Ex 03	PAYSLIP GENERATION
23-07-19	

AIM:

To develop a java console application to generate pay slips for the employees with their gross and net salary.

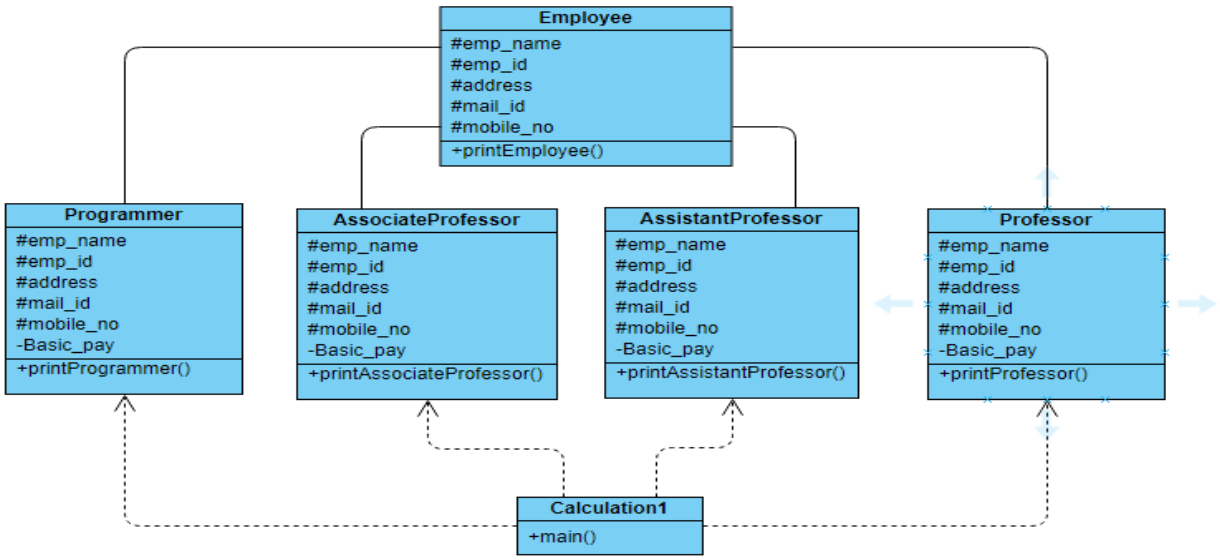
REQUIREMENT:

Java application with Employee clas with empname, empid, address, mailid, mobileno as members. Inherit the classes Programmer, AssistantProfessor, AssociateProfessor 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 staffclub fund.

ALGORITHMS:

Step1: Create class Employee with required attributes, member functions and constructors in package payrollll.
Step 2: Create class Programmer inherit Employee with required attributes, methods in package payroll.
Step 3: Create classes AssistantProfessor, AssociateProfessor and Professor inheriting from class Employee with required attributes, methods and constructors in package payroll.
Step 4: Create class Payslip with static main function.
Step 5: Create objects for Employee, Programmer, AssistantProfessor, AssociateProfessor and Professor.
Step 6: Initialize objects with values passed through constructor arguments.
Step 7: Display data.

CLASS DIAGRAM:



PROGRAM:

AssistantProfessor.java

```
/*developed by: Sanjai Kumar
 * gsanjaik@gmail.com
 */
package payroll;

public class AssistantProfessor extends Employee{
     private double basic_pay;
     public double da;
     public double hra;
     public double pf;
     public double staff_club;
     public double gross_salary;
     public double net_salary;

     public AssistantProfessor()
     {    basic_pay=0;
     }
     public AssistantProfessor(String n,long id,String ad,String
mail,long mn, double bp)
     {    super(n,id,ad,mail,mn);
          basic_pay=bp;
     }
     public void AssistantProfessor()
     {    super.printEmployee();
          System.out.println("Basic pay: "+basic_pay);
     }
     public void calculation()
     {    da=0.97*basic_pay;
          hra=0.1*basic_pay;
          pf=0.12*basic_pay;
          staff_club=0.001*basic_pay;
          gross_salary=da+hra+pf+staff_club+basic_pay;
          net_salary=gross_salary-(pf+ staff_club);
     }
     public void printAssistantProfessor()
     {    super.printEmployee();
          System.out.println("Employee basic salary: "+
basic_pay);
          System.out.println("Employee gross salary: "+
gross_salary);
          System.out.println("Employee net salary: "+ net_salary);


System.out.println("----------------------------------------");
     }
}
```

