Lab-6

Display a package CIE which has 12 class-students internal. Student has name, usn, sem. The class internal derived from student has an array that stores internal marks in 5 courses of current semester. Create another package SEE which has the class External which is derived of student. This class has an array to store marks of 5 subjects. Import 2 packages of a file and declare final marks in all 5 subjects of n students.

Student.java

```
package cie;
import java.util.*;
public class Student
{    protected String usn = new String();
     protected String name = new String();
     protected int sem;

     public void inputStudentDetails()
     {    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 the sem:");
          sem = s.nextInt();
     }
}
```

```java
public void displayDetails()
{
    S.O.P(q"\n VSN :" + usn);
    S.O.Pq("\n Name: " + name);
    C.O.P("\n Sum:" + sum);
}
```

Internals.java

```java
package cii;
import java.util.Scanner;
public class Internals extends Student
{   protected int marks[] = new int[5];
    public void Input(int marks())
    {   int i;
        Scanner s = new Scanner(System.in);
        for(int i = 0; i<5; i++)
            System marks[i] = s.nextInt();
    }
}
```

External.java

```java
package use;
import cii.*;
import java.util.Scanner;
public class External extends Internals
{   public int marks[];
    protected int final Marks[];
    public External()
    {   marks = new int[5];
        finalMarks = new int[5];
    }
    public void input SEF marks()
    {   scanner s = new Scanner(System.in);
```

```java
for (int i=0; i<5; i++)
{  S.O.P ("Enter marks");
   marks[i] = s.nextInt();
}

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

public void displayFinalMarks()
{  displayStudentDetails();
   for (int i=0; i<5; i++)
      {  S.O.P ("Subject " + finalMarks[i]);
   }
}

}

Main.java

import Use.External;
class Main
{  public static void Main (String args[])
   {  int numofstudents = 2;
      Externals finalMarks [ ] = new External
                          [numof
                           students];
      for (int i=0; i< numofstudents; i++)
      {  finalMarks[i] = new External();
         finalMarks[i]. input StudentDetails();
         S.O.P ("Enter CIF marks: ")
         finalMarks[i]. inputSEEMarks();
      }

      S.O.P ("Displaying Data");
      for (int i=0; i< No ofstudents; i++)
      {  finalMarks[i]. CalculateFinalMarks();
         finalMarks[i]. displayFinalMarks();
      }
   }
}
```

Output:

Enter USN: 136

Enter name: Krishin

Enter sem: 2

Enter CIE marks

Enter marks of sub 1: 91

Enter marks of sub 2: 92

Enter marks of sub 3: 93

Enter marks of sub 4: 94

Enter marks of sub 5: 95

Enter SEE marks

Enter marks of sub 1: 91

Enter marks of sub 2: 92

Enter marks of sub 3: 94

Enter marks of sub 4: 95

Enter marks of sub 5 96

Display data

USN: 136

Name: Krishin

Sum: 2

Subject 1: 91

Subject 2: 92

Subject 3: 94

Subject 4: 95

Subject 5: 96

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