

Lab program VI

Create a package CIE which has 2 classes - Student & Internals. Class Student has members like usn & name sem. Class Internals has an array that stores the internal marks scored in 5 courses of current semester of student. Create another package SEE which has class Externals which is derived class of Student. This class has an array that stores SEE marks scored in 5 courses of current semester of student. Import the 2 packages in a file & declare final marks of n students in all 5 courses.

```
package CIE;
import java.util.Scanner;
public class Student {
    String name;
    String usn;
    int sem;
    public void getd() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter student USN");
        usn = sc.nextLine();
        System.out.println("Enter student name");
        name = sc.nextLine();
        System.out.println("Enter the semester");
        sem = sc.nextInt();
    }
    public void display() {
        System.out.println();
        System.out.println("Student USN: " + usn);
        System.out.println("Student name: " + name);
        System.out.println("Semester: " + sem);
        System.out.println();
    }
}
```

```

package CIE;
package CIE;
import java.util.Scanner;

public class Internals {
    public int marksCie[] = new int[5];
    public void getmarks() {
        for (int i=0; i<5; i++) {
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter CIE marks in subject " + (i+1));
            marksCie[i] = sc.nextInt();
        }
    }

    public void int returnMarksCie (int i) {
        return marksCie[i];
    }
}

```

```

package SEE;
import CIE.Student;
import CIE.Internals;
import java.util.Scanner;

public class Externals extends Student {
    int marksSee[] = new int[5]
    public void getmarks() {
        for (int i=0; i<5; i++) {
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter SEE marks in subject " + (i+1));
            marksSee[i] = sc.nextInt();
        }
    }

    public void calcTotalMarks (Internals i1) {
        for (int i=0; i<5; i++) {

```



```

        System.out.println("Subject " + (i+1) + ": " +
            (li.getTotalMarks() + (marksSee[i]/2)));
    }
    System.out.println();
}
}

```

```

import CIE.Student;
import CIE.Internals;
import SEE.Externals;
import java.util.Scanner;

public class Main {
    public static void main (String args[]) {
        Scanner sc = new Scanner (System.in);
        System.out.println ("Enter number of students");
        int n = sc.nextInt();
        Internals [] li = new Internals [n];
        Externals [] ei = new Externals [n];
        for (int i=0; i<n; i++) {
            System.out.println ("Student " + (i+1) +
                " details:");
            ei[i] = new Externals();
            li[i] = new Internals();
            ei[i].getd();
            li[i].getmarks();
            ei[i].getmarks();
        }
        for (int i=0; i<n; i++) {
            ei[i].display();
            ei[i].calculateTotalMarks (li[i]);
        }
    }
}

```

Output:

Enter the number of students

2

Student 1 details:

Enter student USN

1BM123CS330

Enter student name

Sinchana Hemanth

Enter semester

3

Enter CIE marks in subject 1

45

Enter CIE marks in subject 2

49

Enter CIE marks in subject 3

48

Enter CIE marks in subject 4

40

Enter CIE marks in subject 5

50

Enter SEE marks in subject 1

95

Enter SEE marks in subject 2

98

Enter SEE marks in subject 3

90

Enter SEE marks in subject 4

100

Enter SEE marks in subject 5

100

Student 2 details:

Enter student USN

18M23CS317

Enter student name

Shreya Raj

Enter semester

3

Enter CIE marks in subject 1

48

Enter CIE marks in subject 2

40

Enter CIE marks in subject 3

50

Enter CIE marks in subject 4

45

Enter CIE marks in subject 5

42

Enter SEE marks in subject 1

100

Enter SEE marks in subject 2

90

Enter SEE marks in subject 3

96

Enter SEE marks in subject 4

92

Enter SEE marks in subject 5

90

Student USN: 18M23CS330

Student name: Sindhana Hemanth

Semester: 3

Subject 1: 92

Subject 2: 98

Subject 3: 93

Subject 4: 90

Subject 5: 100

Student USN: 18M123CS317

Student name: Shruya Raj

Semester: 3

Subject 1: 98

Subject 2: 85

Subject 3: 98

Subject 4: 91

Subject 5: 87

1265

19/11/24

(FOLDER 1: CIE)

