

LAB 5

9. Create a package CIE which has 2 classes - student & Internals. The class student has members like usn, name, sem. The class Internals 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 5 courses of the current semester of the student. Import the two packages in a file that declares that the final marks of n students in all 5 courses

```
package CIE;
public class Student {
    public int sem;
    public String usn;
    public String name;
    public String usn;
    public int sem;
    public String name;
```

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

```
}
```

```

package CIE;
class Internals
{
    public int entMarks[] = new int[5];
}
Internals (int i[])

```

```

package SEE;
class External extends student;

```

```

package SEE;
import CIE.student;
class External extends student
{
    public int ent-marks[] = new int[5];
}

```

```

import CIE.*;
import SEE.*;
import java.util.*;

```

```

public class finalmarks
{

```

```

    public static void main(String args[])
    {

```

```

        int ent final-marks[] = new int[5];

```

```

        Scanner input = new Scanner(System.in);

```

```

        System.out.println("Enter no. of students");

```

```

        int n n = input.nextInt();

```

```

        CIE.Internals obj[] = new CIE.Internals[n];
        SEE. Ext External obj1[] = new SEE.External[n];

```



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

```
    obj[i] = new Sci-Internal();
```

```
    obj1[i] = new SE-Internal();
```

```
    System.out.println("Enter student details for student " + (i+1));
```

```
    obj[i].accept();
```

```
    {
```

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

```
            System.out.println("Enter internal & external marks of student"); System.out.println("Enter internal & external marks of student");
```

```
            obj[i].int-marks[j] = input.nextInt(); obj[i].int-marks[j] = input.nextInt();
```

```
            obj1[i].ext-marks[j] = input.nextInt(); obj1[i].ext-marks[j] = input.nextInt();
```

```
            final-marks[j] = obj[i].int-marks[j] + obj1[i].ext-marks[j];
```

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

```
    {
        System.out.println("Enter internal & final marks of student");
```

```
        obj[i].int-marks[j] = input.nextInt();
```

```
        obj1[i].ext-marks[j] = input.nextInt();
```

```
        final-marks[j] = obj[i].int-marks[j] + obj1[i].ext-marks[j];
    }
}
```

```

System.out.println("Final marks of" + obj1[i].name);
for (int k=0; k<5; k++)
{
    System.out.println("Course " + (k+1) +
        " : " + final_marks[k]);
}
}
}

```

Output:

Enter n

2

Enter student details for student 1

Enter details

Name: Charvi

USN: 012

Sem: 3

Enter internal and final marks

23 23

Enter internal and final marks

23 23

Enter Internal and final marks

23 23

Enter internal & final marks

34 34

Enter Internal & final marks

34 45

Final marks of Charvi

Course 1: 46

Course 4: 68

Course 2: 46

Course 5: 90

Course 3: 46

Algorithm:

Step 1: ~~start~~ start

Step 2: Create a package c1e
create a class student.

Step 3: create a method Accept() in student.
which reads usn, name, sem;

Step 4: Create a class Internal.

Step 5: create a package SEE.

Step 6: create a class External extending
Student.

Step 7: for $i = 0$ to $n-1$ do
call $obj[i].accept()$
~~end for~~

Step 8: for $j = 0$ to $5-1$ do
input marks for student $\#i$ and
course j
 $final_marks[j] = obj[i].int_marks[j] +$
 $obj1[i].ext_marks[j]$
end for.

Step 9: for $k = 0$ to $5-1$ do.
~~print~~ ~~course~~ course $(k+1)$: final_
marks $[k]$
end for.

~~Step 10: stop. end for.~~

Step 10: stop


```
Enter n
2
Enter Student details for student1
Enter details
Name:
cHARVI
USN:
1nm22cs012
Sem:
3
Enter Internal and final marks
23
23
Enter Internal and final marks
23
23
Enter Internal and final marks
23
23
Enter Internal and final marks
34
34
Enter Internal and final marks
45
45
Final marks ofcHARVI
Course1:46
Course2:46
Course3:46
Course4:68
Course5:90
Enter Student details for student2
Enter details
Name:
ABC
USN:
1BM22CS012
Sem:
3
Enter Internal and final marks
12
12
Enter Internal and final marks
12
12
Enter Internal and final marks
12
12
Enter Internal and final marks
12
12
Enter Internal and final marks
12
12
Final marks ofABC
Course1:24
Course2:24
Course3:24
Course4:24
Course5:24
NAME:ADIKAR CHARVI SREE TEJA USN:1BM22CS012
```