

Lab-6

- Q) Create a package CIE which has two classes - Student and Internal. The class Personal has members like `usr`, `name`, `sem`. The class Internal 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 obtained 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.

Soln:-

```
package CIE;
import java.util.Scanner;
```

```
public class Student {
    public String name;
    public String usr;
    public int sem;
    public void display ()
    {
```

```
        Scanner s2 = new Scanner (System.in);
        System.out.println ("Name: ");
        name = s2.next ();
        System.out.println ("USN: ");
        usr = s2.next ();
        System.out.println ("Semester: ");
        sem = s2.nextInt ();
    }
}
```

}

```

package CIE;
import java.util.Scanner;

public class Internals extends Student
{
    public double[] ciem;

    public void display ()
    {
        ciem = new double [5];
        Scanner s1 = new Scanner (System.in);
        System.out.println ("CIE marks for 5 subjects out
        of 50:");
        for (int i=0; i<5; i++){
            ciem [i] = s1.nextDouble();
            if (ciem[i] > 50){
                System.out.println ("please enter valid
                internal marks");
            }
        }
    }
}

```

```

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

public class Externals extends CIE.Student
{
    public double[] sam;

    public void display ()

```



```

    }

    seen = new double[5];
    Scanner s = new Scanner(System.in);
    System.out.println("SEE marks for 5 subjects  
out of 100 :");
    for (int i=0; i<5; i++) {
        seen[i] = s.nextDouble();
        if (seen[i] > 100) {
            System.out.println("Please enter valid  
External marks");
        }
    }
}
}
}

```

```

import CIE.*;
import SEE.*;
import java.util.Scanner;
public class main
{

```

```

    public static main (String args[])
    {

```

```

        int n;
        Scanner s3 = new Scanner(System.in);
        System.out.println("Enter the number of Students");
        n = s3.nextInt();
        CIE.Student[] st = new CIE.Student[n];
        CIE.Internal[] in = new CIE.Internal[n];
        SEE.External[] en = new SEE.External[n];
        for (int i=0; i<n; i++)
        {
            st[i] = new CIE.Student();

```

Date: / /

```
in[i] = new (IE, Internals());  
en[i] = new (EE, Externals());  
st[i].display();  
in[i].display();  
en[i].display();  
System.out.println("Total marks of student " +  
    st[i].name + " in 5 subjects are :");  
for (int j=0; j<5; j++)  
{  
    System.out.println(in[i].ciem[j] + (en[i].seem[j]/2));  
}  
}  
}  
}
```