(FILE 1: INTERNALS)

```
package CIE;

import java.util.Scanner;

public class Internals {

    public int marksCie[] = new int[5];

    public void getMarks() {

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

            Scanner sc = new Scanner(System.in);

            System.out.println("Enter CIE marks in subject "+(i+1));

            marksCie[i]=sc.nextInt();

        }

    }

    public int returnCieMarks(int i) {

        return marksCie[i];

    }

}
```

(FILE 2: STUDENT)

```
package CIE;

import java.util.Scanner;

public class Student {

    String usn;

    String name;

    int sem;

    public void getd() {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter student USN");

        usn = sc.nextLine();

        System.out.println("Enter student name");

        name = sc.nextLine();

        System.out.println("Enter semester");

    }

}
```

```

        sem = sc.nextInt();
    }
    public void display() {
        System.out.println();
        System.out.println("Student USN: "+usn);
        System.out.println("Student name: "+name);
        System.out.println("Semester: "+sem);
        System.out.println();
    }
}

```

(FOLDER 2: SEE)

(FILE 1: EXTERNALS)

```

package SEE;
import CIE.Student;
import CIE.Internals;
import java.util.Scanner;
public class Externals extends Student {
    int marksSee[] = new int[5];
    public void getMarks() {
        for(int i=0;i<5;i++) {
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter SEE marks in subject "+(i+1));
            marksSee[i]=sc.nextInt();
        }
    }
    public void calcTotalMarks(Internals i1) {
        for(int i=0;i<5;i++) {
            System.out.println("Subject "+(i+1)+" :
"+(i1.returnCieMarks(i)+(marksSee[i]/2)));
        }
    }
}

```



```
System.out.println();
```

```
}
```

```
}
```

(MAIN CLASS)

```
import CIE.Student;
```

```
import CIE.Internals;
```

```
import SEE.Externals;
```

```
import java.util.Scanner;
```

```
public class Main {
```

```
    public static void main(String args[]) {
```

```
        Scanner sc = new Scanner(System.in);
```

```
        System.out.println("Enter the number of students whose details you want to enter");
```

```
        int n = sc.nextInt();
```

```
        Internals[] i1 = new Internals[n];
```

```
        Externals[] e1 = new Externals[n];
```

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

```
            System.out.println("Student "+(i+1)+" details:");
```

```
            e1[i] = new Externals();
```

```
            i1[i] = new Internals();
```

```
            e1[i].getd();
```

```
            i1[i].getMarks();
```

```
            e1[i].getMarks();
```

```
        }
```

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

```
            e1[i].display();
```

```
            e1[i].calcTotalMarks(i1[i]);
```

```
        }
```

```
}
```

}

```
D:\package>java Main
Enter the number of students whose details you want to enter
2
Student 1 details:
Enter student USN
1BM23CS330
Enter student name
Sinchana Hemanth
Enter semester
3
Enter CIE marks in subject 1
45
Enter CIE marks in subject 2
49
Enter CIE marks in subject 3
45
Enter CIE marks in subject 4
40
Enter CIE marks in subject 5
50
Enter SEE marks in subject 1
95
Enter SEE marks in subject 2
98
Enter SEE marks in subject 3
90
Enter SEE marks in subject 4
100
Enter SEE marks in subject 5
100
Student 2 details:
Enter student USN
1BM23CS317
Enter student name
Shreya Raj
Enter semester
3
Enter CIE marks in subject 1
48
Enter CIE marks in subject 2
40
Enter CIE marks in subject 3
50
Enter CIE marks in subject 4
45
Enter CIE marks in subject 5
42
Enter SEE marks in subject 1
100
Enter SEE marks in subject 2
90
Enter SEE marks in subject 3
96
Enter SEE marks in subject 4
92
Enter SEE marks in subject 5
90
```

```
Student USN: 1BM23CS330
Student name: Sinchana Hemanth
Semester: 3
```

```
Subject 1: 92
Subject 2: 98
Subject 3: 93
Subject 4: 90
Subject 5: 100
```

```
Student USN: 1BM23CS317
Student name: Shreya Raj
Semester: 3
```

```
Subject 1: 98
Subject 2: 85
Subject 3: 98
Subject 4: 91
Subject 5: 87
```

```
D:\package>|
```