Assignment No-5

Aim: - Design and develop inheritance for a given case study and identify objects and relationships in it. Employee class with Emp_name, Emp_id, Address, Mail_id, and Mobile_no as data members. Inherit the classes, Programmer, Assistant Professor, Associate Professor and Professor from employee class. Add Basic Pay (BP) as the member of all the inherited classes with 97% of BP, DA 10 % of BP, HRA is12% of BP, and PF is 0.1% of BP for staff club fund. Generate pay slips for the employees with their gross and net salary

Program: -

```java
import java.util.*;
class Employee
{
  int empid;
  long mobile;
  String name, address, mailid;
  Scanner get = new Scanner (System.in);
  void getdata ()
  {
    System.out.println ("Enter Name of the Employee");
    name = get.nextLine ();
    System.out.println ("Enter Mail id");
    mailid = get.nextLine ();
    System.out.println ("Enter Address of the Employee:");
    address = get.nextLine ();
    System.out.println ("Enter employee id ");
    empid = get.nextInt ();
    System.out.println ("Enter Mobile Number");
    mobile = get.nextLong ();
  }
  void display ()
  {
    System.out.println ("Employee Name: " + name);
    System.out.println ("Employee id : " + empid);
    System.out.println ("Mail id : " + mailid);
```

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```java
    System.out.println ("Address: " + address);
    System.out.println ("Mobile Number: " + mobile);
  }
}

class Programmer extends Employee
{
  double salary, bp, da, hra, pf, net, gross;
  void getprogrammer ()
  {
    System.out.println ("Enter basic pay");
    bp = get.nextDouble ();
  }
  void calculateprog ()
  {
    da = (0.10 * bp);
    hra = (0.12 * bp);
    pf = (0.001 * bp);
    gross = (bp + da + hra);
    net = (gross - pf);
    System.out.println ("********************************************");
    System.out.println ("PAY SLIP FOR PROGRAMMER");
    System.out.println ("********************************************");
    System.out.println ("Basic Pay: Rs. " + bp);
    System.out.println ("DA: Rs. " + da);
    System.out.println ("HRA: Rs. " + hra);
    System.out.println ("PF: Rs. " + pf);
    System.out.println ("GROSS PAY: Rs. " + gross);
    System.out.println ("NET PAY: Rs. " + net);
  }
}

class Asstprofessor extends Employee
{
  double salary, bp, da, hra, pf, net, gross;
  void getasst ()
  {
```

```java
    System.out.println ("Enter basic pay");
    bp = get.nextDouble ();
  }
  void calculateasst ()
  {
    da = (0.10 * bp);
    hra = (0.12 * bp);
    pf = (0.001 * bp);
    gross = (bp + da + hra);
    net = (gross - pf);
    System.out.println ("**********************************");
    System.out.println ("PAY SLIP FOR ASSISTANT PROFESSOR");
    System.out.println ("**********************************");
    System.out.println ("Basic Pay: Rs. " + bp);
    System.out.println ("DA: Rs. " + da);
    System.out.println ("HRA: Rs. " + hra);
    System.out.println ("PF: Rs. " + pf);
    System.out.println ("GROSS PAY: Rs. " + gross);
    System.out.println ("NET PAY: Rs. " + net);
  }
}

class Associateprofessor extends Employee
{
  double salary, bp, da, hra, pf, net, gross;
  void getassociate ()
  {
    System.out.println ("Enter basic pay");
    bp = get.nextDouble ();
  }
  void calculateassociate ()
  {
    da = (0.10 * bp);
    hra = (0.12 * bp);
    pf = (0.001 * bp);
    gross = (bp + da + hra);
    net = (gross - pf);
```

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```java
    System.out.println ("*********************************");
    System.out.println ("PAY SLIP FOR ASSOCIATE PROFESSOR");
    System.out.println ("*********************************");
    System.out.println ("Basic Pay: Rs. " + bp);
    System.out.println ("DA: Rs. " + da);
    System.out.println ("HRA: Rs. " + hra);
    System.out.println ("PF: Rs. " + pf);
    System.out.println ("GROSS PAY: Rs. " + gross);
    System.out.println ("NET PAY: Rs. " + net);
  }
}

class Professor extends Employee
{
  double salary, bp, da, hra, pf, net, gross;
  void getprofessor ()
  {
    System.out.println ("Enter basic pay");
    bp = get.nextDouble ();
  }
  void calculateprofessor ()
  {
    da = (0.10 * bp);
    hra = (0.12 * bp);
    pf = (0.001 * bp);
    gross = (bp + da + hra);
    net = (gross - pf);
    System.out.println ("***********************");
    System.out.println ("PAY SLIP FOR PROFESSOR");
    System.out.println ("***********************");
    System.out.println ("Basic Pay: Rs. " + bp);
    System.out.println ("DA: Rs. " + da);
    System.out.println ("HRA: Rs. " + hra);
    System.out.println ("PF: Rs. " + pf);
    System.out.println ("GROSS PAY: Rs. " + gross);
    System.out.println ("NET PAY: Rs. " + net);
  }
```

