**Name: Sreelekshmi Anilkumar**

**Roll No:42**

**Batch: MCA B**

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**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: CO3-3**

**Aim**.

Create a class ‘Person’ with data members Name, Gender, Address, Age and a constructor to initialize the data members and another class ‘Employee’ that inherits the properties of class Person and also contains its own data members like Empid, Company\_name, Qualification, Salary and its own constructor. Create another class ‘Teacher’ that inherits the properties of class Employee and contains its own data members like Subject, Department, Teacherid and also contain constructors and methods to display the data members. Use array of objects to display details of N teachers.

**Procedure**

import java.util.Scanner;

class Person {

String name, gender, address;

int age;

public Person(String name, String gender, String address, int age) {

this.name = name;

this.gender = gender;

this.address = address;

this.age = age;

}

}

class Employee extends Person {

int empid;

double salary;

String company\_name, qualification;

public Employee(String name, String gender, String address, int age, int empid, String company\_name,

String qualification, double salary) {

super(name, gender, address, age);

this.empid = empid;

this.company\_name = company\_name;

this.qualification = qualification;

this.salary = salary;

}

}

class Teacher extends Employee {

int teacher\_id;

String department, subject;

public Teacher(String name, String gender, String address, int age, int empid, String company\_name,

String qualification, double salary, int teacher\_id, String department, String subject) {

super(name, gender, address, age, empid, company\_name, qualification, salary);

this.teacher\_id = teacher\_id;

this.department = department;

this.subject = subject;

}

void displayDetails(String emp) {

System.out.println("The name of the " + emp + " is: " + this.name);

System.out.println("The gender of the " + emp + " is: " + this.gender);

System.out.println("The address of the " + emp + " is: " + this.address);

System.out.println("The age of the " + emp + " is: " + this.age);

System.out.println("The employee ID of the " + emp + " is: " + this.empid);

System.out.println("The Company name of the " + emp + " is: " + this.company\_name);

System.out.println("The qualification of the " + emp + " is: " + this.qualification);

System.out.println("The salary of the " + emp + " is: " + this.salary);

System.out.println("The teacher ID of the " + emp + " is: " + this.teacher\_id);

System.out.println("The department of the " + emp + " is: " + this.department);

System.out.println("The subject of the " + emp + " is: " + this.subject);

}

}

class arrayMultiLevelInheritance {

public static void main(String[] args) {

int empnum;

Scanner sc = new Scanner(System.in);

System.out.print("Please enter the number of teacher employees you want: ");

empnum = sc.nextInt();

System.out.println("\n");

Teacher[] teachers\_arr = new Teacher[empnum];

for (int i = 0; i < empnum; i++) {

String name, gender, address, company\_name, qualification, department, subject;

int age, empid, teacher\_id;

double salary;

System.out.print("Enter the name of the " + (i + 1) + " teacher : ");

name = sc.next();

System.out.print("Enter the gender of the " + (i + 1) + " teacher : ");

gender = sc.next();

System.out.print("Enter the address of the " + (i + 1) + " teacher : ");

address = sc.next();

System.out.print("Enter the age of the " + (i + 1) + " teacher : ");

age = sc.nextInt();

System.out.print("Enter the emp ID of the " + (i + 1) + " teacher : ");

empid = sc.nextInt();

System.out.print("Enter the company name of the " + (i + 1) + " teacher : ");

company\_name = sc.next();

System.out.print("Enter the qualification of the " + (i + 1) + " teacher : ");

qualification = sc.next();

System.out.print("Enter the salary of the " + (i + 1) + " teacher : ");

salary = sc.nextDouble();

System.out.print("Enter the teacher ID of the " + (i + 1) + " teacher : ");

teacher\_id = sc.nextInt();

System.out.print("Enter the department of the " + (i + 1) + " teacher : ");

department = sc.next();

System.out.print("Enter the subject of the " + (i + 1) + " teacher : ");

subject = sc.next();

teachers\_arr[i] = new Teacher(name, gender, address, age, empid, company\_name,

qualification, salary, teacher\_id, department, subject);

System.out.println("\n");

}

for (int i = 0; i < teachers\_arr.length; i++) {

String txt = (i == 0) ? (i + 1) + "st"

: ((i == 1) ? (i + 1) + "nd" : ((i == 2) ? (i + 1) + "rd" : (i + 1) + "th"));

teachers\_arr[i].displayDetails(txt);

System.out.println("\n");

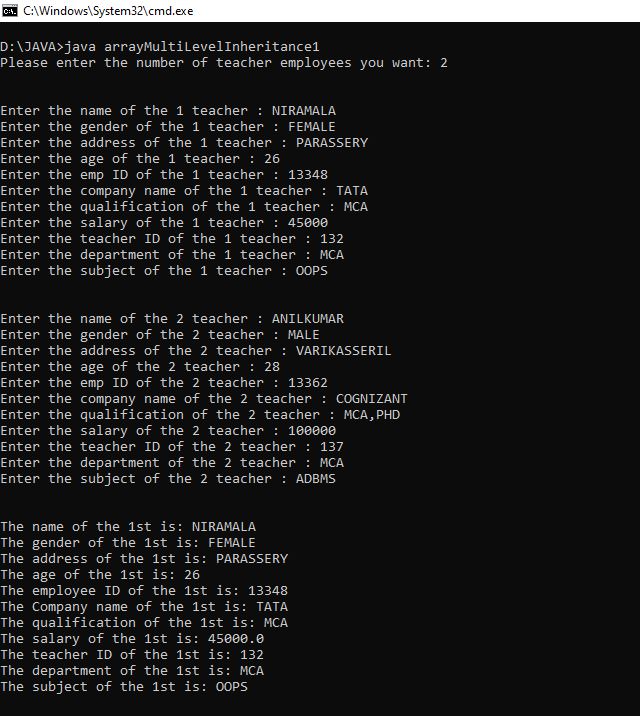
}

sc.close();

}

}

**Output Screenshot**

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