Week 9

Create a package **CIE** which has two classes- **Student** and **Internals- a subclass of Student**. The class **Student** 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 **Internals**. 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.

```
File 1
package CIE;
public class Student{
       public int USN;
       public String Name;
       public int Sem;
       public void setdata(int USN1,String Name1, int Sem1){
              USN = USN1;
              Name = Name1;
              Sem = Sem1;
       }
       public void getd(){
              System.out.println("USN is : " + USN + "\nName is : " + Name + "\nSEM : " +
Sem):
       }
}
File 2
package CIE;
```

public class internals extends Student{

```
public int [] marks = new int [5];
       public void Setd(int [] m){
               for(int i=0; i<5;i++)
                      marks[i] = m[i];
       }
       public void getda(){
               for(int i=0; i<5;i++)
                      System.out.println("Marks is : " + marks[i]);
               }
}
File 3
package SEE;
import CIE.*;
public class External extends CIE.internals{
       public int [] Emarks = new int [5];
       public void Setda(int [] m){
               for(int i=0; i<5;i++)
                      Emarks[i] = m[i];
       }
       public void getdata(){
               for(int i=0; i<5;i++)
                      System.out.println("External Marks is: " + Emarks[i]);
                      System.out.println("Final marks is: "+ (Emarks[i]/2 + super.marks[i])
)
              }
}
```

```
File 4
import java.util.Scanner;
import CIE.*;
import SEE.*;
class Lab_9{
       public static void main(String args[]){
              Scanner S = new Scanner(System.in);
              int marks[] = new int[5];
              System.out.print("\nEnter the number of students: ");
              int n = S.nextInt();
              External [] E = new External[n];
              System.out.println("Enter Student details ");
              for(int i=0; i<n; i++){
                      int usn = S.nextInt();
                      String name = S.nextLine();
                      int sem = S.nextInt();
                      System.out.println("Enter the internal marks of the student");
                      for(int j=0;j<5;j++){
                             marks[j] = S.nextInt();
                      }
                      E[i] = new External();
                      E[i].setdata(usn, name, sem);
                      E[i].setd(marks);
                      System.out.println("Enter the External marks of the student");
                      for(int k=0;k<5;k++){
                             marks[k] = S.nextInt();
```

```
}
E[i].setda(marks);
E[i].getd();
E[i].getda();
E[i].getdata();
}
```

OUTPUT

```
Enter number of students
Enter student details
1 agw 2
Enter internal marks
12 12 12 12 12
Enter external marks
12 12 12 12 12
Student details
USN:1
NAME:aqw
SEMESTER: 2
Internal marks
Subject 0: 12
Subject 1: 12
Subject 2: 12
Subject 3: 12
Subject 4: 12
External marks
Subject 0: 12
External marks
Subject 1: 12
External marks
Subject 2: 12
External marks
Subject 3: 12
External marks
Subject 4: 12
Final marks
Subject 0: 18
Subject 1: 18
Subject 2: 18
Subject 3: 18
Subject 4: 18
```

OBSERVATION

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In strange le le pulling CIRI able class Intervals Extends Student gut () mooths = new qut (5); public usid settle Gut (Ja) (for (anti=0', PCS, ?+t)[nachs[i] = a[i]; public usid get da () { for (int 1=0;965;94+) [Sylth out part en ("gov Nooder of arthreads" + marks (?)); an);

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   Package SKE'1
  Puport CIK. * )
  Oubire class Entorvals extendentanale (
      int Emorts = now Put (5); > 1
    public word soldata (intat) {
         for (Puti=0; PCS; P++) ( )
          Emoning(9) = at?); (7)0 = [7] whom
     public word goddatac) {
         for (int 1=0;965;9++) {
         Eyeta and purchla ("Externel would": "+ Enracho [7]);
File 4
   Puppert Jan. util. Scanor;
  import Clasit;
   import SKL. 4;
  class data 9 {
   public word Static word noin ( Steiny args (7))
  Samer S= new Somer (System ? n);
  System. Out. part on ("Lute mulm og Students" ");
    and u=S. nerd Just ();
    External ) to = now Esternal (1);
```

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System and Printle ( Hoter Student details: ").
 gut USN: S. next Tuto);
 rod skiny name = S. mod Line ();
  gut Ser: S. red Jut CI:
   I(9) = new Intomal();
     E(D. seld (USN, vou, Seu);
 System out. periately ("Entry external months: ");
   for (900 5=0; SCS; 9+4)
  FAX (S AM M [B] = S. MENT TUTCI;
  Sylver peurlan (" Extent Esteral nacibe: "),
    for ( rut &= 0; KLS; K++) {
        m(x) = S. red Tut ();
    E(3). Soldala (); war/ic/s/les when Landing
for (9ut 9=0; 9 cm; 9++) f
*(1) getac);
a[8].getde();
E(i) getdate();
```

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  for ( em 9 = 0; $ 65; ]++) {
     System and point ( " ad (£(3) , mode (5) + £ [3] , may
 Output
 Later number of Students
 Enter details of Student
  1 6 3
Forte External months
 15 15 15 15 15 (M) ah
Enter Putural narly
30 30 30 30, 30
USN: 1
Now 6
Som 3
goternal noutrs
15 15 15 15 15
Esternal north
             30 30
30 30 30
Total norths
30 30 30 30 30
```