

Student.java

```
package CIE;

public class Student {
    public String usn;
    public String name;
    public int sem;

    public Student() {}

    public Student(String usn, String name, int s) {
        this.usn = usn;
        this.name = name;
        this.sem = s;
    }

    public void displayDetails() {
        System.out.println("USN : " + usn);
        System.out.println("Name : " + name);
        System.out.println("Sem : " + sem);
    }
}
```

Internals.java

```
package CIE;

import java.util.Scanner;

public class Internals extends Student {

    public int imarks[] = new int[5];
    Scanner sc = new Scanner(System.in);

    public void setImarks() {
        System.out.println("Enter 5 Internal Marks:");
        for (int i = 0; i < 5; i++) {
            imarks[i] = sc.nextInt();
        }
    }

    public void displayImarks() {
        System.out.println("Internal Marks:");
        for (int i = 0; i < 5; i++) {
            System.out.println("Subject " + (i + 1) + ": " + imarks[i]);
        }
    }
}
```

## Externals.java

```
package SEE;

import java.util.Scanner;

public class Externals extends CIE.Student {

    public int emarks[] = new int[5];
    Scanner sc = new Scanner(System.in);

    public void setEmarks() {
        System.out.println("Enter 5 External Marks:");
        for (int i = 0; i < 5; i++) {
            emarks[i] = sc.nextInt();
        }
    }

    public void displayEmarks() {
        System.out.println("External Marks:");
        for (int i = 0; i < 5; i++) {
            System.out.println("Subject " + (i + 1) + ": " + emarks[i]);
        }
    }
}
```

## DemoMain.java

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

public class DemoMain {
    Run main | Debug main
    public static void main(String args[]) {

        int n, sem;
        String name, usn;

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter number of students: ");
        n = sc.nextInt();

        Student stds[] = new Student[n];
        Internals i[] = new Internals[n];
        Externals e[] = new Externals[n];

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

            System.out.println("\nEnter details of Student " + (j + 1) + ":");

            sc.nextLine();

            System.out.print("Student Name: ");
            name = sc.nextLine();

            System.out.print("USN: ");
            usn = sc.nextLine();

            System.out.print("Enter Semester: ");
            sem = sc.nextInt();

            stds[j] = new Student(usn, name, sem);
        }
    }
}
```

```
i[j] = new Internals();
System.out.println("Enter Internal marks: ");
i[j].setImarks();

e[j] = new Externals();
System.out.println("Enter External marks: ");
e[j].setEmarks();
}

System.out.println("\n===== Student Details =====");
for (int j = 0; j < n; j++) {
    System.out.println("\nStudent " + (j + 1) + " details: ");
    stds[j].displayDetails();

    System.out.println("Internal Marks:");
    i[j].displayImarks();

    System.out.println("External Marks:");
    e[j].displayEmarks();

    System.out.println("Total Marks:");
    for (int k = 0; k < 5; k++) {
        System.out.println("Subject " + (k + 1) + ": " + (i[j].imarks[k] + e[j].emarks[k]));
    }
}
}
```

Output

```
Enter number of students: 2
```

```
Enter details of Student 1:
```

```
Student Name: Vasanth
```

```
USN: 1BM24CS319
```

```
Enter Semester: 2
```

```
Enter Internal marks:
```

```
Enter 5 Internal Marks:
```

```
31
```

```
32
```

```
33
```

```
34
```

```
35
```

```
Enter External marks:
```

```
Enter 5 External Marks:
```

```
35
```

```
34
```

```
33
```

```
32
```

```
31
```

```
Enter details of Student 2:
```

```
Student Name: Arjuna
```

```
USN: 1ABA1320
```

```
Enter Semester: 41
```

```
Enter Internal marks:
```

```
Enter 5 Internal Marks:
```

```
42
```

```
53
```

```
45
```

```
44
```

```
46
```

```
Enter External marks:  
Enter 5 External Marks:  
65  
45  
59  
57  
52
```

```
===== Student Details =====
```

```
Student 1 details:
```

```
USN : 1BM24CS319
```

```
Name : Vasanth
```

```
Sem : 2
```

```
Internal Marks:
```

```
Internal Marks:
```

```
Subject 1: 31
```

```
Subject 2: 32
```

```
Subject 3: 33
```

```
Subject 4: 34
```

```
Subject 5: 35
```

```
External Marks:
```

```
External Marks:
```

```
Subject 1: 35
```

```
Subject 2: 34
```

```
Subject 3: 33
```

```
Subject 4: 32
```

```
Subject 5: 31
```

```
Total Marks:
```

```
Subject 1: 66
```

```
Subject 2: 66
```

```
Subject 3: 66
```

```
Subject 4: 66
```

```
Subject 5: 66
```

**Student 2 details:**

USN : 1ABAI320

Name : Arjuna

Sem : 41

**Internal Marks:**

**Internal Marks:**

Subject 1: 42

Subject 2: 53

Subject 3: 45

Subject 4: 44

Subject 5: 46

**External Marks:**

**External Marks:**

Subject 1: 65

Subject 2: 45

Subject 3: 59

Subject 4: 57

Subject 5: 52

**Total Marks:**

Subject 1: 107

Subject 2: 98

Subject 3: 104

Subject 4: 101

Subject 5: 98