Lab program - 6

Q] Create a package CIE which has two classes.
- Personal and Internals. The class Personal (student)
has members like USN, Name, Sem. The class
internals has an array that stores the internal
marks stored for 5 courses of the current
Semester of the student. Create another package
SEE which has the class External which is a
derived class of Personal. This class has an array
that stores the SEE Marks scored in 5 course
of the current semester of the student. Import
the two packages in a file that declares
the final marks of n Students in all 5 courses.

→ CIE/Internals.java

```
package CIE;
import java.util.Scanner;
public class Internals {
    public int marksCIE [] = new Int [5];
    public void getMarks() {
        for (int i=0; i<5; i++) {
            Scanner sc= new Scanner(System.in);
            System.out.println("Enter CIE Marks out of
            50 in subject " + (i+1));
            marks CIE [i] = sc.nextInt();
        }
    }

    public int returnCIEMarks (int i) {
        return marksCIE[i];
    }
}
```

CIE / Student.java

```java
package CIE;
import java.util.Scanner;
public class Student {
    String usn;
    String name;
    int sem;
    public void getd() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Student USN");
        usn = sc.nextLine();
        System.out.println("Enter Student name");
        name = sc.nextline();
        System.out.println("Enter semester ");
        sem = sc.nextInt();
    }

    public void display() {
        System.out.println();
        System.out.println("Student USN:" + usn);
        System.out.println("Student name:" + name);
        System.out.println("Semester:" + sem);
        System.out.println();
    }
}
```

→ ## SEE / Externals.java

```java
package SEE;
import CIE.Student;
import CIE.Internals;
import Java.util.scanner;
```

```java
public class Externals extends Student {
    int marksSEE[] = new int[5];
    public void getmarks() {
        for (int i=0; i<5; i++) {
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter SEE marks in
                subject " + (i+1));
            marksSEE[i] = sc.nextInt();
        }
    }

    public void calcTotalMarks(Internals il) {
        for (int i=0; i<5; i++) {
            System.out.println("Subject " + (i+1) + " : "
                + (il.returnCIEMarks[i] + (marksSEE[i]/2)));
        }
        System.out.println();
    }
}
```

Main.java

```java
import CIE.*;
import SEE.Externals;
import java.util.Scanner;

public class Main {
    public static void main(String args[]) {
        Scanner sx = new Scanner(System.in);
        System.out.println("Enter the no. of students");
        int n = sx.nextInt();
        Internals[] il = new Internals[n];
        Externals[] el = new Externals[n];
```

```
for (int i=0; i<n; i++) {
    System.out.println("Student " + (i+1) + "detai
    e1[i] = new Externals();
    i1[i] = new Internals();
    e1[i].getd();
    e1[i].getMarks();
    i1[i].getmarks();
}

for (int i=0; i<n; i++) {
    e1[i].display();
    e1[i].calcTotalMarks(i1[i]);
}
```

o/p
→ Enter the no. of students
1

& Student 1 details:
Enter Student USN
IBM22IS007
Enter Student Name:

DIKSHITH
Enter Semester:
2
Enter CIE marks in subject 1
90
Enter CIE marks in subject 2
85
Enter CIE marks in subject 3
83
Enter CIE marks in subject 4
90

Enter CIE marks in Subject 5

86

~~Enter CIE~~

Enter SEE marks in Subject 1

98

Enter SEE marks in Subject 2

96

Enter SEE marks in Subject 3

86

Enter SEE marks in Subject 4

80

Enter SEE marks in Subject 5

84

Student USN : 1BM22 IS 067

student name : Dikshith

Semester : 2

Subject 1 : 139

Subject 2 : 133

Subject 3 : 126

Subject 4 : 130

Subject 5 : 128