

LAB 6

Q. Create a package CIE which has two classes- Student and 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.

PROGRAM

```
package CIE;

import java.util.*;

public class Internals{
    public double cie[];

    public void get_details(){
        cie = new double[5];
        Scanner in = new Scanner(System.in);
        for(int i=0;i<5;i++)
        {
            System.out.print("CIE marks for course "+(i+1)+":");
```

```
        cie[i] = in.nextDouble();
    }
}
}
```

```
package CIE;
```

```
import java.util.*;
```

```
public class Personal{
```

```
    public String name;
```

```
    public int sem;
```

```
    public String usn;
```

```
    public void enter_details(){
```

```
        Scanner in = new Scanner(System.in);
```

```
        System.out.print("Enter Name: ");
```

```
        name = in.next();
```

```
        System.out.print("Enter the Semester: ");
```

```
        sem = in.nextInt();
```

```
        System.out.print("Enter the USN: ");
```

```
        usn = in.next();
```

```
    }
```

```
    public void display_details(){
```

```
        System.out.println("Student Details: ");
        System.out.println("Name: "+name+"\nUSN:
"+usn+"\nSem: "+sem);
    }
}
```

```
package SEE;
import CIE.*;
import java.util.*;

public class Externals extends Personal{
    public double see[];
    public void get_details(){
        see = new double[5];
        Scanner in = new Scanner(System.in);
        for(int i=0;i<5;i++){
            System.out.print("SEE Marks "+(i+1)+":");
            see[i] = in.nextDouble();
        }
    }
}
```

```
import CIE.*;
import SEE.*;
```

```
import java.util.*;
```

```
class Lab6{
```

```
    public static void main(String args[]){
```

```
        Scanner in = new Scanner(System.in);
```

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

```
        int n = in.nextInt();
```

```
        CIE.Internals I[] = new CIE.Internals[n];
```

```
        SEE.Externals E[] = new SEE.Externals[n];
```

```
        int i,j;
```

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

```
        {
```

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

```
            I[i] = new CIE.Internals();
```

```
            E[i] = new SEE.Externals();
```

```
            E[i].enter_details();
```

```
            System.out.println("CIE Marks:");
```

```
            I[i].get_details();
```

```
            System.out.println("SEE Marks:");
```

```
            E[i].get_details();
```

```
            E[i].display_details();
```

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

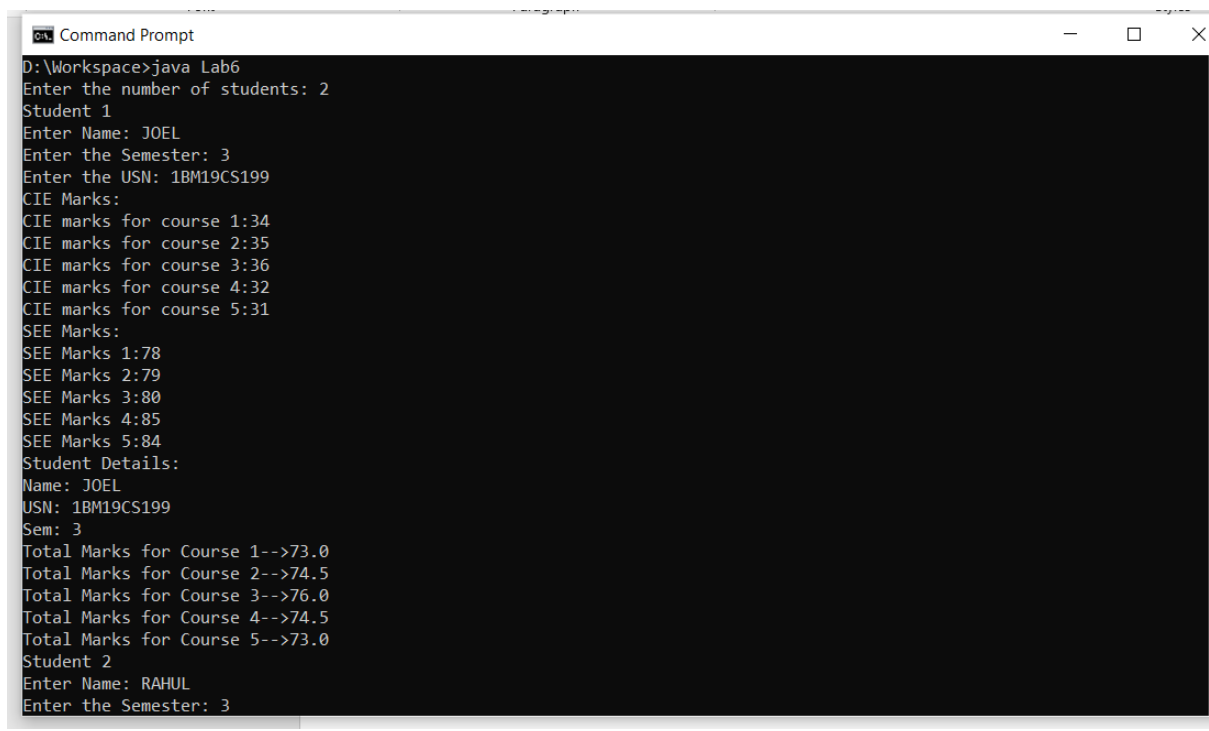
```
            {
```

```

        System.out.println("Total Marks for Course
        "+(j+1)+"-->" + (I[i].cie[j] + (E[i].see[j]/2)));
    }
}
}
}
}
}

```

OUTPUT:



```

Command Prompt
D:\Workspace>java Lab6
Enter the number of students: 2
Student 1
Enter Name: JOEL
Enter the Semester: 3
Enter the USN: 1BM19CS199
CIE Marks:
CIE marks for course 1:34
CIE marks for course 2:35
CIE marks for course 3:36
CIE marks for course 4:32
CIE marks for course 5:31
SEE Marks:
SEE Marks 1:78
SEE Marks 2:79
SEE Marks 3:80
SEE Marks 4:85
SEE Marks 5:84
Student Details:
Name: JOEL
USN: 1BM19CS199
Sem: 3
Total Marks for Course 1-->73.0
Total Marks for Course 2-->74.5
Total Marks for Course 3-->76.0
Total Marks for Course 4-->74.5
Total Marks for Course 5-->73.0
Student 2
Enter Name: RAHUL
Enter the Semester: 3

```

```
Command Prompt
Student 2
Enter Name: RAHUL
Enter the Semester: 3
Enter the USN: 1BM19CS200
CIE Marks:
CIE marks for course 1:35
CIE marks for course 2:35
CIE marks for course 3:35
CIE marks for course 4:32
CIE marks for course 5:31
SEE Marks:
SEE Marks 1:80
SEE Marks 2:80
SEE Marks 3:89
SEE Marks 4:87
SEE Marks 5:86
Student Details:
Name: RAHUL
USN: 1BM19CS200
Sem: 3
Total Marks for Course 1-->75.0
Total Marks for Course 2-->75.0
Total Marks for Course 3-->79.5
Total Marks for Course 4-->75.5
Total Marks for Course 5-->74.0

D:\Workspace>
```

-----X-----X-----X-----