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

→

```
package CIE;

public class student {
    public String usn;
    public String name;
    public int sem;

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

```java
        this.sem = sem;
    }
    public void displayDetails(){
        System.out.println("USN: "+ usn);
        System.out.println("Name: "+ name);
        System.out.println("Semester: "+ sem);
    }
}
```

Internals.java
_____

```java
package CIE;
public class Internals {
    public int[] internalmarks = new int[5];
    public Internals(int[] marks){
        if(marks.length == 5)
        {
            System.arraycopy(marks, 0, internals
                    marks, 0, marks.length);
        }
        else {
            System.out.println("Error: Exactly
            5 external marks are required.");
        }
    }
    public void displayInternalmarks(){
        System.out.println("Internal marks
                : ");
        for(int mark : Internalmarks){
            System.out.print(mark +"
        };
        System.out.println(;
```

External.java

```java
package SEE;
import CIE.student;
public class External extends Student {
    public int[] externalMarks = new int[5];
    public External (String usn, String name,
                     int sem, int[] marks) {
        super (usn, name, sem);
        if (marks.length == 5)
        {
            System.arraycopy (marks, 0, externalMarks,
                              0, marks.length);
        }
        else {
            System.out.println ("Error : Exactly
                            5 SEE marks are required.");
        }
    }
    public void displayExternalMarks () {
        System.out.print ("SEE marks : ");
        for (int mark : externalMarks) {
            System.out.print (mark + " ");
        }
        System.out.println ();
    }
}
```

~~Main~~ ExternalMarks.java

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

```java
public class FinalMarks {
    public static void main (String [] args) {
        Scanner sc = new Scanner (System. in);
        System. out. print ("Enter the number of student:");
        int n = sc. nextInt ();
        Student [] students = new student [n];

        Internals [] internals = new Internals [n];
        External [] externals = new External [n];
        for (int i = 0; i < n; i++) {
            System. out. println ("In Enter details
                of student "+ (i +1) + ": ");
            System. out. print ("USN: ");
            string USN = sc. next ();
            System. out. print ("Name : ");
            String name = sc. next ();
            System. out. print ("Semester : ");
            int sem = sc. nextInt ();
            System. out. println ("Enter 5 Internal
                        marks : ");
            int [] internal marks = new int [5];
            for (int j = 0; j < 5; j++) {
                internalmarks [j] = sc. nextInt ();
            }
            System. out. println ("Enter 5 SEE marks: ");
            int [] external marks = new int [5];
            for (int j = 0; j < 5; j++) {
                external marks [j] = sc. nextInt ();
            }
            students [i] = new Student (USN, name,
                            sem);
            internals [i] = new Internals (
```

```java
                    internalmarks);
        externals[i] = new External (usn, name, sem, external
                                                        marks);
    }

    System.out.println(" In Final marks of Students:
        for (int i = 0; i < n; i++) {
            students[i].displayDetails();
            internals[i].displayInternalMarks();
            externals[i].displayExternalMarks();

            System.out.print(" Final marks : ");
            for (int j = 0; j < 5; j++) {
                int finalmarks = internals[i].internal
                externals[i].externalmarks[j] marks[j] +
                                              /2;
                System.out.print(finalmarks + " ");
            }
            System.out.println(" In ");
        }
    }
}
```

6) o/p. Enter no of students : 1
Enter student details.
Enter USN : 24BEC8403
Enter. Name : Uday
Enter Sem : 5
Enter CIE marks : 20 12 15 22 19.
Enter 5 See marks : 60 70 65 55 75

Student marks details

USN : 24BECS403.
Name : Uday.
Sem : 5

Final marks :
50 53 58 49 56