Date: Page:

Enter USN: 1BM22CS274
Enter Name: Shruti
Enter Semester: 2
Enter CIE Marks
Enter Internal Marks for Shruti
Subject 1: 36
Subject 2: 48
Subject 3: 50
Subject 4: 42
Subject 5: 55
Enter SEE Marks for Shruti
Subject 1 Marks: 80
Subject 2 Marks: 72
Subject 3 Marks: 85
Subject 4 Marks: 78
Subject 5 Marks: 90

// Display Data:
USN: 1BM22CS273
Name: Shreyash
Semester: 2
Subject 1 87
Subject 2 75
Subject 3 79
Subject 4 73
Subject 5 87
USN: 1BM22CS274
Name: Shruti
Semester: 2
Subject 1 98
Subject 2 89
Subject 3 92
Subject 4 81
Subject 5 100

23/01/24

```
for(int i=0; i< numofstudents; i++){
    finalMarks[i] = new External();
    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 USN: 1BM22CS273
Enter Name: Sheyash
Enter Semester: 2
Enter Internal Marks for Sheyash
Subject 1 Marks: 40
Subject 2 Marks: 35
Subject 3 Marks: 42
Subject 4 Marks: 38
Subject 5 Marks: 45

Enter SEE marks for Sheyash
Subject 1 Marks: 75
Subject 2 Marks: 80
Subject 3 Marks: 65
Subject 4 Marks: 70
Subject 5 Marks: 85

```
public void inputSEEMarks() {
    Scanner s = new Scanner(System.in);
    System.out.println("enter see marks
        for " + name);
    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 + superMarks
                                    (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;
public class Main {
    public static void main(String args[])
    {
        int numOfStudents = 2;
    External finalMarks[] = new Externals
                    [numOfStudents];
```

Internals.java

```
package CIE;
import java.util.Scanner;
public class Internals extends Student {
    protected int marks[] = new int[5];
    public Internals() {
        // internals constructor
    }
    public void inputCIEmarks() {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter internal marks
            for " + name);
        for(int i=0; i<5; i++) {
            System.out.println("Subject" + (i+1) +
                marks:");
            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];
    }
```

LAB 6

Bafna Gold
Date: Page:

→ Create a package CIE which has 2 classes - Student and Internals the class Student has members usn, name, sem. class Internals derived from Student has array that stores internal marks scored in five courses of current sem of student. Create another package SEE having class external derived from class of Student class has an array that stores SEE marks scored in five courses of current semester of Student.

→ A 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() {
    Scanner s = new Scanner(System.in);
    System.out.println("Enter USN:");
    usn = s.next();
    System.out.println("Enter name:");
    name = s.next();
    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);
    }
}
```

Internals.java

```
package CIE;
import java.util.Scanner;
public class Internals extends Student {
    protected int marks[] = new int[5];
    public Internals() {
        // internals constructor
    }
    public void inputCIEmarks() {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter internal marks
            for " + name);
        for(int i=0; i<5; i++) {
            System.out.println("Subject" + (i+1) +
                marks: ");
            marks[i] = s.nextInt();
        }
    }
}
```

// External.java

```
package SEE;
import CIE.Internals;
import JAVA.util.Scanner;
public class External extends Internals {
    protected int marks[];
    protected int finalMarks[];
    public External() {
        marks = new int[5];
        finalMarks = new int[5];
    }
```