PG DAC–March 2023
C-DAC THIRUVANANTHAPURAM
JAVA- LAB 6

1. Write a program to print the name, salary and department of 10 employees in a company using array of objects.

```java
package com.javaassignment6.pojo;
public class ArrayofObjects {

    private String name;
    private int salary;
    private String department;

public ArrayofObjects(String name,int salary, String department) {
        this.name = name;
        this.salary = salary;
        this.department = department;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public int getSalary() {
        return salary;
    }
    public void setSalary(int salary) {
        this.salary = salary;
    }
    public String getDepartment() {
        return department;
    }
    public void setDepartment(String department) {
        this.department = department;
    }
}
```

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

    Employee[ ] arr =new Employee[10];
    Scanner scanner =new Scanner(System.in);

    for (int i=0; i<arr.length; i++) {
        System.out.println("Enter employee name" +(i+1)+ ":");
        String name =scanner.next();
        System.out.println("Enter your salary" +(i+1)+ ":");
        int salary =scanner.nextInt();
        System.out.println("Enter your department" +(i+1)+ ":");
        String department =scanner.next();

        Employee emp= new Employee();
        arr[i]= emp;
    }
    System.out.println("Details of employees are:");
    for (Employee emp : arr) {
        System.out.println("Employee name: " + emp.getname());
        System.out.println("Salary: " + emp.getsalary());
        System.out.println("Department: " + emp.getdepartment());
    }
}
    private String getdepartment() {
        return getdepartment(); }
    private String getsalary() {
        return getsalary(); }
    private String getname() {
        return getname(); }
}
```

```
Employee (1) [Java Application] [pid: 15388]
Enter employee name1:
monika
Enter your salary1:
234
Enter your department1:
analyst
Enter employee name2:
arun
Enter your salary2:
234
Enter your department2:
analyst
Enter employee name3:
monika
Enter your salary3:
234
Enter your department3:
analyst
Enter employee name4:
```

Q2. Create a JAVA program to manage patients/doctors / appointments in a hospital.

Patient's data must be managed using a Patient class.
Doctor's data must be managed using a Doctor class.
Appointment data must be managed using an Appointment class.
Appointment details must include Patient's details and the visiting Doctor's details.
Using the application we must be able to book an appointment as well as display appointment details.

***Try the above question with**
i) Patient class, Doctor class and Appointment Class in same package
ii) Patient class, Doctor class and Appointment Class in three different packages

```java
package com.Hospital24.main;

import com.Hospital21.main.Patient;
import com.Hospital22.main.Docter;
import com.Hospital23.main.Appointment;

public class maindetails {

    public static void main(String[] args) {

        Patient pat = new Patient("Monika","abcdefg",8565545);
        Docter doc = new Docter ("Mr Amit","MBBS");

        Appointment apo = new Appointment(289686526,03042023,doc,pa

        apo.dis();
    }
}
```

```
<terminated> maindetails [Java Application] D:\Eclipse\eclipse\plug
name of patiant Monika
desease abcdefg
patiant mobile number8565545.0
doctor nameMr Amit
doctor qualificationMBBS
Appointment number2.89686526E8
Appointment number803859.0
```

```java
    public Patient getPat() {
        return pat;
    }

    public void dis() {
     System.out.println("name of patiant " + pat.getPatient_name());
     System.out.println("desease " + pat.getPatient_disease());
     System.out.println("patiant mobile number" + pat.getMobile_num());
     System.out.println("doctor name" + doc.getDoctor_name());
     System.out.println("doctor qualification" + doc.getDoctor_qaulification());
     System.out.println("Appointment number" + getAppointment_number());
     System.out.println("Appointment number" + getAppointment_date());

    }
}
```

```java
package com.Hospital23.main;

import com.Hospital21.main.Patient;
import com.Hospital22.main.Docter;

public class Appointment {
    private double appointment_number;
    private double appointment_date;
    private Docter doc;
    private Patient pat;

    public Appointment(double appointment_number, double appointment_date, Docter doc, Patient pat) {
        super();
        this.appointment_number = appointment_number;
        this.appointment_date = appointment_date;
        this.doc = doc;
        this.pat = pat;
    }

    public double getAppointment_number() {
        return appointment_number;
    }

    public double getAppointment_date() {
        return appointment_date;
    }

    public Docter getDoc() {
        return doc;
    }

```

```java
package com.Hospital22.main;

public class Docter {
    private String doctor_name;
    private String doctor_qaulification;

    public Docter(String doctor_name, String doctor_qaulification) {
        this.doctor_name = doctor_name;
        this.doctor_qaulification = doctor_qaulification;
    }
    public String getDoctor_name() {
        return doctor_name;
    }
    public String getDoctor_qaulification() {
        return doctor_qaulification;
    }
}
```

```java
package com.Hospital21.main;

public class Patient {

    private String patient_name;
    private String patient_disease;
    private double mobile_num;

    public Patient(String patient_name, String patient_disease, double mobile_num) {
        super();
        this.patient_name = patient_name;
        this.patient_disease = patient_disease;
        this.mobile_num = mobile_num;
    }
    public String getPatient_name() {
        return patient_name;
    }
    public String getPatient_disease() {
        return patient_disease;
    }
    public double getMobile_num() {
        return mobile_num;
    }

}
```

Q3. Create a class Num1 with one instance variable num1.

Create a class Num2 inheriting Num1 and has a member num2. Class Num2 must have a method add2() to add the members and display the result.

Create a class Num3 inheriting Num2 and has a member num3. Class Num3 must have a method add3() to add the members and display the result.

```
1  package com.inheritancedemo.main;
2
3  public class Resultmain {
4
5      public static void main(String[] args) {
6
7
8     num3 result = new num3(5,6,8);
9     result.add1();
10    result.add2();
11     }
12 }
13
```

```
<terminated> Resultmain [Java Application] D:\Eclipse\eclipse\plugir
addition of num1 and num2 : 11
addition of num1,num 2 and num3 :19
```

```
1  package com.inheritancedemo.main;
2
3  public class num3 extends num2 {
4      private int num3;
5
6      public num3(int num1, int num2, int num3) {
7          super(num1, num2);
8          this.num3 = num3;
9      }
10     public int getNum3() {
11         return num3;
12     }
13     public void add2() {
14     int add2 = getNum1()+getNum2()+num3;
15     System.out.println("addition of num1,num 2 and num3 :" +add2);
16    }
17 }
18
19
```

```java
package com.inheritancedemo.main;

public class num2 extends num1 {

    private int num2;

    public num2(int num1, int num2) {
        super(num1);
        this.num2 = num2;
    }

    public int getNum2() {
        return num2;
    }

    public void add1() {
        int add1 = getNum1()+ num2;
        System.out.println("addition of num1 and num2 : " + add1);
    }
}
```

```java
package com.inheritancedemo.main;

public class num1 {
    private int num1;

    public num1(int num1) {
        this.num1 = num1;
    }

    public int getNum1() {
        return num1;
    }
}
```