

23/01/2024

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## Lab 6 :

Q. Program to implement packages.

Ans (i) Student.java :

```
package CIE;
import java.util.Scanner;
public class Student {
    protected String usn = new String();
    protected String name = new String();
    protected int sem;
    public void inputStudentDetails() {
        System.out.println("Enter Details of Students :");
        Scanner s = new Scanner(System.in);
        System.out.println("Enter USN :");
        usn = s.nextLine();
        System.out.println("Enter name :");
        name = s.nextLine();
        System.out.println("Enter Semester :");
        sem = s.nextInt();
    }
    public void displayStudentDetails() {
        System.out.println("USN : " + usn);
        System.out.println("Name : " + name);
        System.out.println("Semester : " + sem);
    }
}
```

(ii) Internals.java :

```
package CIE;
import java.util.Scanner;
```



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```

public class Internals extends Student {
    protected int marks[] = new int[5];
    public void inputCIEmarks() {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the marks for 5 subjects:");
        for (int i = 0; i < 5; i++) {
            System.out.println("Enter the marks for  
subject " + (i+1) + ":");
            marks[i] = s.nextInt();
        }
    }
}

```

(iii.) Externals.java :

```

package SEE;
import CIE.Internals;
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 inputSEEmarks() {
        Scanner s = new Scanner(System.in);
        for (int i = 0; i < 5; i++) {
            System.out.println("Subject " + (i+1) + " marks:");
            marks[i] = s.nextInt();
        }
    }
    public void calculateFinalMarks() {

```



```

        for (int i=0; i<5; i++)
            finalMarks[i] = marks[i] / 2 + super.marks[i];
    }

    public void displayFinalMarks () {
        displayStudentDetails ();
        for (int i=0; i<5; i++)
            System.out.println ("Subject " + (i+1) + " : " +
                                finalMarks[i]);
    }
}

```

(iv.) Main.java :

```

import SEE.Externals;
class Main {
    public static void main (String args[]) {
        int numOfStudents = 5;
        Externals finalMarks[] = new Externals[numOfStudents];
        for (int i=0; i<numOfStudents; i++) {
            finalMarks[i] = new Externals();
            finalMarks[i].inputStudentDetails();
            System.out.println ("Enter CIE marks");
            finalMarks[i].inputCIEmarks();
            System.out.println ("Enter SEE marks");
            finalMarks[i].inputSEEmarks();
        }
        System.out.println ("Displaying data : \n");
        for (int i=0; i<numOfStudents; i++) {
            finalMarks[i].calculateFinalMarks();
            finalMarks[i].displayFinalMarks();
        }
    }
}

```

Output :

Enter details of students :

Enter USN :

IBM22 CS181

Enter Name :

Nikhilesh C

Enter Semester :

3

Enter CIE marks

Enter the marks for subject 1 :

39

Enter the marks for subject 2 :

40

Enter the marks for subject 3 :

38

Enter the marks for subject 4 :

40

Enter the marks for subject 5 :

36

Enter SEE marks

Subject 1 marks : 97

Subject 2 marks : 92

Subject 3 marks : 95

Subject 4 marks : 89

Subject 5 marks : 78

~~Enter details of student~~ Displaying Data :

USN : IBM 22 CS181

Name : Nikhilesh C

Semester : 3



Subject 1 : 87  
Subject 2 : 86  
Subject 3 : 85  
Subject 4 : 84  
Subject 5 : 75

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22/1/2024