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OOP Session @2

LAB 5

Q1)

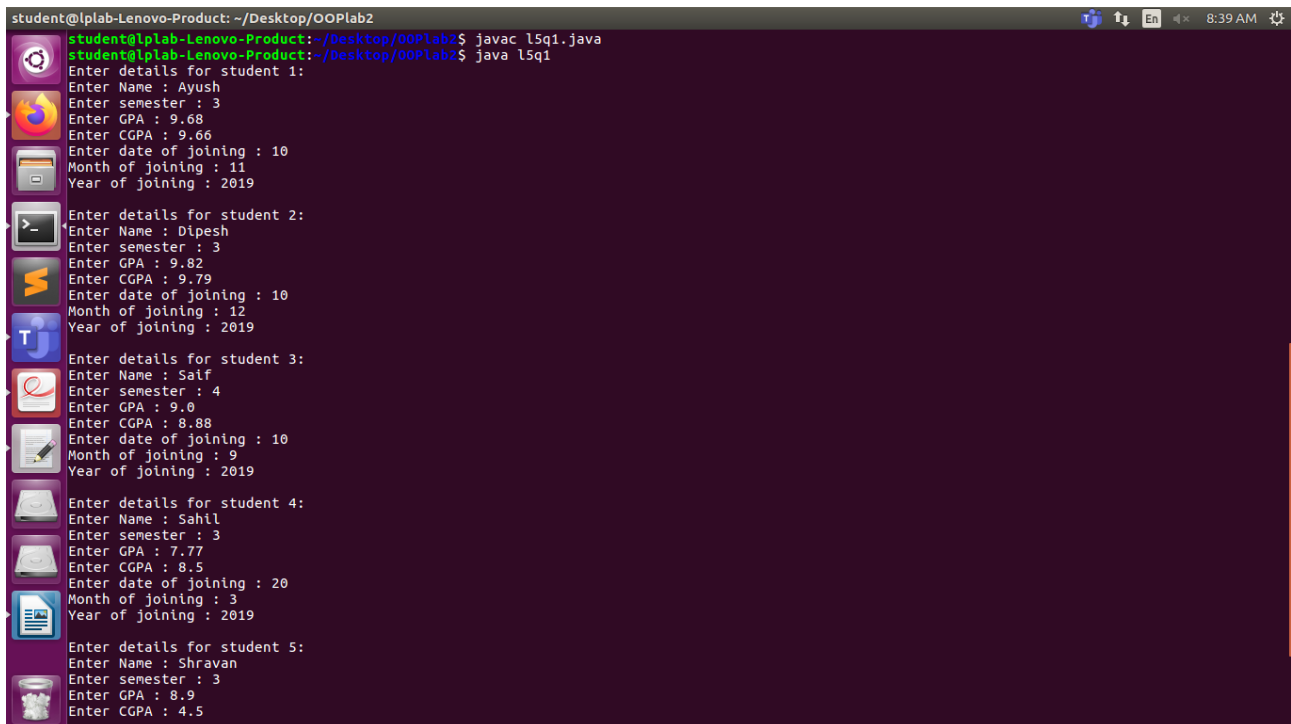
```
import java.util.*;
class Student{
    static int count = 0;
    int reg_no;
    String FullName;
    GregorianCalendar doj = new GregorianCalendar();
    short sem;
    float GPA;
    float CGPA;
    int cnt;
    Student(){
        reg_no = 0;
        FullName = "";
        sem = 0;
        GPA = 0;
        CGPA = 0;
        doj = new GregorianCalendar(2000,1,1);
        count++;
        cnt = count;
    }
    Student(int year, int month, int date,String name,short semester, float gpa, float cgpa){
        FullName = name;
        sem = semester;
        GPA = gpa;
        CGPA = cgpa;
        doj = new GregorianCalendar(year, month, date);
        count++;
        cnt = count;
        int yr = doj.get(Calendar.YEAR)%100;
        reg_no = yr*100 + cnt;
    }
    void display(){
        System.out.print("Registration number:"+reg_no+"\t");
        System.out.print("Full Name:"+FullName+"\t");
        System.out.print("Semester:"+sem+"\t");
        System.out.print("GPA:"+GPA+"\t");
        System.out.print("CGPA:"+CGPA+"\t");
        System.out.print("Date of join:"+doj.get(Calendar.DATE)
+ "/" +doj.get(Calendar.MONTH)+ "/" +doj.get(Calendar.YEAR)+"\n");
    }
}

class l5q1{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        Student stud[] = new Student[5];
        int i,regNo,date,month,year;
```

```

String Name;
short sem;
float gpa,cgpa;
for(i=0;i<5;++i){
    System.out.println("Enter details for student "+(i+1)+":");
    System.out.print("Enter Name : ");
    Name = sc.next();
    System.out.print("Enter semester : ");
    sem = sc.nextShort();
    System.out.print("Enter GPA : ");
    gpa = sc.nextFloat();
    System.out.print("Enter CGPA : ");
    cgpa = sc.nextFloat();
    System.out.print("Enter date of joining : ");
    date = sc.nextInt();
    System.out.print("Month of joining : ");
    month = sc.nextInt();
    System.out.print("Year of joining : ");
    year = sc.nextInt();
    System.out.println();
    stud[i] = new Student(year,month,date,Name,sem,gpa,cgpa);
}
for(i=0;i<5;++i){
    stud[i].display();
}
}
}

