Ex.No: 03	
Date: 23.07.19	**PAYSLIP GENERATION**

Aim:

To develop a Java console application to generate payslips for the employees with their gross and net salary by the inheritance of classes.

Requirement:

Create a package payroll. Develop a java application with Employee class with emp_name,emp_id, address, mail_id,mobile_no as members.
Inherit the classes, Programmer,Assistant Professor, Associate Professor and Professor from Employee class.
Add basicPay (BP) as the member of all the inherited classes with 97% of BP as DA,10 % of BP as HRA, 12% of BP as PF, 0.1% of BP for staff club fund.
Generate pay slips for the employees with their gross and net salary.

Algorithm:

STEP 1: Declare a Package payroll.
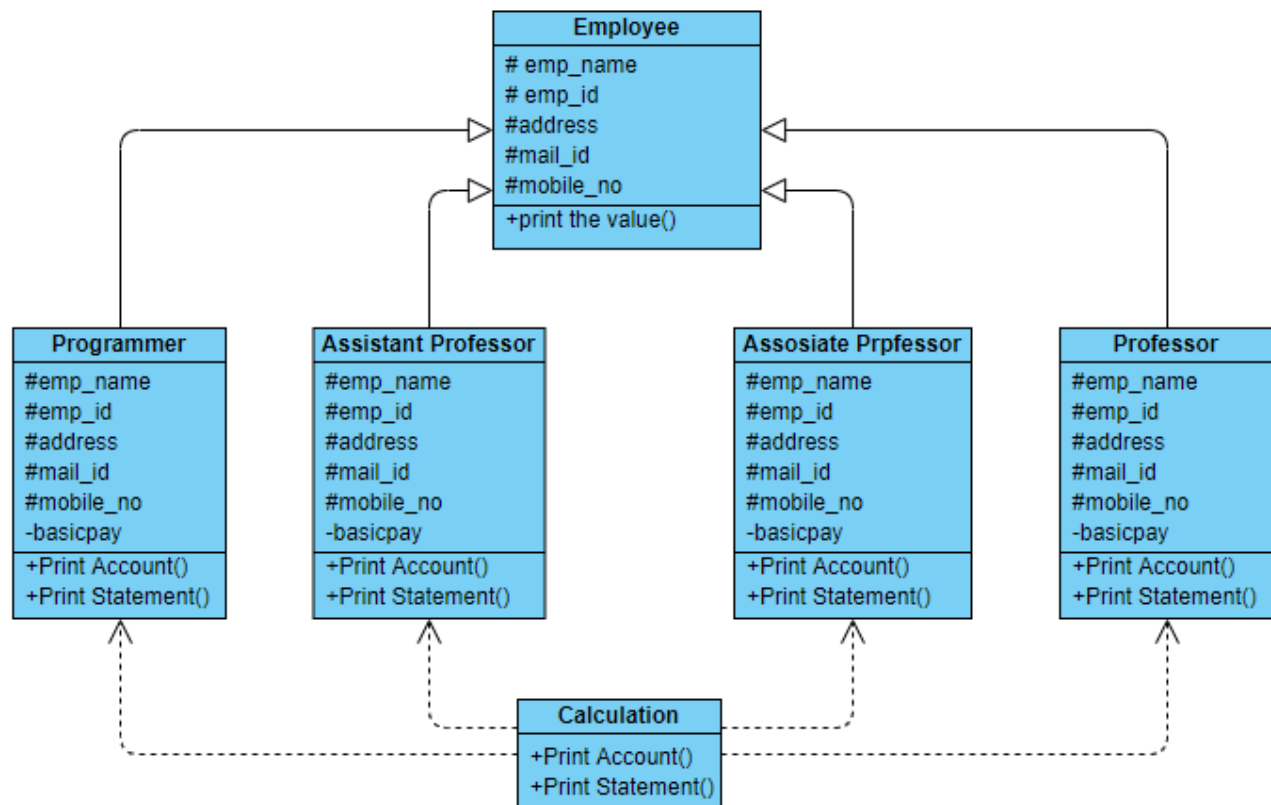**STEP 2:** Declare a classname as employee.
STEP 3: Declare a constructor and the data members.
STEP 4: Inherit the classes from the super class and add the data members as BasicPay.
STEP 5: Calculate the gross salary and net salary based on the inheritance
STEP 6: Display the result.

