

23/01/24

## Lab Program 6

+ Create a package CIE which has two classes - student and internals. class student should have USN, Name, sem. The class internals derived from student has an array that stores the internal marks scored in first courses of current sem of students. Create a package SEE and import both packages.

+ student.java

```
package CIE;
```

```
import java.util.Scanner;
```

```
public class student {
```

```
    protected String USN = new String();
```

```
    protected String name = new String();
```

```
    protected int sem;
```

```
    public void inputStudentDetails () {  
        make scanner s object.
```

```
        read s.USN
```

```
        read s.name
```

```
        read s.sem
```

```
    }
```



```
public void displayStudentDetails () {
    display USN, name, sem;
}
```

+ Internals . Java

```
package CIE;
```

```
import java.util.Scanner;
```

```
public class student { extends student {
    protected int marks[] = new int[5];
    public void inputCIEmarks ()
    {
```

```
        initialize scanner object s
        apply for loop and read 5 subject marks using
        s object for (int i = 0; i < 5; i++) {
            System.out.print("Enter marks " + (i+1) + ": ");
            marks[i] = scanner.nextInt();
        }
```

+ ~~Internals . Java~~ Internals . Java

```
package SEE;
```

```
import CIE. see Internals;
```



import java.util.Scanner;

public class External extends Internal {  
protected int marks[];  
protected int finalmarks[];

public External() {  
marks = new int [5]  
finalmarks = new int [5]; }

public void input PEE marks () {  
Scanner s = new Scanner (System.in);  
for (int i=0; i<5; i++) {  
System.out.print ("Subject " + (i+1) + " marks: ");  
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 () {  
display student details();  
for (int i=0; i<5; i++)  
System.out.println ("Subject " + (i+1) + " : " + finalmarks[i]);  
}



Marks[i]);

}

}

+ Main.java.

```
import SEE.externals;
```

```
class Main {
```

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

```
    {
```

```
        int numofstudent = 2;
```

```
        externals finalMarks[] = new
```

```
        externals [num of students];
```

```
        for (int i = 0; i < numofstudents; i++)
```

```
        {
```

```
            finalMarks[i] = new externals();
```

```
            finalMarks[i].input student details();
```

```
            System.out.println("Enter CIE marks");
```

```
            finalMarks[i].input CIE marks();
```

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

```
            finalMarks[i].input SEE marks();
```

```
        }
```

```
        System.out.println("Displaying Data:\n");
```

```
        for (i = 0; i < num of students; i++)
```

```
        {
```



finalMarks[i]: calculateFinalMarks(i);  
finalMarks[i]: displayFinalMarks(i);  
}

}

}

Output :-

Enter No of students for Internals : 2

Enter details of student 1

USN: 2023BAS02599

Name: Rohit. Gandhi

Semester: 3

Enter details of student: 2

USN: 2023BAS05811

Name: Mahul Ravi

Semester: 3

Enter internal marks for 5 courses of student 1:  
80, 75, 90, 87, 90

Enter internal marks for 5 courses of student 2:  
85, 78, 92, 87, 90



Final marks of student 2,1:

student 1: 716

student 2: 722

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23.01.24