Lab-6

Q: Design a package called maths having the class called number (add & sub methods) Implement a simple class called maths demo to use maths (outside package maths) that makes use of package provided by maths.

Create a package CIE which has 2 classes - student and internal. The class student has members like usn, name, sem. The class internals derived from student has an array that stores the internal marks scored in 5 courses of the current sem of the student. This class has an array that stores the SEE marks scored in 5 courses of the current sem of the student. Import the 2 packages in a files that declares the final marks of n students in all 5 courses.

```
package CIE;
import java.util.*;
public class student {
protected String usn = new String();
protected String name = new String();
protected int sem;

public void inputstudentDetails()
{
```

Scanner sc = new Scanner (System.in);
System.out.println ("Read usn:");
usn = sc.next();
System.out.println ("Read name:");
name = sc.next();
System.out.println ("Read sem:");
sem = sc.nextInt();
}
public void displayStudentDetails()
{
System.out.println ("usn:" + usn);
System.out.println ("name:" + name);
System.out.println ("sem:" + sem);
}
}

package CIE;
import java.util.*;
public class Internals extends Student
{
protected int marks[] = new int[5];
public void inputMarks()
{
Scanner sc = new Scanner (System.
for (int i=0; i<5; i++)
{
System.out.println ("Enter Stud
marks[i] = sc.nextInt();
}
}

```
package SEE;
import CIE.internals;
import java.util.Scanner;
Public class Externals extends Internals
{
    protected int marks[];
    protected int finalmarks[];
    public Externals()
    {
        marks = new int[5];
        finalmarks = new int[5];
    }
    public void inputSEEmarks()
    {
        Scanner sc = new Scanner(System.in);
        for(int i=0; i<5; i++)
        {
            System.out.printf("subject" +
                (i+1) + "marks:");
            marks[i] = sc.nextInt();
        }
    }
    public void displayFinal Marks()
    {
        displayStudentDetails();
        for(int i=0; i<5; i++)
        {
            System.out.println("Subject" +
                (i+1) + ":" + finalMarks
                [i]);
        }
    }
}
```

```java
import SEE.Externals;

class Main1{
public static void main(String args[])
{
    int numOfStudents = 2;
    Externals finalMarks[] = new;
    Externals[numOfStudents];

    for(int i=0; i<numOfStudents;i++)
    {
        finalMarks[i] = new Externals();
        finalMarks[i] = inputStudentdetails

        System.out.println("Enter CIE marks
        finalMarks[i].inputCIEMarks();

        System.out.println("Enter SEE marks"
        finalMarks[i].inputSEEmarks();
    }

    System.out.println("Display data:");
    for(i=0; i<numOfStudents;i++)
    {
        finalMarks[i].calculateFinal();
        finalMarks[i].displayfinalmarks();
    }
  }
}
```

O/p:

```
read
IBM

read
Sam

read
3

Enter
4
4

4
4
C

Ente
20
~~50~~
30
40
45

Stud
fi
```

24/1/2024

O/p:

read usn of student:
1BM22CS240

read name of student:
Saanvi

read sem of student:
3

Enter 5 marks:
40
45
41
42
43

Enter CIE marks:
20
50
30
40
45

Student details:
final marks: math 60
Eng 95
.
.
.

24/1/2024