Class Diagram:

Program:

Employee.java

```
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

package payroll;

public class Employee {

        protected String employee_name;
        protected long employee_id;
        protected String address;
        protected long mobile_no;
        protected String mail_id;

        public Employee()
        {
                employee_name="no name";
                employee_id=5001;
                address="not given";
```

```java
                mail_id="not given";
                mobile_no=2122;

        }

        public Employee(String n,long id,String add,String mail,long num)
        {
                employee_name=n;
                employee_id=id;
                address=add;
                mail_id=mail;
                mobile_no=num;
        }

        public void printAccount()

        {
                System.out.println("Name:"+employee_name);
                System.out.println("Account Id:"+employee_id);
                System.out.println("Address:"+address);
                System.out.println("Email:"+mail_id);
                System.out.println("Mobile:"+mobile_no);
        }
}
```

Programer.java

```java
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

package payroll;

    public class Programer extends Employee {
    private double basicpay;
    public Programer()
    {
       basicpay=0;
     }
    public Programer(String n,long id,String add,String mail,long num,double BP)
    {
       super(n,id,add,mail,num);
       basicpay=BP;
    }
    public void printAccount()
    {
       super.printAccount();
       System.out.println("Basic pay:"+basicpay);
```

```java
            System.out.println("\n");
        }
        public void printStatement()
        {
            double total;
            double total1;
            double total2;
            double total3;
            double gross;
            double net;
            printAccount();
            total=basicpay*0.97;
            total1=basicpay*0.1;
            total2=basicpay*0.12;
            total3=basicpay*0.001;
            gross=total+total1+total2+total3;
            net=gross-total2-total3;
            System.out.printf("duty allowance(DA):%.2f\n",total);
            System.out.printf("HRA:%.2f\n",total1);
            System.out.printf("PF:%2f\n",total2);
            System.out.printf("staff club fund:%.2f\n",total3);
            System.out.printf("gross salary is:%.2f\n",gross);
            System.out.printf("net salary is:%.2f\n",net);
        }

}
```

AssistantProfessor.java

```java
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

  package payroll;

        public class AssistantProfessor extends Employee {
        private double basicpay;

        public AssistantProfessor()
        {
            basicpay=0;
        }

        public AssistantProfessor(String n,long id,String add,String mail,long num,double BP)
        {
                super(n,id,add,mail,num);
                basicpay=BP;
        }
```

```java
        public void printAccount()
        {
                super.printAccount();
                System.out.println("Basic pay:"+basicpay);
        }

        public void printStatement()
        {
                double total;
                double total1;
                double total2;
                double total3;
                double gross;
                double net;
                printAccount();
                total=basicpay*0.97;
                total1=basicpay*0.1;
                total2=basicpay*0.12;
                total3=basicpay*0.001;
                gross=total+total1+total2+total3;
                net=gross-total2-total3;
                System.out.printf("duty allowance(DA):%.2f\n",total);
                System.out.printf("HRA:%.2f\n",total1);
                System.out.printf("PF:%2f\n",total2);
                System.out.printf("staff club fund:%.2f\n",total3);
                System.out.printf("gross salary is:%.2f\n",gross);
                System.out.printf("net salary is:%.2f\n",net);
                System.out.println("\n");
        }

}
```

AssociateProfessor.java

```java
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

package payroll;

   public class AssociateProfessor extends Employee {
   private double basicpay;

   public AssociateProfessor()
   {
     basicpay=0;
   }
   public AssociateProfessor(String n,long id,String add,String mail,long num,double BP)
```

```java
    {
        super(n,id,add,mail,num);
        basicpay=BP;
    }
    public void printAccount()
        {
            super.printAccount();
            System.out.println("Basic pay:"+basicpay);
        }
    public void printStatement()
        {
            double total;
            double total1;
            double total2;
            double total3;
            double gross;
            double net;
            printAccount();
            total=basicpay*0.97;
            total1=basicpay*0.1;
            total2=basicpay*0.12;
            total3=basicpay*0.001;
            gross=total+total1+total2+total3;
            net=gross-total2-total3;
            System.out.printf("duty allowance(DA):%.2f\n",total);
            System.out.printf("HRA:%.2f\n",total1);
            System.out.printf("PF:%2f\n",total2);
            System.out.printf("staff club fund:%.2f\n",total3);
            System.out.printf("gross salary is:%.2f\n",gross);
            System.out.printf("net salary is:%.2f\n",net);
            System.out.println("\n");
        }

}
```

