LAB - 6

Q) Create a package CIE which has two classes - Student and Internals. The class student has members like usn, name, sem. The class internals derived from Student 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 student. Import the two packages in a file that declares the final marks of n students in all five courses

```
package com 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;
```

```
package com.CIE

        this.sem = sem
    }

public void displayDetails(){
    System.out.println("USN:" +usn);
    System.out.println("Name:" +name);
    System.out.println("Sem:" +sem);
}

public class Internals {
    public int[] internalMarks;
    public Internals(int[] marks){
        if(marks.length != 5){
            System.out.println("Enter 5 marks");
        }
        this.internalMarks = marks;
    }

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

```
package com.SEE;
    import CIE.Student;
    public class Externals extends student{
        public int[] ExternalMarks;
    public Externals( String name, String usn, int sem,
                      int[] ExternalMarks;
    public Super( name, usn, sem);
    If( marks.length != 5){
        System.out.println("enter 5 subjects!")
        this.external marks = marks;
    }
public void displayE marks(){
    System.out.println("SEE marks:");
    for( int i =0; i<5; i++)
    System.out.println(marks+" ")
    System.out.println()

Import com.CIE.*;
Import com.SEE.*;
Import java.util.Scanner;
public class main{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
System.out.println("enter no of Students:")
        int n = Scanner Int();
```

```
external[] students = new external[n];
Internal[] int marks = new Internal[n];
for(int i=0;i<n;i++){
    System.out.println("enter usn");
    String usn = sc.nextline();
    System.out.println("enter name:");
    String name = sc.nextline();
    System.out.println("enter sem:");
    int sem = sc.nextline();

System.out.println("enter usn");
    String[] I mark = new int[I];
for(int j=0;j<5;j++){
    I marks[j] = sc.nextint();
}
System.out.println("enter external marks");
    int emark[] new int[5];
for(int k=0;k<5;k++){
    E marks[k] = sc.nextint();
}
```

```
Int marks[i] = new Internals( I marks);
    students [i] = new external (name, usn, sem, emarks];
    }

     S.O.P( "final marks of student:)
         for( int i =0; i<n; i++){
           Students[i] . display details();
           int marks[i] . display marks ();
           Student [i] . display marks();

System. out . println( "final marks");
    for ( j =0; j<5; j++)
{
    int final= int marks[i].Imarks[j] + (Students[i] . emarks[j]);
        SOP (Final+" ");
}
        SOP ("\n");
}
}
}
```

O/p

Enter number of students: 2

Enter details For student 1:

Enter USN: 1BI23CS047

Enter name: Aparna

Enter Semester: 3

Enter Internal Marks For 5 subjects

Subject 1: 45

" 2: 49

" 3: 42

" 4: 48

" 5: 46

Enter SEE Marks for 5 subjects

Subject 1: 49

" 2: 46

" 3: 44

" 4: 42

" 5: 41

Enter details For Student2:

Enter USN : 1B23CS0047

Enter Name: Rahul

Enter semester: 4

Enter internal marks For 5 subjects:

Subject 1: 37

" 2: 39

" 3: 41

" 4: 43

" 5: 45

Enter SEE marks For 5 subjects:

" 1: 48

" 2: 47

" 3: 30

" 4: 12

" 5: 20