→ Lab 6

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 student. Import the 2 packages in a file that declares the final marks of a students in all five courses

// student.java

```java
package CIE;
import java.util.Scanner;
public class student
{
    protected String usn = new String();
    protected String name = new String();
    protected int sem;

    public void input StudentDetails()
    {
        Scanner s = new Scanner(System.in)

        System.out.println("Enter USN :");
        usn = s.nextline();

        System.out.println("Enter name :");
        name = s.nextline();

        System.out.println("Enter semester :");
        sem = s.nextint();
    }
}
```

```java
public void displayStudentDetails()
{
    System.out.println("usn:" + usn);
    System.out.println("Name:" + name);
    System.out.println("Semester:" + semester);
}
}


//internals.java


package CIE;
import java.util.Scanner;
public class internals extends student
{
    protected int marks[] = new int[5]
    public void inputCIEmarks()
    {
        Scanner s = new Scanner(System.in)
        System.out.println("Enter CIE marks for
        subjects");
        for(int i=0; i<5; i++)
        {
            marks[i] = s.nextInt();
        }
    }
}
```

— student

— internals

```java
// External. java


package SEE
import CIE - internals;
import java. util. Scanner;
public class Externals extends Internals
{
        protected int marks[];
        protected int finalMarks[];
        public Externals ()
        {

                marks = new int [5];
                finalMarks = new int [5];
        }

        public void input SEE marks ()
        {
                Scanner s = new Scanner (System.in)
                for (int i=0; i<5; i++)
                {
                        System.out.println ("Subject " + (i +1)
                                                        + " marks");
                        marks [i] = s.nextInt ();
                }
        }

        public void calculate FinalMarks ()
        {
                for (int i=0; i<5, i++)
                        finalMarks [i]= marks [i]/2 +
                                        super.marks [i];
        }
```

```java
public void displayFinalMarks()
{

    displayStudentDetails();
    for (int i=0; i<5; i++)
    System.out.println ("Subject" + (i+1) + ":" +
    finalMarks[i]);

}
}


// main.java

import SEE-Externals;


class Main
{
    public static void main (String args[])
    {

        int numofStudents = 2;
        Externals finalMarks[] = new
        Externals [numofStudents];
        for (int i= 0; i < numofStudents; c++)
        {

            finalMarks[i] = new Externals();
            finalMarks[i].inputStudentDetails();
            System.out.println ("Enter CIE marks");
            finalMarks[i].inputCIEmarks();
            System.out.println ("Enter SEE marks");
            finalMarks[i].inputSEEmarks();
        }

        System.out.println ("Display data: \n");
        for (int i=0; i < numofStudent; i++)
        {
            finalMarks[i].calculateFinalMarks();
            finalMarks[i].display FinalMarks();
```

9

y
→ output

Enter the name

Abhi Pruthana

Enter the sem

3

Enter GE marks

Enter internal marks of course 1

45

Enter internal marks of course 2

46

Enter internal marks of course 3

47

Enter internal marks of course 4

48

Enter internal marks of course 5

49

Enter SEE Marks

Enter external marks of course 1

99

Enter external marks of course 2

55

Enter external marks of course 3

98

Enter external marks of course 4

57

Enter external marks of course 5

93

Enter the name

Soumukh

Enter the sem

3

→ Enter CIE Marks

Enter internal marks of course 1

45

Enter internal marks of course 2

43

Enter internal marks of course 3

46

Enter internal marks of course 4

50

Enter internal marks of course 5

44

→ Enter SEE Marks

Enter external marks of course 1

98

Enter external marks of course 2

99

Enter external marks of course 3

87

Enter external marks of course 4

89

Enter external marks of course 5

98

displaying details

name : Priarara   sem : 3

course 1 : 94

course 2 : 86

course 3 : 96

course 4 : 91

course 5 : 98

name : Pramukh   sem : 3

course 1 : 94

course 2 : 92

course 3 : 89

course 4 : 94

course 5 : 89