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LAB PROGRAM VI

Create a package CIE which has 2 classes student & internals, class student has members like usn, name, sem, class internals has an array that stores the internal marks scored in ~~five~~ n 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 Mark scored in five courses of the current semester of the student. Import the two packages in a file that declares the final marks of a student

```
package CIE;
import java.util.Scanner;
public class Student {
    String name;
    String usn;
    int sem;
    public void getd() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter usn, name &sem");
        name = sc.nextLine();
        USN = sc.nextLine();
        Sem = sc.nextInt();
}
```

```
public void display() {
    Sout();
    Sout("student USN:" + USN + "name" + name + "sem"
    Sout();
}
```

```
package CIE;
import java.util.Scanner;
public class Externals {
    public int marksCie[] = new int[5];
    public void getMarks() {
        for(int i=0; i<5; i++) {
            Scanner sc = new Scanner(System.in);
            Sout("Enter cie marks in subject" + (i+1));
            marksCie[i] = sc.nextInt();
        }
    }
    public int returnMarks(ie(int i) {
        return marksCie[i];
    }
}
```

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```
package SEE;
import CIE.Student;
import CIE.Externals;
import java.util.Scanner;
public class Externals extends Student {
    int marksSee[] = new int[5];
    public void getMarks() {
        for(int i=0; i<5; i++)
        { Scanner sc = new Scanner(System.in);
            sout("Enter SEE marks in subject" + (i+1));
            marksSee[i] = sc.nextInt();
        }
}

public void caleTotalMarks(Internals i1) {
        for (int i=0; i<5; i++)
            { sout("subject" + (i+1) + ":" +
(i1.returnMarksCie(i) + (marksSee[i]/2));
}

 sout();
}
}
```

```
import CIE.student;
import CIE.Internals;
import SEE.Externals;
import java.util.Scanner;
public class main{
    psvm(String[] args)
  {
    Scanner sc = new Scanner(System.in);
    Sout("Enter number of students");
    int n= sc.nextInt();
    Internals[] i1 = new Internals[n];
    Externals[] e1 = new Externals[n];

    for(int i=0; i<n; i++){
      Sout("Student"+(i+1)+"details");
      e1[i] = new Externals();
      i1[i]= new Internals();
      e1[i].getd();
      i1[i].getMarks();
      e1[i].getMarks();
    }
for(int i=0; i<n; i++){
    e1[i].display();
    e1[i].calcTotalMarks(i1[i]);
    }
  }
}
```

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Output :-

Enter the number of students
1
Student 1 details :
Enter student USN
324
Enter student name
shri
Enter semester
3
Enter no of subjects in cie
2
~~Enter No. of students:~~
Enter CIE marks in subject 1
34
Enter CIE marks in subject 2
37
Enter ~~SEE~~ number of subjects
3
Enter SEE marks in subject 1
78
Enter SEE marks in subject 2
89
Enter SEE marks in subject 3
99

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# lab 6

```
package CIE;

class Student {
    String usn;
    String name;
    int sem;

    Student(String usn, String name, int sem) {
        this.usn = usn;
        this.name = name;
        this.sem = sem;
    }
}

public class Internals {
    int[] internalMarks;

    Internals(int[] marks) {
        this.internalMarks = marks;
    }
}

package SEE;

import CIE.Student;

public class External extends Student {
    int[] externalMarks;

    External(String usn, String name, int sem, int[] marks) {
        super(usn, name, sem);
        this.externalMarks = marks;
    }
}

import CIE.*;
import SEE.*;

import java.util.Scanner;

class FinalMarks {
```

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

        System.out.print("Enter the number of students: ");
        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.print("Enter USN: ");
            String usn = sc.next();
            System.out.print("Enter Name: ");
            String name = sc.next();
            System.out.print("Enter Semester: ");
            int sem = sc.nextInt();

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

            int[] externalMarks = new int[5];
            System.out.print("Enter 5 External Marks: ");
            for (int j = 0; j < 5; j++) {
                externalMarks[j] = sc.nextInt();
            }

            students[i] = new Student(usn, name, sem);
            internals[i] = new Internals(internalMarks);
            externals[i] = new External(usn, name, sem, externalMarks);
        }

        for (int i = 0; i < n; i++) {
            System.out.println("Final Marks for " + students[i].name + ":");
            for (int j = 0; j < 5; j++) {
                int finalMarks = internals[i].internalMarks[j] + externals[i].ex
                System.out.println("Course " + (j + 1) + ": " + finalMarks);
            }
        }
    }
}
```

## ▼ Output

```
Enter the number of students: 2
Enter USN: 1BM21CS001
Enter Name: Alice
Enter Semester: 5
Enter 5 Internal Marks: 18 19 20 17 16
Enter 5 External Marks: 70 80 60 75 65
Enter USN: 1BM21CS002
Enter Name: Bob
Enter Semester: 5
Enter 5 Internal Marks: 15 18 17 16 14
Enter 5 External Marks: 68 74 70 72 69

Final Marks for Alice:
Course 1: 53
Course 2: 59
Course 3: 50
Course 4: 54
Course 5: 48

Final Marks for Bob:
Course 1: 49
Course 2: 55
Course 3: 52
Course 4: 52
Course 5: 48
```