

QD Create a package CIE which has 2 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 5 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 5 courses of the current sem of the student. Import the 2 packages in a file that declares the final marks of n students in all 5 courses.

ANSWER:-

```
[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 sem)
    {
        this.usn = usn;
        this.name = name;
        this.sem = sem;
    }
}
```

```
[Internals.java]
package CIE;
import java.util.Scanner;
public class Internals extends Student {
    Scanner in = new Scanner(System.in);
}
```



```

public int[] cie = new int[5];
public void get()
{
    for (int i=0; i<5; i++) {
        System.out.print("Enter CIE marks in subject "+(i+1)+" (out
of 50) of the current semester:");
        cie[i] = in.nextInt();
    }
}

```

[Externals.java]

```

package SEE;

```

```

import java.util.Scanner;

```

```

public class Externals extends CIE.Student {
    public Externals (String usn, String name, int sem)
    {

```

```

        super (usn, name, sem);
    }

```

```

    Scanner in = new Scanner (System.in);

```

```

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

```

```

    public void get()
    {

```

```

        System.out.print("\n");

```

```

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

```

```

            System.out.print("Enter the SEE marks in
subject "+(i+1)+" (out of 100) of this semester:");

```

```

            see[i] = in.nextInt();

```

```

        }
    }
}

```


[finalmarks.java]

import CIE.*;

import SEE.*;

import java.util.*;

class finalmarks {

public static void main (String args[]) {

Scanner in = new Scanner (System.in);

System.out.println ("Enter the number of students:");

int n = in.nextInt();

SEE.Externals ob1[] = new SEE.Externals[5];

CIE.Internals ob[] = new CIE.Internals[5];

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

{

System.out.println ("Enter the details of student "+ (i+1));

System.out.print ("USN:");

String usn = in.next();

System.out.print ("NAME:");

String name = in.next();

System.out.print ("SEMESTER:");

int sem = in.nextInt();

ob[i] = new CIE.Internals();

ob[i] = get();

ob1[i] = new SEE.~~see~~Externals (usn, name, sem);

ob1[i].get();

}

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

```
    System.out.println("STUDENT NUMBER " + (i + 1));
```

```
    for (int j = 0; j < 5; j++) {
```

```
        System.out.println("SUBJECT " + (j + 1) + " TOTAL MARKS:"  
            + (ob[i].cie[j] + ob[i].see[j] / 2));
```

```
    }
```

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

```
package CIE;
import java.util.Scanner;
public class Internals extends Student {
Scanner in=new Scanner(System.in);
public int[] cie=new int[5];
public void get()
{
for(int i=0;i<5;i++){
System.out.print("Enter CIE marks in subject "+(i+1)+"(out of 50) of the current semester : ");
cie[i]=in.nextInt();
}}}
```

```
package SEE;
import java.util.Scanner;
public class Externals extends CIE.Student {
public Externals(String usn,String name,int sem)
{
super(usn,name,sem);
}
Scanner in = new Scanner(System.in);
public int[] see=new int[5];
public void get()
{
System.out.print("\n");
for(int i=0;i<5;i++){
System.out.print("Enter the SEE marks in subject "+(i+1)+"(out of 100) of this semester : ");
see[i]=in.nextInt();
}
}
}
```



```
import CIE.*;
import SEE.*;
import java.util.*;
class finalmarks{
public static void main(String args[])
{
Scanner in=new Scanner(System.in);
System.out.println("Enter the number of students:");
int n=in.nextInt();
SEE.Externals ob1[]=new SEE.Externals[5];
CIE.Internals ob[]=new CIE.Internals[5];
for(int i=0;i<n;i++)
{
System.out.println("Enter the details of student number "+(i+1));
System.out.print("USN:");
String usn=in.next();
System.out.print("NAME:");
String name=in.next();
System.out.print("SEMESTER:");
int sem=in.nextInt();
ob[i]=new CIE.Internals();
ob[i].get();
ob1[i]=new SEE.Externals(usn,name,sem);
ob1[i].get();
}
for(int i=0;i<n;i++){
System.out.println("STUDENT NUMBER "+(i+1));
for(int j=0;j<5;j++){
System.out.println("SUBJECT "+(j+1)+"TOTAL MARKS:"+(ob[i].cie[j]+ob1[i].see[j]/2));
}
}
}
}
```



```
C:\Users\srish\Documents>javac finalmarks.java
```

```
C:\Users\srish\Documents>java finalmarks.java
```

```
Enter the number of students
```

```
1
```

```
Enter details of student number 01
```

```
USN:1bm19cs001
```

```
NAME:derek
```

```
SEMESTER:3
```

```
Enter cie marks(out of 50) in subject 1 : 45
```

```
Enter cie marks(out of 50) in subject 2 : 44
```

```
Enter cie marks(out of 50) in subject 3 : 46
```

```
Enter cie marks(out of 50) in subject 4 : 47
```

```
Enter cie marks(out of 50) in subject 5 : 41
```

```
Enter the see marks(out of 100) in subject 1 : 100
```

```
Enter the see marks(out of 100) in subject 2 : 99
```

```
Enter the see marks(out of 100) in subject 3 : 96
```

```
Enter the see marks(out of 100) in subject 4 : 78
```

```
Enter the see marks(out of 100) in subject 5 : 79
```

```
STUDENT NUMBER 01
```

```
SUBJECT 1:145
```

```
SUBJECT 2:143
```

```
SUBJECT 3:142
```

```
SUBJECT 4:125
```

```
SUBJECT 5:120
```