```java
package CIE;

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

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

```java
package CIE;

public class Internals {
public int[] internalMarks = new int[5];

public Internals(int[] marks) {
for (int i = 0; i < 5; i++) {
 internalMarks[i] = marks[i];
        }
    }
}
```

```java
package SEE;
import CIE.Student;

public class External extends Student {
    public int[] seeMarks = new int[5];

    public External(String usn, String name, int sem, int[] marks) {
        super(usn, name, sem);
        for (int i = 0; i < 5; i++) {
            seeMarks[i] = marks[i];
        }
    }
}
```

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

public class Main {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);

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

for (int i = 0; i < n; i++) {
sc.nextLine();

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

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

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

int[] internalMarks = new int[5];
System.out.println("Enter 5 internal marks:");
 for (int j = 0; j < 5; j++) {
internalMarks[j] = sc.nextInt();
}
sc.nextLine();
int[] seeMarks = new int[5];
System.out.println("Enter 5 SEE marks:");
for (int j = 0; j < 5; j++) {
seeMarks[j] = sc.nextInt();
                }
sc.nextLine();

Internals internal = new Internals(internalMarks);
External external = new External(usn, name, sem, seeMarks);

 System.out.println("\nFinal Marks for Student: " + name + " (USN: " + usn + ")");
for (int j = 0; j < 5; j++) {
int finalMark = internal.internalMarks[j] + (seeMarks[j] / 2);
 System.out.println("Course " + (j + 1) + ": " + finalMark);
}
System.out.println();
}
 sc.close();
    }
}
```

```
C:\Users\Admin\Desktop\Srushti N>javac -d . CIE/Student.java CIE/Internals.java SEE/External.java Main.java

C:\Users\Admin\Desktop\Srushti N>java Main
Enter the number of students: 2
Enter USN: 2021
Enter Name: srushti
Enter Semester: 3
Enter 5 internal marks:
23
34
41
54
23
Enter 5 SEE marks:
87
98
70
90
78

Final Marks for Student: srushti (USN: 2021)
Course 1: 66
Course 2: 83
Course 3: 76
Course 4: 99
Course 5: 62

.
Enter USN: 202
Enter Name: pallavi
Enter Semester: 3
Enter 5 internal marks:
34
56
23
15
46
Enter 5 SEE marks:
89
90
78
89
90

Final Marks for Student: pallavi (USN: 202)
Course 1: 78
Course 2: 101
Course 3: 62
Course 4: 59
Course 5: 91
```

Week - 6

Create a package CIE which has two classes - Student & internals. The class personal has members like usn, name, sem. The class internals has an array that stores the internal marks scored in five courses of the current semester of the student. Create another package SEE which has the class External which is a derived class of Student. This class has an array that stores the SEE marks scored in five courses of the current semester of the student. import the two packages in a file that declares the final marks of n students in all five courses.

```java
//CIE / Student.java
package CIE;

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

    public Student (String usn, String name, int sem){
        this.usn = usn;
        this.name = nname;
        this.sem = sem;
    }
}
// CIE / internals.java
package CIE;

public class internals {
    public int[] internalMarks = new int[5];
```

```java
public internals (int [] marks){
    for (int i=0; i<5; i++){
        internalMarks[i] = marks[i];
    }
}
}

// SEE /External.java
package SEE;
import CIE.Student;

public class External extends Student{
    public int[] SeeMarks = new int[5];

    public External (String usn, String name, int sem,
            int[] marks){
        super (usn, name, sem);
        for (int i=0; i<5; i++){
            SeeMarks[i] = marks[i];
        }
    }
}

// Main.java
import CIE.*;
import SEE.External;
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: ");
int n = sc.nextInt();
for (int i =0; i<n; i++){
```

```java
        sc.nextline();
        System.out.println("Enter USN:");
        String usn = sc.nextline();
        System.out.println("Enter semester:");
        int sem = sc.nextInt();
        int[] internalMarks = new int[5];
        System.out.println("Enter 5 internal marks:");
        for(int j = 0; j<5; j++){
            internalMarks[j] = sc.nextInt();
        }

        sc.nextline();
        int[] seeMarks = new int[5];
        System.out.println("Enter 5 SEE Marks:");
        for(int j=0; j<5; j++){
            seeMarks[j] = sc.nextInt();
        }

        sc.nextline();
        Internals internal = new Internals(internalMarks);
        External external = new External(usn, name, sem, seeMarks);
        System.out.println("\n Final Marks for student: "
            + name + " (USN:" + usn + ")");
        for(int j=0; j<5; j++){
            int finalMarks = internal.internalMarks[j] +
            (seeMarks[j]/2);
            System.out.println("Course" + (j+1) + ":" +
                finalMark);
        }

        System.out.println();
        }

        sc.close();
        }
    }
```

→ cd: C:\users\Admin\Desklop\Srushti.N →path

→ javac -d. CIE/Student.java CJE/Internals.java
  SEE./External.java Main.java
  → java Main

O/P:
javac Student.java ———— ? do compile for
javac -d. Student.java ┘ all the files like this

Enter the number of students: 2
Enter usn: 2001
Enter name: Srushti
Enter semester: 3
Enter 5 internal marks:
23
34
41
54
23
Enter 5 SEE Marks:
87
98
70
90
78
Final marks for student: srushti (USN: 2001)
course 1: 66
course 2: 83
course: 76
course 4: 99
course 5: 62

Enter usn: 202
Enter name: Pallavi
Enter semester: 3
Enter 5 internal marks:
34

java
Main.java
for
like this

93
15

Enter 15 SEE marks
89
90
78
89
90

Final marks for Student : Pallavi (USN : 202)
  Course 1 : 78
  Course 2 : 101
  Course 3 :
  Course 4 : 59
  Course 5 : 91

N : 2001)