

## // 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 scanner = new Scanner(System.in);  
    System.out.println("ENTER USN : ");  
    usn = scanner.nextInt();  
    System.out.println("Enter name : ");  
    name = scanner.next();  
    System.out.println("Enter semester : ");  
    sem = scanner.nextInt();
```

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```
✓ Public void displayStudentDetails() {  
    System.out.println("USN : " + usn);  
    System.out.println("name : " + name);  
    System.out.println("Semester : " + sem);
```

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## 1) Internals.java

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

## 2) 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];  
    }  
}
```

```
Public void inputSEMarks() {  
    Scanner s = new Scanner(System.in);  
    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 + paper.marks[i];  
    }  
}
```

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

```
import SEE.External;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        int num = 2;
        External finalMarks[] = new External[num];
        for(int i=0; i< num; 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< num; i++) {
    finalMarks[i].calculateFinalMarks();
    finalMarks[i].displayFinalMarks();
}
```

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### OUTPUT:

Entn USN : 777 Entn Name : thala Entn sem : 7

Entn CIE marks :

Entn Intnl marks for "thala":

Subject 1 marks : 45

Subject 2 marks : 46

Subject 3 marks : 47

Subject 4 marks : 48

Subject 5 marks : 50

Entn SEE marks :

Subject 1 marks : 90

Subject 2 marks : 92

Subject 3 marks : 95

Subject 4 marks : 98

Subject 5 marks : 100

Entn USN: 18 Entn name : Kohli Entn sem : 8

Entn CIE marks :

Entn Intnl marks for "Kohli":

Subject 1 marks : 45

Subject 2 marks : 47

Subject 3 marks : 48

Subject 4 marks : 49

Subject 5 marks : 50

Entn SEE marks :

Subject 1 marks : 98

Subject 2 marks : 97

Subject 3 marks : 96

Subject 4 marks : 95

Subject 5 marks : 100

USN : 777 Name : thala Semester : 7

Subject 1 : 90

Subject 2 : 92

Subject 3 : 94

Subject 4 : 97

Subject 5 : 100

Subject 6

USN : 18 name : kohli semester : 8

Subject 1 : 94

Subject 2 : 95

Subject 3 : 96

Subject 4 : 96

Subject 5 : 100

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