

Lab program 6

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() {  
        Scanner scanner = new Scanner(System.in);  
        System.out.println("Enter USN:");  
        usn = scanner.nextLine();  
        System.out.println("Enter name:");  
        name = scanner.nextLine();  
        System.out.println("Enter semester:");  
        sem = scanner.nextInt();  
    }  
    public void displayStudentDetails() {  
        System.out.println("STUDENT DETAILS:");  
        System.out.println("Name:" + name);  
        System.out.println("USN:" + usn);  
        System.out.println("Semester:" + sem);  
    }  
}  
  
package Cie;  
  
import java.util.Scanner;  
  
public class Internals extends Student {  
    protected int marks[] = new int[5];  
    public void inputCIEMarks() {
```

```

Scanner scanner = new Scanner(System.in);

System.out.println("\nEnter Internal Marks for 5 subjects:");

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

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

    marks[i] = scanner.nextInt();

}

}

}

```

```

package See;

import Cie.Internals;

import java.util.Scanner;

public class Externals extends Internals {

    protected int finalMarks[];

    protected int seeMarks[];

    public Externals() {

        finalMarks = new int[5];

        seeMarks = new int[5];

    }

    public void inputSeeMarks() {

        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter SEE Marks for the subjects:");

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

            System.out.print("SEE Marks for Subject " + (i + 1) + ": ");

            seeMarks[i] = scanner.nextInt();

        }

    }

    public void calculateFinalMarks() {

```

```

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

    public void displayFinalMarks() {
        displayStudentDetails();

        System.out.println("Final Marks (CIE + SEE/2):");

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

import See.Externals;

import java.util.Scanner;

class Main {

    public static void main(String args[]) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter number of students: ");

        int n = scanner.nextInt();

        Externals students[] = new Externals[n];

        for (int i = 0; i < n; i++) {
            System.out.println("\nEnter details for Student " + (i + 1));

            students[i] = new Externals();

            students[i].inputStudentDetails();

            students[i].inputCIEMarks();

            students[i].inputSeeMarks();

            students[i].calculateFinalMarks();
        }
        System.out.println("\nFINAL MARKS OF STUDENTS");
    }
}

```

```

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

        students[i].displayFinalMarks();

    }

}

}

```

The screenshot shows a Java IDE with a terminal window. The terminal output is as follows:

```

PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260\Lab_pgm6> javac Main.java Cie\Student.java Cie\Internals.java See\Externals.java
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260\Lab_pgm6> java Main
>>
Enter number of students: 2

Enter details for Student 1
Enter USN:
564
Enter name:
Sananya
Enter semester:
3

Enter Internal Marks for 5 subjects:
Subject 1: 45
Subject 2: 48
Subject 3: 47
Subject 4: 49
Subject 5: 50
Enter SEE Marks for the subjects:
SEE Marks for Subject 1: 98
SEE Marks for Subject 2: 99
SEE Marks for Subject 3: 97
SEE Marks for Subject 4: 89
SEE Marks for Subject 5: 92

Enter details for Student 2
Enter USN:
987
Enter name:
Turvi
Enter semester:
5

Enter Internal Marks for 5 subjects:

```

The IDE interface includes tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The status bar at the bottom indicates 'Ln 20, Col 47', 'Spaces: 4', 'UTF-8', 'CRLF', and 'Java'.

The screenshot shows the continuation of the program execution in the Java IDE terminal. The output is as follows:

```

Enter details for Student 2
Enter USN:
987
Enter name:
Turvi
Enter semester:
5

Enter Internal Marks for 5 subjects:
Subject 1: 45
Subject 2: 49
Subject 3: 48
Subject 4: 50
Subject 5: 46
Enter SEE Marks for the subjects:
SEE Marks for Subject 1: 98
SEE Marks for Subject 2: 79
SEE Marks for Subject 3: 93
SEE Marks for Subject 4: 95
SEE Marks for Subject 5: 94

FINAL MARKS OF STUDENTS
STUDENT DETAILS:
Name:Sananya
USN:564
Semester:3
Final Marks (CIE + SEE/2):
Subject 1: 94
Subject 2: 97
Subject 3: 95
Subject 4: 93
Subject 5: 96
STUDENT DETAILS:
Name:Turvi
USN:987
Semester:5
Final Marks (CIE + SEE/2):

```

The IDE interface is consistent with the previous screenshot, showing the same tabs and status bar information.

The image shows a screenshot of the Visual Studio Code (VS Code) editor interface. The main editor window displays a text file with student marks data. The terminal window at the bottom shows the command prompt and the output of the program. The sidebar on the right contains a 'SUGGESTED ACTIONS' panel with a 'Build with Agent' button and a 'SUGGESTED ACTIONS' panel with a 'Build with Agent' button. The status bar at the bottom shows the current line and column (Ln 20, Col 47), the number of spaces (4), the encoding (UTF-8), the line ending (CRLF), and the active language (Java).

28 }

PROBLEMS 15 OUTPUT DEBUG CONSOLE TERMINAL PORTS

powershell + v [trash] [refresh] [close]

FINAL MARKS OF STUDENTS
STUDENT DETAILS:
Name:Sanarya
USN:564
Semester:3
Final Marks (CIE + SEE/2):
Subject 1: 94
Subject 2: 97
Subject 3: 95
Subject 4: 93
Subject 5: 96
STUDENT DETAILS:
Name:Turvi
USN:987
Semester:5
Final Marks (CIE + SEE/2):
Subject 1: 94
Subject 2: 88
Subject 3: 94
Subject 4: 97
Subject 5: 93
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260\Lab_pg6> |

Build with Agent

AI responses may be inaccurate.
[Generate Agent Instructions](#) to onboard AI onto your codebase.

SUGGESTED ACTIONS

Build Workspace Show Config

Mainjava +

Describe what to build next

Agent v Auto v [trash] [refresh] [close]

Ln 20, Col 47 Spaces: 4 UTF-8 CRLF Java