

WEEK-05

```
J Personal.java > ...
1  package CIE;
2
3  public class Personal {
4      protected String usn;
5      protected String name;
6      protected int sem;
7
8      public void getDetails(String usn, String name, int sem) {
9          this.usn = usn;
10         this.name = name;
11         this.sem = sem;
12     }
13
14     public void display() {
15         System.out.println("USN: " + usn);
16         System.out.println("Name: " + name);
17         System.out.println("Semester: " + sem);
18     }
19 }
```

```
J Internals.java > ...
1  package CIE;
2
3  public class Internals extends Personal {
4      public int[] internalMarks = new int[5];
5
6      public void setInternalMarks(int[] marks) {
7          for (int i = 0; i < 5; i++) {
8              internalMarks[i] = marks[i];
9          }
10     }
11
12     public void displayInternalMarks() {
13         System.out.print("Internal Marks: ");
14         for (int i = 0; i < 5; i++) {
15             System.out.print(internalMarks[i] + " ");
16         }
17         System.out.println();
18     }
19 }
```

J External.java > ...

```
1  package SEE;
2
3  import CIE.Personal;
4
5  public class External extends Personal {
6      public int[] seeMarks = new int[5];
7
8      public void setSEEMarks(int[] marks) {
9          for (int i = 0; i < 5; i++) {
10             seeMarks[i] = marks[i];
11          }
12      }
13
14      public void displaySEEMarks() {
15          System.out.print("SEE Marks: ");
16          for (int i = 0; i < 5; i++) {
17              System.out.print(seeMarks[i] + " ");
18          }
19          System.out.println();
20      }
21  }
```

J Main.java > ...

```
1  import CIE.*;
2  import SEE.*;
3  import java.util.Scanner;
4
5  public class Main {
    Run | Debug
6      public static void main(String[] args) {
7          Scanner sc = new Scanner(System.in);
8          System.out.print("Enter number of students: ");
9          int n = sc.nextInt();
10
11         Internals[] internal = new Internals[n];
12         External[] external = new External[n];
13
14         for (int i = 0; i < n; i++) {
15             internal[i] = new Internals();
16             external[i] = new External();
17
18             System.out.println("\nEnter details for Student " + (i + 1));
19             System.out.print("USN: ");
20             String usn = sc.next();
21             System.out.print("Name: ");
22             String name = sc.next();
23             System.out.print("Semester: ");
24             int sem = sc.nextInt();
25
26             internal[i].getDetails(usn, name, sem);
27             external[i].getDetails(usn, name, sem);
28
29             int[] inMarks = new int[5];
30             int[] seeMarks = new int[5];
31
32             System.out.println("Enter 5 Internal Marks:");
33             for (int j = 0; j < 5; j++) inMarks[j] = sc.nextInt();
34             internal[i].setInternalMarks(inMarks);
35
36             System.out.println("Enter 5 SEE Marks:");
37             for (int j = 0; j < 5; j++) seeMarks[j] = sc.nextInt();
38             external[i].setSEEMarks(seeMarks);
39         }
    }
```

```
40
41     System.out.println("\n--- Final Marks of Students ---");
42     for (int i = 0; i < n; i++) {
43         System.out.println("\nStudent " + (i + 1) + " Details:");
44         internal[i].display();
45
46         int[] finalMarks = new int[5];
47         for (int j = 0; j < 5; j++) {
48             // Assuming SEE marks are out of 100 and internal out of 50 (scaled)
49             finalMarks[j] = internal[i].internalMarks[j] + (external[i].seeMarks[j] / 2);
50         }
51
52         System.out.print("Final Marks: ");
53         for (int j = 0; j < 5; j++) System.out.print(finalMarks[j] + " ");
54         System.out.println();
55     }
56
57     sc.close();
58 }
59 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\BMSCE\Desktop\SHIRISHA B R> javac CIE*.java SEE*.java Main.java

PS C:\Users\BMSCE\Desktop\SHIRISHA B R> java Main

Enter number of students: 3

Enter details for Student 1

USN: 01

Name: shirishabr

Semester: 3

Enter 5 Internal Marks:

30 31 33 35 38

Enter 5 SEE Marks:

48 45 46 50 48

Enter details for Student 2

USN: 02

Name: sailikhitha

Semester: 3

Enter 5 Internal Marks:

30 34 31 32 31

Enter 5 SEE Marks:

40 39 46 41 46

Enter details for Student 3

USN: 03

Name: chaithanya

Semester: 3

Enter 5 Internal Marks:

31 34 33 35 32

Enter 5 SEE Marks:

47 43 45 41 40

--- Final Marks of Students ---

Student 1 Details:

USN: 01

Name: shirishabr

Semester: 3

Final Marks: 54 53 56 60 62

Student 2 Details:

USN: 02

Name: sailikhitha

Semester: 3

Final Marks: 50 53 54 52 54

Student 3 Details:

USN: 03

Name: chaithanya

Semester: 3

Final Marks: 54 55 55 55 52

PS C:\Users\BMSCE\Desktop\SHIRISHA B R> █