

## Program - 6

- 2) Create a package CTE which has two classes - Student & Internals. The class Personal has members like USN, Name, Sem. The class Internals has an array that stores the internal marks scored in 5 courses of current semester of student. Create another package SEF which has class External derived from Student. This class has an array that stores SEF marks scored in five courses. Declare final marks of n students in all 5 courses.

```
package CTE;
import java.util.*;
public class Student
{
    public String usn;
    public String name;
    public int sem;

    public void input()
    {
        Scanner in = new Scanner(System.in);
        System.out.println("Enter usn, name, sem: ");
        usn = in.nextLine();
        name = in.nextLine();
        sem = in.nextInt();
    }
}
```

```
package CTE;
public class Internals
{
    public int intm[] = new int[5];
}
```

```
package SEF;
import CTE.Student;
public class External extends Student
```



```

    } public int seema[] = new int[5];

```

```

import java.util.*;

```

```

import SEF.*;

```

```

import CIE.*;

```

```

public class Marks

```

```

{
    public static void main (String args[])
    {
        int m[] = new int[5];

```

```

        Scanner in = new Scanner (System.in);

```

```

        System.out.println ("Enter n:");

```

```

        int n = in.nextInt();

```

```

        SEF. External se[] = new SEF. External[n];

```

```

        Internals in[] = new CIE [n];

```

```

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

```

```

        {
            se[i] = new SEF. External();

```

```

            in[i] = new CIE ();

```

```

            System.out.println ("Enter details of " + (i+1));

```

```

            se[i].input();

```

```

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

```

```

            {

```

```

                System.out.println ("Enter internal &
                seema marks" + (j+1));

```

```

                se[i].entm[j] = in.nextInt();

```

```

                in[i].seem[j] = in.nextInt();

```

```

                in[j] = in[i].intm[j] + se[i].
                seem[j];
            }

```

```

        System.out.println ("Final marks of " + se[i].name);

```

```

        for (int k = 0; k < 5; k++)

```

```

        {
            System.out.println ("Course " + (k+1) + " = "
            + m[k]);
        }
    }
}

```



## Algorithm:

Step 1: Start

Step 2: Create a package CIE

Step 3: Declare a public class Student with members  
usrn, name, sem.

Step 4: A method input allows users to give inputs  
for variables, usrn, name & sem.

Step 5: Create another class Internals in same package CIE  
It consists of an array intm that stores  
internal marks scored in 5 courses.

Step 6: Create package XEE

Step 7: Import Student class from package CIE

Step 8: ~~Create~~ a class external which extends Student  
class.

Step 9: It consists of an array xeen that stores  
external marks of 5 courses of a student.

Step 10: Import packages CIE & XEE into a  
new file.

Step 12: Create an array m that stores total marks.

Step 13: Read the user input for no. of students.

Step 14: Instantiate objects External & Internals

Step 15: For each student, object, call input f<sup>n</sup> to  
get student details.

For each course, take user input for  
internal & external marks.

Step 16: Add internal & external marks.

Step 17: ~~Display~~ total marks of all students.

Step 18: Step.

Akanksha

IBM22C8001

Enter no of students:

1

Enter details

Enter sem, urn and name:

Enter internal and see marks of sub1

45

45

~~Enter internal & see marks of sub2~~

~~46~~

46

Enter internal & see marks of sub3

47

47

Enter internal & see marks of sub4

48

48

Enter internal & see marks of sub5

49

49

Final marks of IBM22C8001

Course1 = 90

Course2 = 92

~~Course3 = 94~~

✓ Course4 = 96

Course5 = 98

13/02/24



```
C:\Users\STUDENT\Desktop\1bm22cs029\ooj>javac -d . finalMarks.java
```

```
C:\Users\STUDENT\Desktop\1bm22cs029\ooj>java finalMarks
```

Aakanksha

1bm22cs001

enter no of students:

1

Enter details1

Enter sem,usn and name:

3

1bm22cs001

Enter internal and see marks of sub1

45

45

Enter internal and see marks of sub2

46

46

Enter internal and see marks of sub3

47

47

Enter internal and see marks of sub4

48

48

Enter internal and see marks of sub5

49

49

Final marks of 1bm22cs001

Course1=90

Course2=92

Course3=94

Course4=96

Course5=98