Professor.java

```java
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

package payroll;

        public class AssociateProfessor extends Employee {
        private double basicpay;

        public AssociateProfessor()
        {
            basicpay=0;
        }
```

```java
        public AssociateProfessor(String n,long id,String add,String mail,long num,double BP)
        {
          super(n,id,add,mail,num);
          basicpay=BP;
        }
        public void printAccount()
        {
          super.printAccount();
          System.out.println("Basic pay:"+basicpay);
        }
        public void printStatement()
        {
          double total;
          double total1;
          double total2;
          double total3;
          double gross;
          double net;
          printAccount();
          total=basicpay*0.97;
          total1=basicpay*0.1;
          total2=basicpay*0.12;
          total3=basicpay*0.001;
          gross=total+total1+total2+total3;
          net=gross-total2-total3;
          System.out.printf("duty allowance(DA):%.2f\n",total);
          System.out.printf("HRA:%.2f\n",total1);
          System.out.printf("PF:%2f\n",total2);
          System.out.printf("staff club fund:%.2f\n",total3);
          System.out.printf("gross salary is:%.2f\n",gross);
          System.out.printf("net salary is:%.2f\n",net);
          System.out.println("\n");
        }

}
```

Calculation.java

```java
/*Program to represent payroll
 *Created by Faizul
 *faizulsmart10@gmail.com
*/

package payroll;

public class Calculation {
    public static void main(String[]args) {
            Employee emp;
             Programer pro;
```

```
        AssistantProfessor Asspro;
        AssociateProfessor Asopro;
        Professor prof;

        emp=new Employee("Hariharan",5022,"Chennai","harirahul@gmail.com",87346);
        pro=new Programer("Faizul",5016,"Karur","faizulsmart@gmail.com",75167,50000)
        Asspro=newAssistantProfessor("Akhshy",5006,"Chennai","akhshyganeshb@gmail.com",
                                91886,55000);
        Asopro=newAssociateProfessor("Sanjai",5019,"Chennai","gsanjaikumar@gmail.com",
                                19764,60000);
        prof=newProfessor("Abhijith",5002,"Chennai","abhijithabhi@gmail.com",54533,65000);
                emp.printAccount();
                pro.printAccount();
                Asspro.printStatement();
                Asopro.printStatement();
                prof.printStatement();



    }

}
```

Output:

Name:Hariharan
Account Id:5022
Address:Chennai
Email:harirahul@gmail.com
Mobile:87346

Name:Faizul
Account Id:5016
Address:Karur
Email:faizulsmart@gmail.com
Mobile:75167
Basic pay:50000.0

Name:Akhshy
Account Id:5006
Address:Chennai
Email:akhshyganeshb@gmail.com
Mobile:91886
Basic pay:55000.0
duty allowance(DA):53350.00
HRA:5500.00
PF:6600.000000
staff club fund:55.00
gross salary is:65505.00

net salary is:58850.00

Name:Sanjai
Account Id:5019
Address:Chennai
Email:gsanjaikumar@gmail.com
Mobile:19764
Basic pay:60000.0
duty allowance(DA):58200.00
HRA:6000.00
PF:7200.000000
staff club fund:60.00
gross salary is:71460.00
net salary is:64200.00

Name:Abhijith
Account Id:5002
Address:Chennai
Email:abhijithabhi@gmail.com
Mobile:54533
Basic pay:65000.0
duty allowance(DA):63050.00
HRA:6500.00
PF:7800.000000
staff club fund:65.00
gross salary is:77415.00
net salary is:69550.00

Result:

Thus the Java console program to generate payslips is verified with its output.