

Lab Assignment Day 3

1) Source Code :

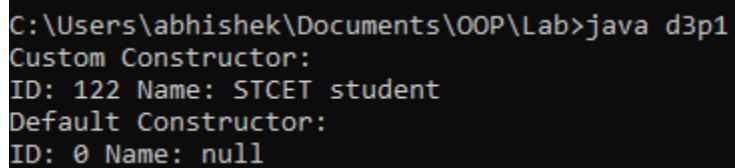
```
public class d3p1{
    public static class student{
        int ID;
        String name;

        public student(){
            ID = 122;
            name = "STCET student";
        }
    }

    public static class student_default{
        int ID;
        String name;
    }

    public static void main(String[] args){
        System.out.println("Custom Constructor: ");
        student s1 = new student();
        System.out.println("ID: " + s1.ID + " Name: " + s1.name);
        student_default s2 = new student_default();
        System.out.println("Default Constructor: ");
        System.out.println("ID: " + s2.ID + " Name: " + s2.name);
    }
}
```

Output :



```
C:\Users\abhishek\Documents\OOP\Lab>java d3p1
Custom Constructor:
ID: 122 Name: STCET student
Default Constructor:
ID: 0 Name: null
```

2) Source Code :

```
public class d3p2{
    public static class Employee{
        int EID;
        String Ename;
        String Dept;

        public Employee(int EID, String Ename, String Dept){
            this.EID = EID;
            this.Ename = Ename;
            this.Dept = Dept;
        }

        public void display(){
            System.out.println("EID: " + this.EID);
            System.out.println("Ename: " + this.Ename);
            System.out.println("Department: " + this.Dept);
            System.out.println("");
        }
    }

    public static void main(String[] args){
        Employee e1 = new Employee(122 , "Rick" , "Sales");
        Employee e2 = new Employee(143 , "John" , "IT");
        Employee e3 = new Employee(158 , "Jason" , "Accounts");
        Employee e4 = new Employee(190 , "Joseph" , "HR");
        Employee e5 = new Employee(188 , "Mike" , "IT");

        e1.display();
        e2.display();
        e3.display();
        e4.display();
        e5.display();
    }
}
```

Output :

```
C:\Users\abhishek\Documents\OOP\Lab>java d3p2
EID: 122
Ename: Rick
Department: Sales

EID: 143
Ename: John
Department: IT

EID: 158
Ename: Jason
Department: Accounts

EID: 190
Ename: Joseph
Department: HR

EID: 188
Ename: Mike
Department: IT
```

3) Source Code :

```
public class d3p3{
    public static class student{
        int ID;
        String name;

        public student(int ID, String name){
            this.ID = ID;
            this.name = name;
        }

        public void display(){
            System.out.println("ID: " + this.ID);
            System.out.println("Name: " + this.name);
        }
    }

    public static void main(String[] args){
        student arr[] = new student[5];

        arr[0] = new student(122 , "Jacob");
        arr[1] = new student(65 , "John");
        arr[2] = new student(145 , "Anna");
```

```

arr[3] = new student(134 , "Lara");
arr[4] = new student(188 , "Claudia");

for(int i=0;i<5;i++){
    System.out.println("Info of student" +(i+1)+ " : ");
    arr[i].display();
    System.out.println("");
}
}
}

```

Output :

```

C:\Users\abhishek\Documents\OOP\Lab>java d3p3
Enter Student name: Moitrish
Enter Student id: 111

Enter Student name: Lara
Enter Student id: 123

Enter Student name: Marie
Enter Student id: 678

Enter Student name: John
Enter Student id: 345

Enter Student name: Joseph
Enter Student id: 234

Student id : 111
Student name is : Moitrish

Student id : 123
Student name is : Lara

Student id : 678
Student name is : Marie

Student id : 345
Student name is : John

Student id : 234
Student name is : Joseph

```

LAB DAY 3

Questionnaires:

1) What is a constructor? Why is it called so?

Ans> Constructor - It is a method to invoke when an object of class is created. Unlike java methods, a constructor has the same name as that of the class and does not have any return type.

For e.g. - class Test{
 Test(){
 pass
 }
 }

Here, 'Test()' is a constructor.

2) What happens if a programmer does not create any constructor?

Ans> If a programmer does not create any constructor, the compiler will create a default constructor. The compiler needs default constructor to initialize the class level variables and give them space in memory with default values.

3) If we create 5 objects of a class, then how many times constructors will be called?

Ans> On every object creation, the constructor gets called. Thus, the constructor will be called for 5 times for creating the objects of a class.