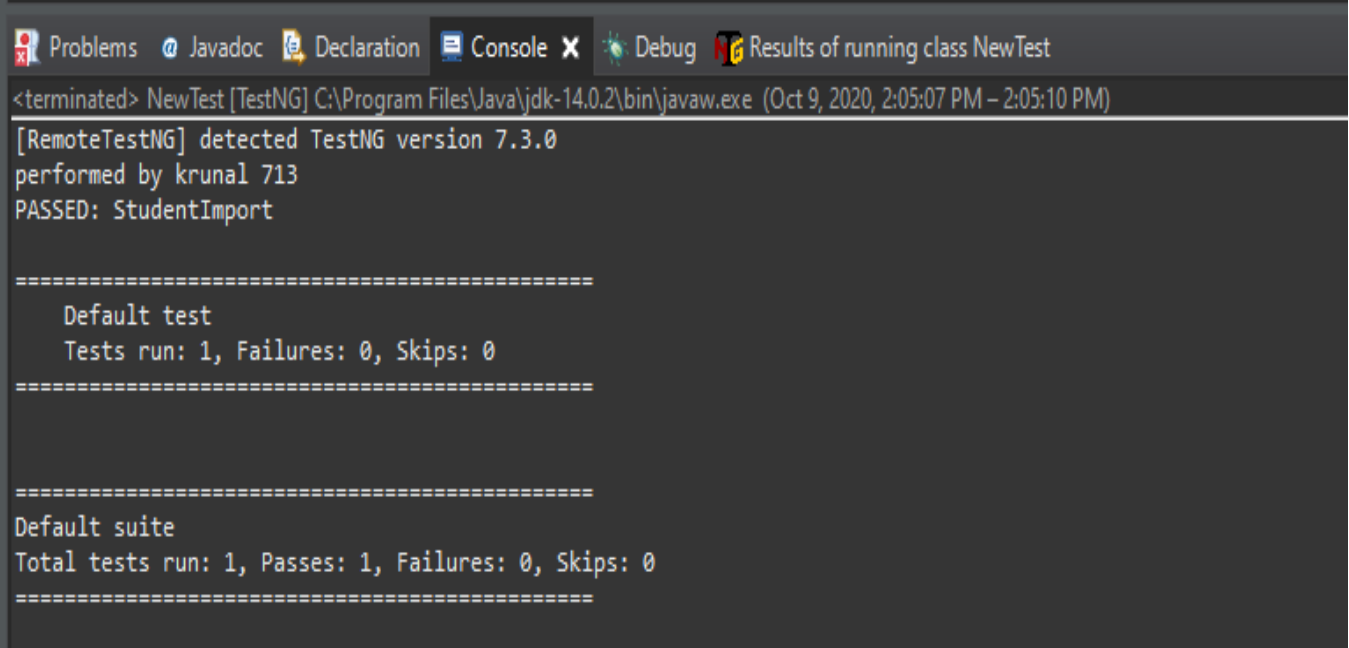
**Code**

```
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import org.testng.annotations.Test;
import jxl.Sheet;
import jxl.Workbook;
import jxl.read.biff.BiffException;
import jxl.write.Label;
import jxl.write.WritableSheet;
import jxl.write.WritableWorkbook;
import jxl.write.WriteException;
import jxl.write.biff.RowsExceededException;

public class NewTest {
    @Test
    public void StudentImport() throws IOException , BiffException , RowsExceededException ,
WriteException
    {
        FileInputStream fi = new FileInputStream("E:\\tycs\\stqa prac\\prac5\\Student.xls");
        Workbook w = Workbook.getWorkbook(fi);
        Sheet s = w.getSheet(0);
        String a[][] = new String[s.getRows()][s.getColumns()];
        FileOutputStream fo = new FileOutputStream("E:\\tycs\\stqa prac\\prac5\\studentdata.xls ");
        WritableWorkbook ww = Workbook.createWorkbook(fo);
        WritableSheet ws = ww.createSheet("result", 0);
        int c=0;
        System.out.println("performed by krupal 713");
        for (int i = 0; i < s.getRows(); i++)
        {
            for (int j = 0; j < s.getColumns();
            {
                if(i >= 1)
                {
                    String b= new String();
                    b = s.getCell(3,i).getContents();
                    int x= Integer.parseInt(b);
                    if( x < 60)
                    {
                        c++;
                        break;
                    }
                }
            }
        }
    }
}
```

```
    }  
  }  
  a[i][j] = s.getCell(j, i).getContents();  
  Label l2 = new Label(j, i-c, a[i][j]);  
  ws.addCell(l2);  
}  
}  
wwb.write();  
wwb.close();  
}  
}
```