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```java
}

public class Main
{
  public static void main(String args[])
{
int choice,cont;
do
{
System.out.println("PAYROLL");
System.out.println(" 1.PROGRAMMER \t 2.ASSISTANT PROFESSOR \t
3.ASSOCIATE PROFESSOR \t 4.PROFESSOR ");
Scanner c = new Scanner(System.in);
System.out.println("Enter your choice:");
choice=c.nextInt();
switch(choice)
{
case 1:
{
Programmer p=new Programmer();
p.getdata();
p.getprogrammer();
p.display();
p.calculateprog();
break;
}
case 2:
{
Asstprofessor asst=new Asstprofessor();
asst.getdata();
asst.getasst();
asst.display();
asst.calculateasst();
break;
}
case 3:
```

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```java
{
Associateprofessor asso=new Associateprofessor();
asso.getdata();
asso.getassociate();
asso.display();
asso.calculateassociate();
break;
}
case 4:
{
Professor prof=new Professor();
prof.getdata();
prof.getprofessor();
prof.display();
prof.calculateprofessor();
break;
}
}
System.out.print("Please enter 0 to quit and 1 to continue: ");
cont=c.nextInt();
 }while(cont==1);
}
}
```

OUTPUT: -

```
Output                                                    Clear

java -cp /tmp/5rCbBYq40a HelloWorld
PAYROLL
1.PROGRAMMER     2.ASSISTANT PROFESSOR   3.ASSOCIATE PROFESSOR   4.PROFESSOR
Enter your choice:
1
Enter Name of the Employee
Narayan Surve
Enter Mail id
Narak@gmail.com
Enter Address of the Employee:
Ganesh Talav Building Pune
Enter employee id
1289
Enter Mobile Number
667776689
Enter basic pay12000
Employee Name: Narayan Surve
Employee id : 1289
Mail id : Narak@gmail.com
Address: Ganesh Talav Building Pune
Mobile Number: 667776689
*******************************************
PAY SLIP FOR PROGRAMMER
*******************************************
Basic Pay: Rs. 12000.0
DA  D   1200 0
```

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```
Basic Pay: Rs. 12000.0
DA: Rs. 1200.0
HRA: Rs. 1440.0
PF: Rs. 12.0
GROSS PAY: Rs. 14640.0
NET PAY: Rs. 14628.0
Please enter 0 to quit and 1 to continue: 1
PAYROLL
1.PROGRAMMER    2.ASSISTANT PROFESSOR   3.ASSOCIATE PROFESSOR   4.PROFESSOR
Enter your choice:
3
Enter Name of the Employee
Yash Ranavde
Enter Mail id
Yas22@gmail.com
Enter Address of the Employee:
Umarnath road cctv building Alibag
Enter employee id
5671
Enter Mobile Number
5556667870
Enter basic pay
52000
Employee Name: Yash Ranavde
Employee id : 5671
```

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Employee id : 5671
Mail id : Yas22@gmail.com
Address: Umarnath road cctv building Alibag
Mobile Number: 5556667870
****
PAY SLIP FOR ASSOCIATE PROFESSOR
****
Basic Pay: Rs. 52000.0
DA: Rs. 5200.0
HRA: Rs. 6240.0
PF: Rs. 52.0
GROSS PAY: Rs. 63440.0
NET PAY: Rs. 63388.0
Please enter 0 to quit and 1 to continue: 1
PAYROLL
 1.PROGRAMMER   2.ASSISTANT PROFESSOR   3.ASSOCIATE PROFESSOR   4.PROFESSOR
Enter your choice:
4
Enter Name of the Employee
Ajit Dval
Enter Mail id
Aj12@gmail.com
Enter Address of the Employee:
yad road firewall building Pune
Enter employee id

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```
4
Enter Name of the Employee
Ajit Dval
Enter Mail id
Aj12@gmail.com
Enter Address of the Employee:
yad road firewall building Pune
Enter employee id
7865
Enter Mobile Number
234567891
Enter basic pay23000
Employee Name: Ajit DvalEmployee id : 7865
Mail id : Aj12@gmail.com
Address: yad road firewall building Pune
Mobile Number: 234567891
***********************
PAY SLIP FOR PROFESSOR
***********************
Basic Pay: Rs. 23000.0
DA: Rs. 2300.0
HRA: Rs. 2760.0
PF: Rs. 23.0
GROSS PAY: Rs. 28060.0
NET PAY: Rs. 28037.0Please enter 0 to quit and 1 to continue: 0
```

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