```



```

student@lplab-Lenovo-Product: ~/Desktop/OOPlab2
student@lplab-Lenovo-Product:~/Desktop/OOPlab2$ javac l5q1.java
student@lplab-Lenovo-Product:~/Desktop/OOPlab2$ java l5q1
Enter details for student 1:
Enter Name : Ayush
Enter semester : 3
Enter GPA : 9.68
Enter CGPA : 9.66
Enter date of joining : 10
Month of joining : 11
Year of joining : 2019
Enter details for student 2:
Enter Name : Dipesh
Enter semester : 3
Enter GPA : 9.82
Enter CGPA : 9.79
Enter date of joining : 10
Month of joining : 12
Year of joining : 2019
Enter details for student 3:
Enter Name : Saif
Enter semester : 4
Enter GPA : 9.0
Enter CGPA : 8.88
Enter date of joining : 10
Month of joining : 9
Year of joining : 2019
Enter details for student 4:
Enter Name : Sahil
Enter semester : 3
Enter GPA : 7.77
Enter CGPA : 8.5
Enter date of joining : 20
Month of joining : 3
Year of joining : 2019
Enter details for student 5:
Enter Name : Shravan
Enter semester : 3
Enter GPA : 8.9
Enter CGPA : 4.5

```

```

student@lplab-Lenovo-Product: ~/Desktop/OOPlab2
Enter details for student 2:
Enter Name : Dipesh
Enter semester : 3
Enter GPA : 9.82
Enter CGPA : 9.79
Enter date of joining : 10
Month of joining : 12
Year of joining : 2019

Enter details for student 3:
Enter Name : Saif
Enter semester : 4
Enter GPA : 9.0
Enter CGPA : 8.88
Enter date of joining : 10
Month of joining : 9
Year of joining : 2019

Enter details for student 4:
Enter Name : Sahil
Enter semester : 3
Enter GPA : 7.77
Enter CGPA : 8.5
Enter date of joining : 20
Month of joining : 3
Year of joining : 2019

Enter details for student 5:
Enter Name : Shravan
Enter semester : 3
Enter GPA : 8.9
Enter CGPA : 4.5
Enter date of joining : 20
Month of joining : 12
Year of joining : 2019

Registration number:1901    Full Name:Ayush Semester:3    GPA:9.68    CGPA:9.66    Date of join:10/11/2019
Registration number:2002    Full Name:Dipesh Semester:3    GPA:9.82    CGPA:9.79    Date of join:10/0/2020
Registration number:1903    Full Name:Saif Semester:4    GPA:9.0    CGPA:8.88    Date of join:10/9/2019
Registration number:1904    Full Name:Sahil Semester:3    GPA:7.77    CGPA:8.5    Date of join:20/3/2019
Registration number:2005    Full Name:Shravan Semester:3    GPA:8.9    CGPA:4.5    Date of join:20/0/2020
student@lplab-Lenovo-Product: ~/Desktop/OOPlab2$

```

LAB 7

Q5)

```
import java.util.*;
```

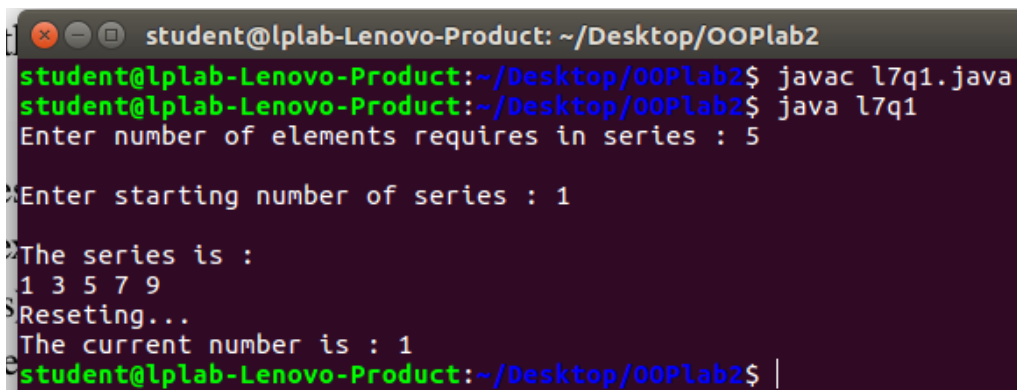
```
interface Series{
    public int getNext();
    public void reset();
    public void setStart(int a);
}
```

```
class ByTwos implements Series{
    int val;
    int start;
    ByTwos(){
        val = 0;
        start = 0;
    }
    public int getNext() {
        val+=2;
        return val;
    }
    public void reset(){
        val = start;
    }
    public void setStart(int a){
        start = a;
        val = a;
    }
}
```

```

class l7q1{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        ByTwos s = new ByTwos();
        Series var = s;
        System.out.print("Enter number of elements requires in series : ");
        int n = sc.nextInt();
        System.out.print("\nEnter starting number of series : ");
        int a = sc.nextInt();
        var.setStart(a);
        System.out.print("\nThe series is : \n" + a);
        for(int i=0;i<n-1;i++){
            System.out.print(" " + var.getNext());
        }
        System.out.println("\nReseting...");
        var.reset();
        System.out.println("The current number is : " +(var.getNext()-2));
    }
}

```



```

student@lplab-Lenovo-Product: ~/Desktop/OOPlab2
student@lplab-Lenovo-Product:~/Desktop/OOPlab2$ javac l7q1.java
student@lplab-Lenovo-Product:~/Desktop/OOPlab2$ java l7q1
Enter number of elements requires in series : 5
Enter starting number of series : 1
The series is :
1 3 5 7 9
Reseting...
The current number is : 1
student@lplab-Lenovo-Product:~/Desktop/OOPlab2$ |

```