# LABPROGRAM 6 (17/11/2020)

## Q.1) */PACKAGES ; CLASS INTERNALS;EXTERNALS;FINALS MARKS*/

## A) Student.java

```
/*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.*/

package CIE;
import java.util.Scanner;

public class student6{
    Scanner sc = new Scanner(System.in);
    public String usn,name,sem;
    public void personal(){
        System.out.print("NAME :");
        name = sc.next();
         System.out.print("USN :");
         usn = sc.next();
         System.out.print("SEM :");
         sem = sc.next();
    }
}
```

# B) Internals.java

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

public class Internals{
    Scanner sc = new Scanner(System.in);
     public double[] intmarks;
     public double[] quiz;
     public double count1=0;
     public void setd1(){
         intmarks = new double[5];
         quiz = new double[5];
         for(int i=0;i<5;i++){
             System.out.print("SUBJECT "+(i+1)+" :");
             System.out.print("CIE :");
             intmarks[i] = sc.nextDouble();
             System.out.print("          QUIZ :");
             quiz[i] = sc.nextDouble();
         }
     }

    public void disp1(){
        for(int i=0;i<5;i++){
            count1 += (intmarks[i]+quiz[i]);
        }
        System.out.println("INTERNALS TOTAL :"+count1+"/250");
    }

}
```

# c) Externals.java

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

import java.util.Arrays;
import java.util.Scanner;

public class Externals extends CIE.Internals {
    public double[] see;
    public double[] total;
    public double result = 0;
    public double count2=0;
```

```java
    public double add=0;
    Scanner sc = new Scanner(System.in);

    public void setd2() {
        System.out.println("------ENTER EXTERNALS MARKS (OUT OF 100)----");
        see = new double[5];
        for (int i = 0; i < 5; i++) {
            System.out.print("SUBJECT " + (i + 1) + " :");
            see[i] = sc.nextInt();
        }
    }

    public void disp2(){
        for(int i=0;i<5;i++){
            count2 += see[i]/2;
        }
        System.out.println("EXTERNALS TOTAL :"+count2+"/250");
    }

}
```

# D) Totalmarks.java

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

import java.util.Scanner;
public class totalmarks {
    public static void main(String ss[]) {
        Scanner sc = new Scanner(System.in);
        System.out.println("ENTER NUMBER OF STUDENTS");
        int n = sc.nextInt();
        CIE.student6 s[] = new CIE.student6[n];
        CIE.Internals in[] = new CIE.Internals[n];
        SEE.Externals ex[] = new SEE.Externals[n];
        for (int i = 0; i < n; i++) {
            System.out.println("\n------STUDENT :" + (i + 1) + "-------");
            s[i] = new student6();
            s[i].personal();
            in[i] = new Internals();
            System.out.println("\nENTER INTERNAL MARKS : STUDENT :"+(i+1));
            in[i].setd1();
            ex[i] = new Externals();
            System.out.println("\nENTER EXTERNAL MARKS : STUDENT :"+(i+1));
            ex[i].setd2();
        }

        System.out.println("\n\nTOTAL MARKS OF ALL STUDENTS");
        for(int i=0;i<n;i++){
            System.out.println("\n-----------------------\nSTUDENT
:"+(i+1)+"\n-----------------------");
            in[i].disp1();
            ex[i].disp2();
```

```
          System.out.println("TOTAL :"+(in[i].count1 + ex[i].count2));
          for(int j=0;j<5;j++){
              System.out.println("SUBJECT :"+(j+1)+" "+(in[i].intmarks[j] +
ex[i].see[j]/2 + in[i].quiz[j]));
              }
          }
      }
}
```

# OUTPUT

```
TOTAL MARKS OF ALL STUDENTS


------------------------
STUDENT :1
------------------------
INTERNALS TOTAL :250.0/250
EXTERNALS TOTAL :250.0/250
TOTAL :500.0
SUBJECT :1 100.0
SUBJECT :2 100.0
SUBJECT :3 100.0
SUBJECT :4 100.0
SUBJECT :5 100.0


------------------------
STUDENT :2
------------------------
INTERNALS TOTAL :250.0/250
EXTERNALS TOTAL :250.0/250
TOTAL :500.0
SUBJECT :1 100.0
SUBJECT :2 100.0
SUBJECT :3 100.0
SUBJECT :4 100.0
SUBJECT :5 100.0
```