



Packages

CIE package :- In CIE folder.

Student.java

Package CIE;
public class Student

String name;

String usn;

int sem;

public Student (String name, String usn, int sem)

{

this.name = name;

this.usn = usn;

this.sem = sem;

}

}



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Internal.java

```
package CIE;
import CIE.Student;
```

```
public class Internal extends Student
{
```

```
    public int [] InternalMarks;
```

```
    public Internal (String name, String USN,
                    int sem, int [] Internal Marks)
    {
```

```
        super (name, USN, sem);
```

```
        this.InternalMarks = InternalMarks;
```

SEE package :- In SEE folder :-

```
package SEE;
```

```
import CIE.Student;
```

```
public class External extends CIE.Student
{
```

```
    public int [] SeeMarks;
```

```
    public External (String name, String USN, int sem,
                    int [] See Marks)
```




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```
{ super (name, usn, sem),  
  this, seemarks = Seemarks,  
}  
}
```

Final marks.java

```
import CIE.Student;  
import CIE.Internal;  
import SEE.Externals;  
import java.util.Scanner;
```

```
public class FinalMarks
```

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

```
{  
        Scanner s1 = new Scanner (System.in);
```

```
        System.out.println ("Enter the number  
        of students");
```

```
        int n = s1.nextInt();
```

```
        String[] name = new String[n];
```

```
        String[] usn = new String[n];
```

```
        int[] sem = new int[n];
```

```
        int[][] InternalMarks = new int[n][5];
```

```
        int[][] Seemarks = new int[n][5];
```




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```
for (int i = 0; i < n; i++) {  
    System.out.println("Enter details of student " +  
        (i + 1) + ": ");
```

~~System~~

S.o.p (" | Name: ");

name[i] = s1.next();

S.o.p (" | USN: ");

usn[i] = s1.next();

S.o.p (" | Sem: ");

sem[i] = s1.nextInt();

S.o.p ("Enter entire marks for course: ");

```
for (int j = 0; j < 5; j++) {
```

S.o.p (" | Course " + (j + 1) + ": ");

Internal marks[i][j] = s1.nextInt();

~~System.out.println("Enter Sem marks for~~

~~5 courses: ");~~

```
for (int j = 0; j < 5; j++) {
```

S.o.p (" | Course " + (j + 1) + ": ");

Sem marks[i][j] = s1.nextInt();

?

?



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```
int [][] Finalmarks = new int [n] [5];  
for (int i = 0; i < n; i++) {  
    Internal I1 = new Internal (name[i],  
    sem[i], Internamarks[i]),  
    External E1 = new External (name[i], ex[i],  
    sem[i], Seemarks[i]);  
    int sum = 0;  
    for (int j = 0; j < 5; j++) {  
        Finalmarks[i][j] = I1.Internamarks  
        [i][j] + E1.Seemarks[j];  
    }  
}
```

SOP ("In In Final marks for" + n +
"Student in 5 courses :");

SOP (name[r] + " : ");

```
for (int j = 0; j < 5; j++) {  
    sum += Finalmarks[i][j];  
}
```

System.out.println("sum");

}

}

}

}

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1. Package CIE – Student.java

```
package CIE;
```

```
public class Student {
```

```
    public String usn, name;
```

```
    public int sem;
```

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

```
        this.usn = usn;
```

```
        this.name = name;
```

```
        this.sem = sem;
```

```
    }
```

```
}
```

2. Package CIE – Internals.java

```
package CIE;
```

```
import CIE.Student;
```

```
public class Internals extends Student {
```

```
    public double[] internalMarks = new double[5];
```

```
public Internals(String usn, String name, int sem, double[] internalMarks) {  
    super(usn, name, sem);  
    this.internalMarks = internalMarks;  
}  
}
```

3. Package SEE – External.java

```
package SEE;  
import CIE.*;  
  
public class External extends Student {  
    public double[] seeMarks = new double[5];  
  
    public External(String usn, String name, int sem, double[] seeMarks) {  
        super(usn, name, sem);  
        this.seeMarks = seeMarks;  
    }  
}
```

4. FinalMarks.java – outside the package folders

```
import CIE.Internals;
import SEE.External;
import java.util.Scanner;

public class FinalMarks {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter the number of students: ");
        int n = input.nextInt();
        input.nextLine();

        Internals[] internals = new Internals[n];
        External[] externals = new External[n];

        // Input Internal Marks
        for (int i = 0; i < n; i++) {
            System.out.println("Enter details of Student " + (i + 1));
            System.out.print("Enter USN: ");
            String usn = input.nextLine();
            System.out.print("Enter Name: ");
            String name = input.nextLine();
            //input.nextLine();
        }
    }
}
```



```

        System.out.print("Enter Semester: ");
        int sem = input.nextInt();
        input.nextLine();
        double[] internalMarks = new double[5];
        System.out.print("Enter Internal Marks for 5 courses: ");
        for (int j = 0; j < 5; j++) {
            internalMarks[j] = input.nextDouble();
        }
        input.nextLine();

        internals[i] = new Internals(usn, name, sem, internalMarks);
    }

    // Input SEE Marks
    for (int i = 0; i < n; i++) {
        System.out.println("Enter SEE Marks for 5 courses of Student " + (i+1) + " " + internals[i].name);
        String usn = internals[i].usn;
        String name = internals[i].name;
        int sem = internals[i].sem;
        double[] seeMarks = new double[5];

        for (int j = 0; j < 5; j++) {
            seeMarks[j] = input.nextDouble();
        }

        externals[i] = new External(usn, name, sem, seeMarks);
    }
}

```

```

    }

    // Display Final Marks
    System.out.println("\nFinal Marks of Students:");
    for (int i = 0; i < n; i++) {
        System.out.println("Student " + (i + 1) + " : USN: " + internals[i].usn +
            "\nName: " +
                internals[i].name + "\nSemester: " + internals[i].sem);

        for (int j = 0; j < 5; j++) {
            System.out.println("Subject " + (j + 1) + ": " +
                ((internals[i].internalMarks[j]) + (externals[i].seeMarks[j] / 2)) +
            "\n");
        }
        System.out.println();
    }
}
}
}

```

Compilation:

```
javac CIE/Student.java CIE/Internals.java SEE/External.java FinalMarks.java
```

```
java FinalMarks
```


Output

Deekshith B
1BM22CS082

Enter the number of students: 2

Enter details of Student 1

Enter USN 1BM22CS082

Enter Name: Deekshith B

Enter Semester 3

Enter Internal Marks for 5 courses:

43

44

45

46

47

Enter details of Student 2

Enter USN 1BM22CS083

Enter Name: Dixit

Enter Semester: 3

Enter Internal Marka for 5 courses:

40

48

45

48

47

Enter SEE Marks for 5 courses of Student 1 Deekshith B

85

89

90

95

96

Enter SEE Marks for 5 courses of Student 2 Vibinn Noothan

95

98

99

97

98

Final Marks of Students:

Student 1: USN: 18M22CS082

Name: Deekshith B

Semester: 3

Subject 1: 90.5

Subject 2: 91.5

Subject 3: 94.0

Subject 4: 92.5

Subject 5: 99.5

Student 2: USN: 18M22CS083

Name: Dixit

Semester: 3

Subject 1: 96.5

Subject 2: 97.0

Subject 3: 98.5

Subject 4: 97.5

Subject 5: 98.0

