WEEK_9

QUESTION:

Create a package CIE
which has two classes- Student and Internals. The class Personal has members like usn, name, sem. The class internals has an array that stores the internal marks scored in five courses of the current semester of the student. Create another package SEE which has the class External which is a derived class of Student. This class has an array that stores the SEE marks scored in five courses of the current semester of the student. Import the two packages in a file that declares the final marks of n students in all five courses.
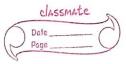
Lab 9

Create a package CIE which has two classes Student and Internals. The class personal has members like USN, name, sem. The class Internals has an array that stores the SEE marks scored in five courses of the current semester. Create another package SEE which has the class External which is a derived class of Student. This class has an array that stores SEE marks scored in five courses of student. Import the two packages in a file that declares the final marks of an student in all five courses.

```
package CIE :

public class Student {
    public int USN;
    public String name;
    public int sem;

    public void Set data (int N, String S, int a){
        USN = U;
        name = S;
        sem = q; }

    public void getdata() {
        System.out.println (" student details");
        System.out.println (" USN :" + USN + "\nname"
                + name + "\n SEMESTER : "+ sem);
    }
}
```

```java
package CIE;

public class Internals extend student {
    public int[] marks = new int[5];

    public void setmarks(int[] a) {
        for(int i=0; i<5; i++) {
            marks[i] = a[i];
        }
    }

    public void getmarks() {
        System.out.println("Internal marks");
        for(int i=0; i<5; i++) {
            System.out.println("Subject "+i+": "+marks[i]);
        }
    }
}


package SEE;

import CIE.*;

public class External extend Internals {
    public int[] marks = new int[5];

    public void set(int[] a) {
        for(int i=0; i<5; i++) {
            marks[i] = a[i];
        }
    }

    public void get() {
        for(int i=0; i<5; i++) {
            System.out.println("External marks");
            System.out.println("Subject "+i+","+marks[i]);
        }
    }
}
```

```java
import c.e.*;
import s.e.*;
import java.util.Scanner;

class Test {
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number of students");
        int n = s.nextInt();
        External[] dets = new External[n];
        for(int i=0; i<n; i++) {
            System.out.println("Enter student details");
            int usn = s.nextInt();
            String name = s.next();
            int sem = s.nextInt();
            System.out.println("Enter internal marks");
            int[] im = new int[5];
            for(int j=0; j<5; j++) {
                int[j] = s.nextInt();
            }
            dets[i] = new External();
            dets[i].setdets(usn, name, sem);
            dets[i].setims(im);
            System.out.println("Enter external marks");
            for(int j=0; j<5; j++) {
                int[j] = s.nextInt();
                dets[i].setims();
            }
            for(int i=0; i<n; i++) {
                dets[i].getdets();
                dets[i].getims();
                dets[i].get();
                System.out.println("Final marks");
```

```
for (int i=0; i<n; j++) {
    System.out.println ("subject " + j + " : " + (dot5*
        (((j.siemans.[j]/2 + das 2.[j].marks [j]))));
    }
}
}.
```

Output:

Enter USN, name, current semester :

1BM21CS019

Amshu

3

Enter CIE marks, of subject 1

47

Enter CIE marks Of subject 2

46

Enter CIE marks of subject 3

45

Enter CIE marks of subject 4

43

Enter CIE marks of subject 5

44

Enter SEE marks of subject 1

48

Enter SEE marks of subject 2

47

Enter SEE marks of subject 3

44

Enter SEE marks of subject 4

49

Enter SEE marks of subject 5

50

Student Details

Name : Anshu

USN : 1BM21CS019

Semester : 3

Total marks in subject 1 : 95

Total marks in subject 2 : 93

Total marks in Subject 3 : 89

Total marks in Subject 4 : 92

Total marks in Subject 5 : 94 .

OUTPUT:

```
C:\Users\amshu\OneDrive\Desktop\Downloads\OOJ-1BM21cs019--main (2)\OOJ-1BM21cs019--main>java Test
Enter number of students
1
Enter student details
1
amshu
3
Enter internal marks
50
50
48
48
49
Enter external marks
48
48
47
50
50
Student details
USN:1
NAME:amshu
SEMESTER:3
Internal marks
Subject 0: 50
Subject 1: 50
Subject 2: 48
Subject 3: 48
Subject 4: 49
External marks
Subject 0: 48
External marks
Subject 1: 48
External marks
Subject 2: 47
External marks
Subject 3: 50
External marks
Subject 4: 50
```

```
Student details
USN:1
NAME:amshu
SEMESTER:3
Internal marks
Subject 0: 50
Subject 1: 50
Subject 2: 48
Subject 3: 48
Subject 4: 49
External marks
Subject 0: 48
External marks
Subject 1: 48
External marks
Subject 2: 47
External marks
Subject 3: 50
External marks
Subject 4: 50
Final marks
Subject 0: 74
Subject 1: 74
Subject 2: 71
Subject 3: 73
Subject 4: 74
```