

Lab Program-6

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.

```
import java.util.*;

public class Personal
{

    public String usn,name;

    public int sem;

    public void read()
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter your usn and name");
        usn=sc.nextLine();
        name=sc.nextLine();
        System.out.println("Enter your semester ");
        sem=sc.nextInt();
    }

    public void display()
    {
        System.out.println("Student details:");
        System.out.println("Name:"+name+"\nUSN:"+usn+"\nSemester:"+sem);
        System.out.println();
    }
}
```

```
package CIE;

import java.util.*;

public class Internals extends Personal
{
    public double cie[];

    public void accept()
    {
        cie=new double[5];

        int i;

        Scanner sc=new Scanner(System.in);

        for(i=0;i<5;i++)
        {
            System.out.println("Enter the cie marks for subject "+(i+1)+":");
            cie[i]=sc.nextDouble();
        }
    }
}
```

```
package SEE;

import CIE.*;

import java.util.*;

public class External extends Personal
{
    public double see[];

    public void get()
    {
        see=new double[5];

        int i;
```

```

Scanner sc=new Scanner(System.in);
for(i=0;i<5;i++)
{
    System.out.println("Enter the see marks for subject "+(i+1)+":");
    see[i]=sc.nextDouble();
}
}
}

```

```

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

```

```

class lab6
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the number of students");
        int n=sc.nextInt();
        CIE.Internals in[]=new CIE.Internals[n];
        SEE.External en[]=new SEE.External[n];
        int i,j;
        for(i=0;i<n;i++)
        {
            System.out.println("Student "+(i+1));
            in[i]=new CIE.Internals();
            en[i]=new SEE.External();
            in[i].read();

```

```

System.out.println("CIE marks:");

in[i].accept();

System.out.println("SEE marks:");

en[i].get();

System.out.println();

in[i].display();

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

    System.out.println("Final total marks for subject "+(j+1)+" : "+(in[i].cie[j] + (en[i].see[j]/2)));

    System.out.println();

}

}

}

```

OUTPUT:

```

Microsoft Windows [Version 10.0.18363.1198]
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C:\Users\Anagha>cd Documents

C:\Users\Anagha\Documents>cd JavaPrograms

C:\Users\Anagha\Documents\JavaPrograms>javac lab6.java

C:\Users\Anagha\Documents\JavaPrograms>java lab6
Enter the number of students
2
Student 1
Enter your usn and name
1bm19
anagha
Enter your semester
3
CIE marks:
Enter the cie marks for subject 1:
45
Enter the cie marks for subject 2:
40
Enter the cie marks for subject 3:
39
Enter the cie marks for subject 4:
47
Enter the cie marks for subject 5:
46
SEE marks:
Enter the see marks for subject 1:
90
Enter the see marks for subject 2:
88
Enter the see marks for subject 3:
85
Enter the see marks for subject 4:
86
Enter the see marks for subject 5:
83

```

```
Command Prompt
Enter the see marks for subject 1:
90
Enter the see marks for subject 2:
88
Enter the see marks for subject 3:
85
Enter the see marks for subject 4:
86
Enter the see marks for subject 5:
83

Student details:
Name:anagha
USN:1bm19
Semester:3

Final total marks for subject 1: 90.0
Final total marks for subject 2: 84.0
Final total marks for subject 3: 81.5
Final total marks for subject 4: 90.0
Final total marks for subject 5: 87.5

Student 2
Enter your usn and name
1bm20
aditi
Enter your semester
3
CIE marks:
Enter the cie marks for subject 1:
39
Enter the cie marks for subject 2:
40
Enter the cie marks for subject 3:
42
Enter the cie marks for subject 4:
38
Enter the cie marks for subject 5:
35
SEE marks:
Enter the see marks for subject 1:
```

```
Command Prompt
Enter the cie marks for subject 1:
39
Enter the cie marks for subject 2:
40
Enter the cie marks for subject 3:
42
Enter the cie marks for subject 4:
38
Enter the cie marks for subject 5:
35
SEE marks:
Enter the see marks for subject 1:
90
Enter the see marks for subject 2:
78
Enter the see marks for subject 3:
79
Enter the see marks for subject 4:
88
Enter the see marks for subject 5:
85

Student details:
Name:aditi
USN:1bm20
Semester:3

Final total marks for subject 1: 84.0
Final total marks for subject 2: 79.0
Final total marks for subject 3: 81.5
Final total marks for subject 4: 82.0
Final total marks for subject 5: 77.5

C:\Users\Anagha\Documents\JavaPrograms>
```