

23/01/24

LAB-6

Create a package CIE which has two classes Student & Internals. The class student has members usn, name, sem. The class internals derived from student has an array that stores the internal marks stored in 5 subjects. Create another package SEE containing a class External which has an array to store SEE marks.

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 s = new Scanner(System.in);
        this.usn = s.nextLine();
        this.name = s.nextLine();
        this.sem = s.nextInt();
    }

    public void displayStudentDetails() {
        System.out.println(this.usn + " " + this.name);
    }
}
```


Internals.java

```

package CIE;
import java.util.*;
public class Internals extends Student {
    protected int marks[] = new int[5];
    public void inputCIEmarks() {
        Scanner s = new Scanner(System.in);
        for (int i = 0; i < 5; i++)
            marks[i] = s.nextInt();
    }
}

```

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() {
        for (int i = 0; i < 5; i++)
            marks[i] = s.nextInt();
    }
    public void calcFinalMarks() {
        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]);
    }
}

```

Main.java.

```

import SEE.Externals;
class Main {
    public static void main (String args[]) {
        int numOfStudents = 2;
        Externals finalMarks[] = new Externals[ ];
        for (int i = 0; i < numOfStudents; i++) {
            finalMarks[i] = new Externals();
            finalMarks[i].inputStudentDetails();
            System.out.println("Enter IFE Marks");
            finalMarks[i].inputIFEmarks();
            System.out.println("Enter SEE Marks");
            finalMarks[i].inputSEEmarks();
        }
        for (int i = 0; i < numOfStudents; i++) {
            final[i].calculateFinalMarks();
            final[i].displayFinalMarks();
        }
    }
}

```


OUTPUT:

Enter Student Details:

IBM22CS251

Shamanth

2

Enter CIE Marks

40

45

41

48

44

Enter SEE Marks

80

90

86

80

84

Enter Student Details

1BM22CS256

Shashank

2

Enter CIE marks

50

45

40

48

46

Enter SEE marks

90

96

100

90

92

Displaying Details:

USN: 1BM22CS251

Name: Shamanth

Sem: 2

Subject 1: 80

Subject 2: 90

Subject 3: 84

Subject 4: 88

Subject 5: 86

USN: 1BM22CS256

Name: Shashank

Sem: 2

Subject 1: 95

Subject 2: 93

Subject 3: 90

Subject 4: 96

Subject 5: 92