

Create a package CIE which has two classes - student and internals. The class Personal has members like usn, name, sem. The class Internals marks 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 a student in all five courses.

CONCEPT: Overloading of functions

CONCEPT: Working with Information Encapsulation

```
package CIE;
```

```
import java.util.Scanner;
```

-- FROM STUDY --

```
public class Student {
```

```
    protected String usn;
```

```
    protected String name;
```

```
    protected int sem;
```

TOPIC 1

WORKSHEET 2

WORKSHEET 3

FORWARD HEADING AND STUDENT

```
public void inputStudentDetails() {
```

```
    Scanner s = new Scanner(System.in);
```

```
    System.out.print("Enter USN:");
```

THIS.USN = S.nextLine();

```
System.out.print("Enter Name:");
```

```
THIS.NAME = S.nextLine();
```

```
System.out.print("Enter Semester:");
```

```
THIS.SEM = S.nextInt();
```

}

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

3 } class Student { } class InternalMarks { }

package CIE; } class InternalMarks { }

```
import java.util.Scanner; } class InternalMarks { }
```

```
public class Internals extends Student { }
protected int marks[] = new int[5]; }
```

```
public void inputInternalMarks() {
    Scanner sc = new Scanner(System.in);
    System.out.print("Enter Internal Marks for 5 courses : ");
    for (int i = 0; i < 5; i++) {
        System.out.print("course " + (i + 1) + ": ");
        marks[i] = sc.nextInt();
    }
}
```

```
public void displayCIEmarks() {
    System.out.println("Internal marks : ");
    for (int i = 0; i < 5; i++) {
        System.out.println("course " + (i + 1) + ": "
                           + marks[i]);
    }
}
```

package SEE; ? Client make wolfish kiss visit

:(not "+", "new") Standard. Usual type

~~import CIE.internals~~; will probably be removed

```
import java.util.Scanner; import java.io.File;
```

public class Externals extends Internals {

protected int externalMarks[] = new ~~marks~~ int [5];

~~protected int finalmarks [] = new int[5];~~ ~~protected~~

public Externals () {

external marks = new int[5];

final marks [in new int. P.S.]

3) $i[2]$ till $max = [7] \text{ såsom till bestämma}$

public void () inputSeeMarks(), Show result

: Scanning for new scanner (System.in);

```
25. class System.out.println("Enter External marks for S  
                        ") {
```

courses?"); if (0 == i & !ref

```
int i := 0; i < 5; i += 1) {  
    System.out.println("course " + (i+1) + ": ");
```

`externalMarks[i] = s.nextInt();`

2

3 (1) 24.00m³) наимен. бетон 316ук

: ("• 14.0m "Larval") distal (Lugano) P

$$\{ (t+i\langle \vec{r} \rangle i; 0 \geq i \leq n) \}_{i=1}^n$$

$t'' := t + (t+i) \cdot \text{"several"}$) will receive $t+it$ as input.

Fil serien

```

public void displayFinalMarks() {
    displayStudentDetails();
    displayGEmarks();
}

System.out.println("External marks:");
for (int i = 0; i < 5; i++) {
    System.out.println("Course" + (i + 1) + " " + externalMarks[i]);
}

System.out.println("Final Marks:");
for (int i = 0; i < 5; i++) {
    System.out.println("Course" + (i + 1) + " " + finalMarks[i]);
}

```

import SEE.Externals;

import java.util.Scanner;

public class Main {

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

System.out.print ("Enter no. of Students : ");
 int n = sc.nextInt();

Externals [] students = new Externals [n];

```
for(int i=0; i<n; i++) {  
    Student[i] = new Externals(i);  
    cout << "Input details of student " << i+1 << endl;  
}
```

Students[i].inputStudentDetails();

Students[i].inputIEMarks(i);

Students[i].inputSEEmarks();

Students[i].calculateFinalMarks();

}

```
for(int i=0; i<n; i++) {  
    cout << "Input marks of student " << i+1 << endl;  
}
```

Students[i].displayFinalMarks(i);

: [i].zaron kari + "System.out.println("Total marks = " + Students[i].getTotal());

Output:

Enter number of students : 2

Enter USN : 1BM23S096

Enter name: Divyashree

Enter Semester: 3

Enter internal Marks for 5 courses : course 1 = 32

course 1 : 67

course 2 : 95

course 3 : 55

course 4 : 67

course 5 : 88

Enter External Marks for 5 courses:

Course 1: 99

Course 2: 89

Course 3: 90

Course 4: 91

Course 5: 85

USN: 1BM23C1096

Name: Divyanshree

Semester: 3

Internal Marks:

Course Marks: 1: 67

Course 2: ~~100~~ 95

Course 3: 55

Course 4: 67

Course 5: 88

External Marks:

Course 1: 99

Course 2: 89

Course 3: 90

Course 4: 91

Course 5: 95

C:\Users\Admin\Desktop\96>javac -d ..

C:\Users\Admin\Desktop\96>javac Main..

C:\Users\Admin\Desktop\96>java Main

Enter number of students: 2

Enter USN: 1bm23cs096

Enter Name: divya

Enter Semester: 3

Enter Internal Marks for 5 courses:

Course 1: 67

Course 2: 56

Course 3: 23

Course 4: 89

Course 5: 43

Enter External Marks for 5 courses:

Course 1: 86

Course 2: 56

Course 3: 55

Course 4: 99

Course 5: 88

Enter USN: 1bm23cs064

Enter Name: ridhi

Enter Semester: 3

Enter Internal Marks for 5 courses:

Course 1: 34

Course 2: 67

Course 3: 76

Course 4: 54

Course 5: 44

Enter External Marks for 5 courses:

Course 1: 90

Course 2: 45

Course 3: 67

Course 4: 77

Course 5: 56

USN: 1bm23cs096

Name: divya

Semester: 3

Internal Marks:

Course 1: 67

Course 2: 56

Course 3: 23

Course 4: 89

Course 5: 43

External Marks:

Course 1: 86

Course 2: 56

Course 3: 55

Course 4: 99

Course 5: 88

Final Marks:

Course 1: 153

Enter Internal Marks for 5 courses:

Course 1: 34
Course 2: 67
Course 3: 76
Course 4: 54
Course 5: 44

Enter External Marks for 5 courses:

Course 1: 90
Course 2: 45
Course 3: 67
Course 4: 77
Course 5: 56

USN: 1bm23cs096

Name: divya

Semester: 3

Internal Marks:

Course 1: 67
Course 2: 56
Course 3: 23
Course 4: 89
Course 5: 43

External Marks:

Course 1: 86
Course 2: 56
Course 3: 55
Course 4: 99
Course 5: 88

Final Marks:

Course 1: 153
Course 2: 112
Course 3: 78
Course 4: 188
Course 5: 131

USN: 1bm23cs064

Name: ridhi

Semester: 3

Internal Marks:

Course 1: 34
Course 2: 67
Course 3: 76
Course 4: 54
Course 5: 44

External Marks:

Course 1: 90
Course 2: 45
Course 3: 67
Course 4: 77
Course 5: 56

Final Marks:

Course 1: 124
Course 2: 112
Course 3: 143
Course 4: 131
Course 5: 100
