

Display a .

Lab 6 : Display a package CIE which has 2 classes - students & internals. Student has name, user, sem. The class internals derived from Student has an array that stores internal marks in 5 courses of current semester. Create another package SEE which has the class External which is derived of Student. This class also has an array to store marks of 5 subjects. Import 2 packages in a file and declare final marks in all 5 subjects of n students.

Student.java

```
package cie ;  
import java.util.* ;  
public class Student {  
    protected String user = new String ( ) ;  
    protected String name = new String ( ) ;  
    protected int sem ;
```

```
    public void inputStudentDetails ( ) {  
        Scanner s = new Scanner ( System.in ) ;  
        System.out.println ( "Enter user : " ) ;  
        user = s.nextLine ( ) ;  
        System.out.println ( "Enter name : " ) ;  
        name = s.nextLine ( ) ;  
        System.out.println ( "Enter sem : " ) ;  
        sem = s.nextInt ( ) ;  
    }
```

```
    public void displayStudentDetails ( ) {  
        System.out.println ( "\n User : " + user ) ;  
        System.out.println ( "\n Name : " + name ) ;  
        System.out.println ( "\n Sem : " + sem ) ;  
    }
```

Internals.java

```
package cie;
import java.util.Scanner;
public class Internals extends Student {
    protected int marks[] = new int[5];

    public void input (IE marks()) {
        int i;
        Scanner s = new Scanner (System.in);
        for (i=0; i<5; i++) {
            System.out.println ("Enter marks in subject " + (i+1));
            marks[i] = s.nextInt();
        }
    }
}
```

Externals.java

```
package see;
import cie.*;
import java.util.Scanner;
public class Externals extends Internals {
    protected int marks[];
    protected int final marks[];

    public Externals {
        marks = new int[5];
        final marks = new int[5];
    }
}
```

```
public void input SEE marks() {
    Scanner s = new Scanner (System.in);
}
```

```

for (int i = 0; i < 5; i++) {
    System.out.println ("Enter marks for
    subject : " + (i+1));
    marks[i] = s.nextInt();
}
}

```

```

public void calculate Final Marks() {
    for (int i = 0; i < 5; i++)
        finalMarks[i] = marks[i]/2
        + super.marks[i];
}

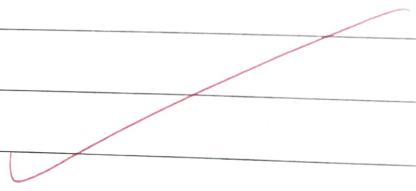
```

```

public void display Final Marks() {
    displayStudentDetails();
    for (int i = 0; i < 5; i++)
    {
        System.out.println ("Subject "
        + (i+1) + " : " + finalMarks[i]);
    }
}
}

```

}



Main.java

```
import see.Externals;  
class Main {
```

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

```
        int numOfStudents = 2;
```

```
        Externals finalMarks[] = new Externals  
            [numOfStudents];
```

```
        for (int i = 0; i < num of Students; i++) {  
            final Marks[i] = new Externals();  
            final Marks[i].input Student details();
```

```
            System.out.println ("Enter IE marks :");
```

```
            final Marks[i].input (IE marks());
```

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

```
            final Marks[i].input SEE marks();
```

```
        }
```

```
        System.out.println ("displaying data :");
```

```
        for (int i = 0; i < num of Students; i++) {
```

```
            final Marks[i].calculate Final Marks();
```

```
            final Marks[i].display Final Marks();
```

```
        }
```

```
    }
```

```
}
```

Output :

Enter usn : 136

Enter name : Sam

Enter sem : 2

Enter CIE marks :

Enter marks of subject 1 : 41

Enter marks of subject 2 : 42

Enter marks of subject 3 : 43

Enter marks of subject 4 : 44

Enter marks of subject 5 : 45

Enter SEE marks :

Enter marks of subject 1 : 91

Enter marks of subject 2 : 92

Enter marks of subject 3 : 93

Enter marks of subject 4 : 94

Enter marks of subject 5 : 95

Displaying data :

USN : 136

Name : Sam

Sem : 2

Subject 1 : 86

Subject 2 : 88

Subject 3 : 90

Subject 4 : 92

Subject 5 : 93

~~100~~
1-24
20