

12/11/2024

LAB-6

Create a package CIE which has two classes - Student and Internal. The class Personal has members like usn, name, sem. The class internal has an array that stores the internal marks scored in 5 courses of the current semester of the student. Create another package SEE which has the external which is a derived class of Student. This class has an array that stores the SEE marks scored in 5 courses of the current semester of the student. Import two packages in a file that declares the final mark of n students in all 5 courses.

Program

```
package CIE;
public class Personal
{
```

```
    protected String usn;
    protected String name;
    protected int sem;
```

```
public Personal(String usn, String name, int sem)
{
```

```
    this.usn = usn;
    this.name = name;
    this.sem = sem;
```



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

}

```
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 internal marks for  
        5 courses:");
```

```
        for (int i = 0; i < 5; i++)
```

{

```
            System.out.println(" course : " + (i+1) + " : ");
```

```
            marks[i] = s.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;
```

```
import CIE.Internals;
```

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

```
public class External extends Internal
```

```
{
```

```
    protected int externalMarks[] = new int[5];
```

```
    protected int finalMarks[] = new int[5];
```

```
    public External ()
```

```
{
```

```
        externalMarks = new int [5];
```

```
        finalMarks = new int [5];
```

```
}
```

```
    public void inputSEEmarks ()
```

```
{
```

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

```
        System.out.println("Enter external marks for S  
        courses : ");
```

```
        for (int i=0; i<5; i++)
```

```
{
```

```
System.out.println("Course " + (i+1) + ": ");  
externalMarks[i] = s.nextInt();
```

```
}
```

```
}
```

```
5 public void calculate FinalMarks ()
```

```
{
```

```
for (int i=0; i<5; i++)
```

```
{
```

```
finalMarks[i] = marks[i] + externalMarks[i];
```

```
}
```

```
10
```

```
}
```

```
public void displayFinalMarks ()
```

```
{
```

```
displayStudentDetails ();
```

```
displayCIE marks ();
```

```
15
```

```
System.out.println(" External Marks: ");
```

```
for (int i=0; i<5; i++)
```

```
{
```

```
System.out.println(" Course " + (i+1) + ": "  
+ finalMarks[i]);
```

```
20
```

```
}
```

```
}
```

```
}
```



```
import SEE.Externals;  
import java.util.Scanner;  
public class Main
```

```
{  
    public static void main (String [] args)
```

```
{  
    Scanner sc = new Scanner (System.in);  
    System.out.println ("Enter number of students");
```

```
    int n = sc.nextInt();
```

```
    Externals [] student = new Externals[n];
```

```
    for (int i=0; i<n; i++)
```

```
{
```

```
        student[i] = new Externals();
```

```
        student[i].inputStudentDetails();
```

```
        student[i].input CIE marks();
```

```
        student[i].input SEE marks();
```

```
        student[i].calculateFinalMarks();
```

```
}
```

```
    for (int i=0; i<n; i++)
```

```
{
```

```
        student[i].displayFinalMarks();
```

```
}
```

```
}
```

```
}
```

```
C:\Users\STUDENT\Desktop\cse>javac Main.java
```

```
C:\Users\STUDENT\Desktop\cse>java Main
```

```
Enter number of students: 2
```

```
Enter USN: 1BM23CS090
```

```
Enter Name: DHARUNYA
```

```
Enter Semester: 2
```

```
Enter Internal Marks for 5 courses:
```

```
Course 1: 90
```

```
Course 2: 98
```

```
Course 3: 89
```

```
Course 4: 88
```

```
Course 5: 97
```

```
Enter External Marks for 5 courses:
```

```
Course 1: 99
```

```
Course 2: 97
```

```
Course 3: 96
```

```
Course 4: 95
```

```
Course 5: 92
```

```
Enter USN: 1BM23CS001
```

```
Enter Name: XYZ
```

```
Enter Semester: 2
```

```
Enter Internal Marks for 5 courses:
```

```
Course 1: 78
```

```
Course 2: 89
```

```
Course 3: 87
```

```
Course 4: 67
```

```
Course 5: 77
```

```
Enter External Marks for 5 courses:
```

```
Course 1: 90
```

```
Course 2: 98
```

```
Course 3: 78
```

```
Course 4: 68
```

```
Course 5: 66
```

```
USN: 1BM23CS090
```

```
Name: DHARUNYA
```

```
Semester: 2
```

```
Internal Marks:
```

```
Course 1: 90
```

```
Course 2: 98
```

```
Course 3: 89
```

```
Course 4: 88
```

```
Course 5: 97
```

```
External Marks:
```

```
Course 1: 99
```

```
Course 2: 97
```

```
Course 3: 96
```

```
Course 4: 95
```

```
Course 5: 92
```

```
Final Marks:
```



Search

Course 4: 68

Course 5: 66

USN: 1BM23CS090

Name: DHARUNYA

Semester: 2

Internal Marks:

Course 1: 90

Course 2: 98

Course 3: 89

Course 4: 88

Course 5: 97

External Marks:

Course 1: 99

Course 2: 97

Course 3: 96

Course 4: 95

Course 5: 92

Final Marks:

Course 1: 189

Course 2: 195

Course 3: 185

Course 4: 183

Course 5: 189

USN: 1BM23CS001

Name: XYZ

Semester: 2

Internal Marks:

Course 1: 78

Course 2: 89

Course 3: 87

Course 4: 67

Course 5: 77

External Marks:

Course 1: 90

Course 2: 98

Course 3: 78

Course 4: 68

Course 5: 66

Final Marks:

Course 1: 168

Course 2: 187

Course 3: 165

Course 4: 135

Course 5: 143

C:\Users\STUDENT\Desktop\cse>