

Lab - 6

Date _____ / _____ / _____

Page _____

- Q) Create a package CIE which has two classes - Student and Internals. The class Student has members like usn, name, sem. The class Internals derived from Student 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 n students in all five courses.

// Student.java

```
package CIE;  
import java.util.*;  
public class Student  
{  
    protected String USN = new String();  
    protected String Name = new String();  
    protected int sem;  
  
    public void InputStudentDetails()  
    {  
        Scanner sc = new Scanner (System.  
        in);  
        System.out.println ("Enter  
        Student USN");  
    }  
}
```

usn = sc.nextInt();
System.out.println("Enter student name");
name = sc.nextLine();

System.out.println("Enter semester");
sem = sc.nextInt();

{
public void displayStudentDetails()

System.out.println("Student usn: "+
usn);

System.out.println("Student name: "+
name);

System.out.println("Student semester:
+ sem);

11 Internals.java

package GE;

import java.util.*;

public class Internals extends Student
{

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

{
public void InputMarks()

Scanner sc = new Scanner(System.in);

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

System.out.print("Enter 5
subject marks");

marks[0] = sc.nextInt();

}

}

externals.java

package SCD;

import java.util.Scanner;

import java.util.Scanner;

public class Externals extends Internals

{

protected int marks[];

protected int finalMarks[];

public Externals()

marks = new int [5];

finalMarks = new int [5];

}

public void inputScanner()

Scanner sc = new Scanner (System.in);

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

{

System.out.println ("Subject " +
(i+1) + " marks: ");

marks[i] = sc.nextInt();

}

}

public void calculateFinalMarks()

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

finalMarks[i] = marks[i]*2 +
superMarks[i];

}

public void displayFinalMarks()

{
displayStudentDetails();

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

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

// Main.java

Import SEE.Externals

Class Main

{

public static void main (String args)

{
int numStudents=2;

External finalMarks[] = new

Externals [numStudents];

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

{
finalMarks[i] = new External();

finalMarks[i]. Input Student Details();
System.out.println("Enter CGE
marks");
finalMarks[i]. Input CGE marks;
System.out.println("Enter SEE
marks");
finalMarks[i]. Enqur SEE marks();
System.out.println("Displaying data:
for (int i=0; i<numOfStudents; i++)
finalMarks[i]. calculateFinal Marks();
finalMarks[i]. displayFinal Marks();

Output : Setu Misra
(BM22CS250)

Enter student USN

1BM22CS250

Enter student name

Setu

Enter student semester

3

Enter CGE marks

Enter SEE marks: 39

: 38

" : 26

" : 40

" : 36

Enter SEE marks

Subject 1 marks: 78
" 2 " : 89
" 3 " : 90
" 4 " : 87
" 5 " : 92

Enter student usn: 18M22CS250

18M22CS250

Enter student name: Aayra

Aayra

Enter student semester: 3

3

Selvi Mihira

Enter CG marks

18M22CS250

Enter 5 marks: 39

" : 38
" : 30
" : 30
" : 25

Enter SEE marks

Subject 1 marks: 56
" 2 " : 78
" 3 " : 89
" 4 " : 90
" 5 " : 92

Displaying data

Student name: Selvi

Student usn: 18M22CS250

Student semester: 3

Subject 1: 78

Subject 2: 82

Subject 3: 77

Subject 4: 83

Subject 5: 82

Student name: Aayra

Student Usn: 1BMCS247

Student Semester: 3

Subject 1: 58

Subject 2: 77

Subject 3: 80

Subject 4: 70

Subject 5: 80

100
30 1-13