

**OBJECT ORIENTED PROGRAMMING LAB****Experiment No.: 9****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.

**Program**

```
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;
```

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```
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

```
D:\>javac arrayMultiLevelInheritance.java
D:\>java arrayMultiLevelInheritance
Please enter the number of teacher employees you want: 2

Enter the name of the 1 teacher : arun
Enter the gender of the 1 teacher : male
Enter the address of the 1 teacher : kottayam
Enter the age of the 1 teacher : 25
Enter the emp ID of the 1 teacher : 123
Enter the company name of the 1 teacher : donzcomp
Enter the qualification of the 1 teacher : graduation
Enter the salary of the 1 teacher : 25000
Enter the teacher ID of the 1 teacher : 234
Enter the department of the 1 teacher : metallurgy
Enter the subject of the 1 teacher : mining

Enter the name of the 2 teacher : greeshma
Enter the gender of the 2 teacher : female
Enter the address of the 2 teacher : kollam
Enter the age of the 2 teacher : 24
Enter the emp ID of the 2 teacher : 564
Enter the company name of the 2 teacher : hulkcomp
Enter the qualification of the 2 teacher : graduation
Enter the salary of the 2 teacher : 23000
Enter the teacher ID of the 2 teacher : 125
Enter the department of the 2 teacher : maths
Enter the subject of the 2 teacher : maths

The name of the 1st is: arun
The gender of the 1st is: male
The address of the 1st is: kottayam
The age of the 1st is: 25
The employee ID of the 1st is: 123
The Company name of the 1st is: donzcomp
The qualification of the 1st is: graduation
The salary of the 1st is: 25000.0
The teacher ID of the 1st is: 234
The department of the 1st is: metallurgy
```

```
C:\Windows\System32\cmd.exe
Enter the company name of the 1 teacher : donzcomp
Enter the qualification of the 1 teacher : graduation
Enter the salary of the 1 teacher : 25000
Enter the teacher ID of the 1 teacher : 234
Enter the department of the 1 teacher : metallurgy
Enter the subject of the 1 teacher : mining

Enter the name of the 2 teacher : greeshma
Enter the gender of the 2 teacher : female
Enter the address of the 2 teacher : kollam
Enter the age of the 2 teacher : 24
Enter the emp ID of the 2 teacher : 564
Enter the company name of the 2 teacher : hulkcomp
Enter the qualification of the 2 teacher : graduation
Enter the salary of the 2 teacher : 23000
Enter the teacher ID of the 2 teacher : 125
Enter the department of the 2 teacher : maths
Enter the subject of the 2 teacher : maths

The name of the 1st is: arun
The gender of the 1st is: male
The address of the 1st is: kottayam
The age of the 1st is: 25
The employee ID of the 1st is: 123
The Company name of the 1st is: donzcomp
The qualification of the 1st is: graduation
The salary of the 1st is: 25000.0
The teacher ID of the 1st is: 234
The department of the 1st is: metallurgy
The subject of the 1st is: mining

The name of the 2nd is: greeshma
The gender of the 2nd is: female
The address of the 2nd is: kollam
The age of the 2nd is: 24
The employee ID of the 2nd is: 564
The Company name of the 2nd is: hulkcomp
The qualification of the 2nd is: graduation
The salary of the 2nd is: 23000.0
The teacher ID of the 2nd is: 125
The department of the 2nd is: maths
The subject of the 2nd is: maths

D:\>
```