Lab - ① - 23/1/2024

Simple Lab.

* Student.java

```java
package LJE;
import java.util.Scanner;
public class Student
{
    protected String usn = new String();
    protected String name = new String();
    private int sem;
    public void inputStudentDetails()
    {
        Scanner s = new Scanner(System.in);
        System.out.print("Enter the usn of the student");
        usn = s.nextLine();
        System.out.println("Enter the name of the student");
        name = s.nextLine();
        System.out.println("Enter the semester of the student.");
        sem = s.nextInt();
    }

    public void displayStudentDetails()
    {
        System.out.print("The student's usn is " + usn);
        System.out.println("The student's name is " + name);
        System.out.println("The student's semester is " + sem);
    }
}
```

* Internals.java

```java
package CIE;
import java.util.Scanner;
public class Internals extends Student
{
    protected int marks[] = new int[5];
    public void input(int marks[])
    {
        int i;
        Scanner z = new Scanner(System.in);
        for(i=0; i<5; i++)
        {
            System.out.println("Enter the CIE marks for subject"+(i+1)));
            marks[i] = z.nextInt();
        }
    }
}
```

* Externals.java

```java
package SEE;
import CIE.Internals;
import java.util.Scanner;
public class Externals extends Internals
{
    protected int marks[] = new int[5];
    protected int finalmarks[] = new int[5];
    public void inputSEEmarks()
    {
        int i;
        Scanner z = new Scanner(System.in);
```

```java
for(i=0;i<5;i++)
{
    System.out.println("Enter the SEE marks
    for subject "+(i+1));
    marks[i]=s.nextInt();
}
}
```

~~public void~~

```java
public void calculateFinalmarks()
{
    int i;
    for(i=0;i<5;i++)
    {
        finalmarks[i]=(this.marks[i]
                    +sem.marks[i])/2;
    }
}

public void displayFinalmarks()
{
    displayStudentDetails();
    int i;
    for(i=0;i<5;i++)
    {
        System.out.println("Final marks
        of subject "+(i+1)+" is "+finalmarks[i]);
    }
}
}
```

* ~~Internal.java~~

* <u>Main.java</u>

```java
import SEE External()
class Main
{
    public static void main (String args [])
    {
        int numOfStudents = 2;
        External finalMarks [] = new External
                                [ numOfStudents];
        int i;
        for(i=0; i < numOfStudents; i++)
        {
            finalMarks [i] = new External()
            finalMarks [i] .import StudentDetails()
            System.out.printf ("Enter [i] marks
            finalMarks [i] .import [i] marks()
            System.out.printf (" Enter SEE marks"
            finalMarks [i] .import SEE marks();
        }

        System.out.printf (" Displaying data \n")
        for(i=0; i < numOfStudents; i++)
        {
            finalMarks [i] .calculate Final marks()
            finalMarks [i] .display Final marks()
        }
    }
}
```

Output:

Enter the usn of the student:
1BM22LS173
Enter the name of the student
Pravieen Ramamurthy
Enter the semester of the student:
3
Enter CIE marks
Enter the CIE marks for subject 1
49
Enter the CIE marks for subject 2
47
Enter the CIE marks for subject 3
50
Enter the CIE marks for subject 4
40
Enter the CIE marks for subject 5
42
Enter SEE marks
Enter SEE marks for subject 1
95
''   ''   '' 2
97
''   ''   '' 3
99
''   ''   ''   4
87
''   ''   ''   5
90
Enter the usn of the student:
1BM2267173
Enter the name of the student
Ganesh Subramanian

Enter the semester of the student.
3
Enter CIE marks
Enter the CIE marks for subject 1
38
"   "   "   2
47
"   "   "   3
45
"   "   "   4
42
"   "   "   5
49
Enter SEE marks
Enter the SEE marks for subject 1
79
~~Enter the~~   "))) * " 2
81
"   "   "   3
93
"   "   "   4
98
"   "   "   5
91

Displaying data.

The student's vsn is 1BM22CS173
The student's name is Pranav Ramamurthy
The student's semester is 3
Final marks of subject 1 is 96
"   "   "   2 is 95
"   "   "   3 is 99
"   "   "   4 is 83
"   "   "   5 is 87

The student's ugn is 1BM22CS173 | 1BM2267 173
The student's name is Gaurav Subramanian
The student's semester is 3
Final marks of subject 1 is 77
    ''   ''   '' 2 is 91
    ''   ''   '' 3 is 91
    ''   ''   '' 4 is 91
    ''   ''   '' 5 is 94

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