PROGRAM 6:

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.

CODE:

```java
import CIE.Student;
import CIE.Internals;
import SEE.Externals;
import java.util.Scanner;
public class Main {
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of students whose details you
want to enter");
        int n = sc.nextInt();
        Internals[] i1 = new Internals[n];
        Externals[] e1 = new Externals[n];
        for(int i=0;i<n;i++) {
            System.out.println("Student "+(i+1)+" details:");
            e1[i] = new Externals();
            i1[i] = new Internals();
            e1[i].getd();
            i1[i].getMarks();
            e1[i].getMarks();
        }
        for(int i=0;i<n;i++) {
            e1[i].display();
            e1[i].calcTotalMarks(i1[i]);
        }

    }
}


//student.java

package CIE;
import java.util.Scanner;
public class Student {
    String usn;
    String name;
    int sem;
```

```java
    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();
    }
}


//internal.java
package CIE;
import java.util.Scanner;
public class Internals {
    public int marksCie[];
    public void getMarks() {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter no of subjects in cie");
        int n=sc.nextInt();
        marksCie=new int[n];
        // System.out.println("Enter No. Of Students: ");

        for(int i=0;i<n;i++) {
            System.out.println("Enter CIE marks in subject "+(i+1));
            marksCie[i]=sc.nextInt();
        }
    }
    public int returnCieMarks(int i) {
        return marksCie[i];
    }
}
```

```java
//external.java



package SEE;

import CIE.Student;
import CIE.Internals;
import java.util.Scanner;

public class Externals extends Student {
    Scanner sc = new Scanner(System.in);
    int n;
    int marksSee[];

    public void getMarks() {
        System.out.println("Enter the number of subjects");
        n = sc.nextInt();
        marksSee = new int[n];
        for (int i = 0; i < n; i++) {
            System.out.println("Enter SEE marks in subject " + (i + 1));
            marksSee[i] = sc.nextInt();
        }
    }

    public void calcTotalMarks(Internals i1) {
        for (int i = 0; i < n; i++) {
            System.out.println("Subject " + (i + 1) + ": " +
(i1.returnCieMarks(i) + (marksSee[i] / 2)));
        }
        System.out.println();


    }
}
```

OUTPUT:

```
Enter the number of students whose details you want to enter
2
Student 1 details:
Enter student USN
1BM23CS001
Enter student name
Alice
Enter semester
5
Enter the number of subjects in cie
2
Enter CIE marks in subject 1
18
Enter CIE marks in subject 2
20
Enter the number of subjects
2
Enter SEE marks in subject 1
72
Enter SEE marks in subject 2
68
Student 2 details:
Enter student USN
1BM23CS002
Enter student name
Bob
Enter semester
5
Enter the number of subjects in cie
2
Enter CIE marks in subject 1
15
Enter CIE marks in subject 2
17
Enter the number of subjects
2
Enter SEE marks in subject 1
80
Enter SEE marks in subject 2
```

```
75



Student USN: 1BM23CS001
Student name: Alice
Semester: 5

Subject 1: 54
Subject 2: 54

Student USN: 1BM23CS002
Student name: Bob
Semester: 5

Subject 1: 55
Subject 2: 54
```

NOTES:

```
package CIE;
Import Java.util.Scanner;
public class student {
        String name;
        String usn;
        int sem;
        public void getd() {
        Scanner sc = new Scanner (System.in);
        Usn = sc.nextLine();
        name = sc.nextLine();
        sem = sc.nextInt();
    }

    public void display() {
        System.out.println();
        System.out.println ("Student USN" +
        USN);
        System.out.println("student name"+nam);
        System.out.println ("semester"+sem);
        System.out.println();
}


package CIE;
Import java.util.Scanner;
public class Internals {
public int marksole [] = new int[5];
public void getmarks() {
for (int i=0 ; i<5 ; i++) {
Scanner x = new Scanner(System.in);
```

```java
public int return marks(ie (int i) {
    return marks(ie [i];
}
}


package SEE;
import CIE. Student;
import CIE. Internals;
import java.util. Scanner;
public class Externals extends Student {
    int markssee [] = new int [5]

public void get marks() {
    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 costotalmarks (Internals i1)
{
    for (int i=0; i<5; i++) {
        System.out.println ("subject " + (i+1)"+
        (i1 returnmembrks(ie (i) + (marks [i]/2
}
}
}
```

```java
public static void main (String args[])
{
    Scanner sc = new Scanner (System.in);
    System.out.println(" Enter number of
students");

    int n = sc.nextInt();
    Internals [] i1 = new Internals [n];
    Externals [] e1 = new Externals [n];
    for (int i=0; i<n; i++) {
        e1[i] = new Externals();
        i1[i] = new Internals();
        e1[i].getd();
        i1[i].getmarks();
        e1[i].getmarks();
    }

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

output

Enter the number of students
2 1
Student 1 details:
Enter Student USN
1BM23CS329
enter student name
synchana
Enter semester