/*Create a package CIE which has two classes - Personal 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 Personal. 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 */

cie/Internals.java

```java
package cie;
public class Internals {
    public int[] internalMarks = new int[5];

    public Internals(int[] marks) {
        for (int i = 0; i < 5; i++) {
            internalMarks[i] = marks[i];
        }
    }
}
```


cie/Personal.java

```java
package cie;
public class Personal
{
public String usn;
```

```java
    public String name;

    public int sem;


    public Personal(String usn,String name, int sem)
    {
        this.usn=usn;

        this.name=name;

        this.sem=sem;

    }


}
```

```java
package see;

import cie.Personal;

public class External extends Personal {
    public int[] seeMarks = new int[5];


    public External(String usn, String name, int sem, int[] see) {
        super(usn, name, sem);

        for (int i = 0; i < 5; i++) {
            this.seeMarks[i] = see[i];

        }

    }
```

```
}
```

Finalmarks.java

```java
import java.util.*;

import cie.*;

import see.*;


public class Finalmarks {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);


        System.out.print("Enter number of students: ");
        int n = sc.nextInt();


        Personal[] p = new Personal[n];
        Internals[] in = new Internals[n];
        External[] ex = new External[n];


        for (int i = 0; i < n; i++) {
            System.out.println("\nEnter details for Student " + (i + 1));


            System.out.print("USN: ");
            String usn = sc.next();
```

```java
            System.out.print("Name: ");
            String name = sc.next();


            System.out.print("Semester: ");
            int sem = sc.nextInt();


            int[] internalMarks = new int[5];
            System.out.println("Enter Internal Marks for 5 courses:");
            for (int j = 0; j < 5; j++)
                internalMarks[j] = sc.nextInt();


            int[] seeMarks = new int[5];
            System.out.println("Enter SEE Marks for 5 courses:");
            for (int j = 0; j < 5; j++)
                seeMarks[j] = sc.nextInt();


            p[i] = new Personal(usn, name, sem);
            in[i] = new Internals(internalMarks);
            ex[i] = new External(usn, name, sem, seeMarks);
        }


        System.out.println("\n--- FINAL MARKS OF STUDENTS ---");


        for (int i = 0; i < n; i++) {
            System.out.println("\nStudent: " + p[i].name + " | USN: " + p[i].usn);
```

```java
        for (int j = 0; j < 5; j++) {

            int finalMarks = in[i].internalMarks[j] + (ex[i].seeMarks[j] / 2);

            System.out.println("Course " + (j + 1) + ": " + finalMarks);

        }

    }


    sc.close();

  }
}
```

OUTPUT:-