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EXPERIMENT NO: 3

Inheritance.

Aim

Write a java program which creates a class named 'Employee' having the following members: Name, Age, Phone number, Address, Salary. It also has a member metaod named 'printSalary()' which prints the salary of the 'Emplogee' class. The 'Officer' and 'Manager' classes have data members 'specialisation' and 'department' respectively. Now assign name, age, phonenumber, address and salary to an officer and a manager by making an object of both of these classes and print the same.

Input

Details of the employee

Expected Output

Display the entered details of employee with calculated salary and specialisation or department

Algorithm.

Class Employee

1. Declare field names name, age, phone, address and salary
2. Declare field names for calculating salary hra, ta, da, pt, ppf, ins, gross, net sal

3. Declare enter function for inputting employee details from user
4. Declare display method for displaying employee details on the screen.
5. Declare psint-salary() method to calculate and display salary of employee as given below
   - 5.1 set hra ← 0.75 * salary
   - 5.2 set da ← 0.02 * salary
   - 5.3 set ta ← 0.03 * salary
   - 5.4 set pt ← 0.2 * salary
   - 5.5 set ppf ← 0.1 * salary
   - 5.6 set gross = salary + da + ta + hra
   - 5.7 set netsal = (gross - ins - ppf - pt)
6. Define constructor for class employee()

class officer extends employee.
1. Declare field specialisation.
2. Define constructor for class officer
   - 2.1 use super() to invoke constructor of employee class.
3. Declare method psint-spcl() to psint specialisation.

Class Manager extends employee.
1. Declare field department
2. Declare method psint-dpt() to psint department
3. Define constructor for class manger
   - 3.1 use super to invoke constructor of employee class.

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Main function.

1. Declare an object M1 for Manager
2. M1. enter
3. M1. display
4. M1. paint Salary ()
5. M1. paint-dpt ()
6. Declare an array of object O for Officer
7. Input no: of officers n
8. for i = 0 till i<n
   8.1 O[i]. enter.
9. Endfor
10. for i = 0 till i<n.
    10.1 O[i]. display
    10.2 O[i]. paint_sal
    10.3 O[i]. paint-dpt.
11. Endfor

Stop.

Result-

Result is obtained.

Output

Enter no: of managers = 2.
Enter Manager Details
Enter Name : Devika
Enter Age : 36
Phone : 1 2 3 4 5 6
Enter salary : 15260

Enter Manager Details
Enter name : Govind
Enter Age : 47
Enter Phone : 179267
Enter address : Tvpm
Enter salary : 19270

Enter no: of officers : 1

Enter officer Details
Enter Name : Ajay
Enter Age : 37
Enter Phone no: 9895496721
Enter Address : Alapuzha.
Enter salary : 17690

Managers Details are.
Name : Devika
Age : 36
Address : Kottayam
Phone : 123456
Managers Department : Artificial Intelligence
Salary : 13279.85

Name : Govind
Age : 47
Address : Tvpm
Phone. : 1792971
Manager Department : Data Structures
Salary : 19827

Officer details are.

Name : Ajay
Age : 37
Address : Alapuzha.
Phone : 9187296351
Officer Specialisation. : Computer Science.
Salary : 178920

```
import java.util.*;
 class Employee
{
   String Name;
   int age;
   long ph;
   String add;
    int salary;


public Employee(String Name,int age,long ph,String add,int salary)
{
 this.Name= Name;
 this.age= age;
 this.ph= ph;
 this.add= add;
 this.salary= salary;
 }

 public Employee()
 {
```

```
Name = "xxxx";
age= 00;
ph= 0000000;
add= "xxxx";
salary= 000000;
}


void enter()
 {
   Scanner sc = new Scanner(System.in);

   System.out.println("Enter Name : ");
   Name= sc.nextLine();
   System.out.println("Enter Age : ");
   age= sc.nextInt();
   System.out.println("Enter Phone no : ");
   ph= sc.nextInt();
     sc.nextLine();
   System.out.println("Enter Address : ");
   add= sc.nextLine();
   System.out.println("Enter Salary : ");
   salary= sc.nextInt();
 }

 void display()
 {
   System.out.println("Name : "+Name);
   System.out.println("Age : "+age);
   System.out.println("Phone no : "+ph);


   System.out.println("Address : "+add);

 }
void print_salary()
{

System.out.println("Salary:"+salary);

  }

}


class officer extends Employee
{
String specialisation;
public officer(String Name,int age,long ph,String add,int salary)
{
super(Name,age,ph,add,salary);
this.specialisation= specialisation;
}
public officer ()
{
super();
specialisation="Mechanical";
}

 void print_spl()
  {

    System.out.println("Officer Specialsation:"+specialisation);

  }
}
 class Manager extends Employee
{
 String department;

public Manager(String Name,int age,long ph,String add,int salary)
{
super(Name,age,ph, add,salary);
this.department= department;
```

```
}
 public Manager ()

{
super();
department="Artificial Intelligence";
}

 void print_dpt()
 {

  System.out.println("Manager Department:"+department);


 }


}

public class employee{
 public static void main(String[]args)
{
  officer O1 = new officer();
  Employee E2 = new Employee();
  Manager M1 = new Manager();
  Manager M2 = new Manager();


    System.out.println("Enter Manager details:");

M1.enter();


    M1.display();
    M1.print_salary();
    M1.print_dpt();

    System.out.println("Enter Officer details:");
     O1.enter();
     O1.display();
     O1.print_salary();
     O1.print_spl();


 }
}
```