### OUTPUT:



The screenshot shows an IDE console window with the following content:

```
<terminated> NewTest [TestNG] C:\Program Files\Java\jdk-14.0.2\bin\javaw.exe (Oct 9, 2020, 2:05:07 PM – 2:05:10 PM)  
[RemoteTestNG] detected TestNG version 7.3.0  
performed by krunal 713  
PASSED: StudentImport  
  
=====  
Default test  
Tests run: 1, Failures: 0, Skips: 0  
=====
```

Below this, there is a section for the default suite:

```
=====  
Default suite  
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0  
=====
```

	A	B	C	D	E	F	G	H
1	ROLL NO	NAME	WS	STQA	INS	TOTAL		
2	1	krunal	65	60	50	175		
3	2	kunal	30	30	30	90		
4	3	mayur	55	55	60	170		
5	4	deva	50	45	65	160		
6	5	hemanth	45	50	65	160		
7	6	abhishek	50	45	60	155		
8	7	lara	55	60	55	170		
9	8	shravani	60	65	50	175		
10	9	sakshi	65	55	45	165		
11	10	subin	60	50	40	150		
12	11	tejas	55	45	50	150		
13	12	vaibha	50	60	55	165		
14								
15								

	A	B	C	D	E	F	G
1	ROLL NO	NAME	WS	STQA	INS	TOTAL	
2	1	krunal	65	60	50	175	
3	7	lara	55	60	55	170	
4	8	shravani	60	65	50	175	
5	12	vaibhav	50	60	55	165	
6							
7							

**Part B:-**

**Aim:-** Write and test a program to read the data from product excel sheet and select the products which price is more than 10000.

**Code:-**

```
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import org.testng.annotations.Test;
import jxl.Sheet;
import jxl.Workbook;
import jxl.read.biff.BiffException;
import jxl.write.Label;
import jxl.write.WritableSheet;
import jxl.write.WritableWorkbook;
import jxl.write.WriteException;
import jxl.write.biff.RowsExceededException;

public class NewTest {
    @Test
    public void ProductImport() throws IOException , BiffException ,
    RowsExceededException , WriteException
    {
        FileInputStream fi = new FileInputStream("E:\\tycs\\stqa prac\\prac5\\product.xls");
        Workbook w = Workbook.getWorkbook(fi);
        Sheet s = w.getSheet(0);
        String a[][] = new String[s.getRows()][s.getColumns()];
        FileOutputStream fo = new FileOutputStream("E:\\tycs\\stqa prac\\prac5\\productdata.xls ");
        WritableWorkbook ww = Workbook.createWorkbook(fo);
        WritableSheet ws = ww.createSheet("result", 0);
        int c=0;
        System.out.println("performed by krupal 713");
        for (int i = 0; i < s.getRows(); i++)
        {
            for (int j = 0; j < s.getColumns();
            {
                if(i >= 1)
                {
                    String b= new String();
```

```
b = s.getCell(3,i).getContents();
int x= Integer.parseInt(b);
if( x < 60)
{
    c++;
    break;
}
}
a[i][j] = s.getCell(j, i).getContents();
Label l2 = new Label(j, i-c, a[i][j]);
ws.addCell(l2);
}
}
wwb.write();
wwb.close();
}
}
```

**Output:**

```
<terminated> NewTest.ProductImport [TestNG] C:\Program Files\Java\jdk-14.0.2\bin\javaw.exe (Oct 9, 2020, 3:04:29 PM - 3:04:31 PM)
[RemoteTestNG] detected TestNG version 7.3.0
performed by krunal 713
PASSED: ProductImport
```

```
=====
Default test
Tests run: 1, Failures: 0, Skips: 0
=====

=====
Default suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====
```

	A	B	C	D	E
1	prdtID	Name	Price		
2	1	Laptop	50000		
3	2	mobile	20000		
4	3	keyboard	2500		
5	4	Mouse	3500		
6	5	Processor	30000		
7	6	Ram	6000		
8	7	MasterCooler	3000		
9	8	Ssd	14000		
10	9	MotherBoard	6000		
11	10	Headphones	5000		
12					
13					

A1	:	X	✓	<i>f<sub>x</sub></i>	prdtID
	A	B	C	D	E
1	prdtID	Name	Price		
2	1	Laptop	50000		
3	2	mobile	20000		
4	5	Processor	30000		
5	8	Ssd	14000		
6					
7					
8					
9					
10					