AssociateProfessor.java

```
package payroll;

public class AssociateProfessor extends Employee{
     private double basic_pay;
     public double da;
     public double hra;
     public double pf;
     public double staff_club;
     public double gross_salary;
     public double net_salary;

     public AssociateProfessor()
     {    basic_pay=0;
     }
     public AssociateProfessor(String n,long id,String ad,String
mail,long mn, double bp)
     {    super(n,id,ad,mail,mn);
          basic_pay=bp;
     }
     public void AssociateProfessor()
     {    super.printEmployee();
          System.out.println("Basic pay: "+basic_pay);
     }
     public void calculation()
     {    da=0.97*basic_pay;
          hra=0.1*basic_pay;
          pf=0.12*basic_pay;
          staff_club=0.001*basic_pay;
          gross_salary=da+hra+pf+staff_club+basic_pay;
          net_salary=gross_salary-(pf+ staff_club);
     }
     public void printAssociateProfessor()
     {    super.printEmployee();
          System.out.println("Employee basic salary: "+
basic_pay);
          System.out.println("Employee gross salary: "+
gross_salary);
          System.out.println("Employee net salary: "+ net_salary);


System.out.println("----------------------------------------");
     }
}
```

Employee.java

```
package payroll;

public class Employee {
     protected String empname;
     protected long empid;
     protected String address;
     protected String mailid;
     protected long mobileno;
```

```
	public Employee()
	{	empname="no name";
		empid=100001;
		address="not given";
		mailid="not given";
		mobileno=800000001;
	}
	public Employee(String n,long id,String ad,String mail,long
mn)
	{	empname=n;
		empid=id;
		address=ad;
		mailid=mail;
		mobileno=mn;
	}
	public void printEmployee()
	{	System.out.println("Name: "+empname);
		System.out.println("Account: "+empid);
		System.out.println("Address: "+address);
		System.out.println("Email: "+mailid);
		System.out.println("Mobile: "+mobileno);
	}
}
```

Professor.java

```
package payroll;

public class Professor extends Employee{
	private double basic_pay;
	public double da;
	public double hra;
	public double pf;
	public double staff_club;
	public double gross_salary;
	public double net_salary;

	public Professor()
	{	basic_pay=0;
	}
	public Professor(String n,long id,String ad,String mail,long
mn, double bp)
	{	super(n,id,ad,mail,mn);
		basic_pay=bp;
	}
	public void Professor()
	{	super.printEmployee();
		System.out.println("Basic pay: "+basic_pay);
	}
	public void calculation()
	{	da=0.97*basic_pay;
```

```
          hra=0.1*basic_pay;
          pf=0.12*basic_pay;
          staff_club=0.001*basic_pay;
          gross_salary=da+hra+pf+staff_club+basic_pay;
          net_salary=gross_salary-(pf+ staff_club);
     }
     public void printProfessor()
     {    super.printEmployee();
          System.out.println("Employee basic salary: "+
basic_pay);
          System.out.println("Employee gross salary: "+
gross_salary);
          System.out.println("Employee net salary: "+ net_salary);


System.out.println("----------------------------------------");
     }
}
```

Programmer.java

```
package payroll;

public class Programmer extends Employee{
     private double basic_pay;
     public double da;
     public double hra;
     public double pf;
     public double staff_club;
     public double gross_salary;
     public double net_salary;

     public Programmer()
     {    basic_pay=0;
     }
     public Programmer(String n,long id,String ad,String mail,long
mn, double bp)
     {    super(n,id,ad,mail,mn);
          basic_pay=bp;
     }
     public void Programmer()
     {    super.printEmployee();
          System.out.println("Basic pay: "+basic_pay);
     }
     public void calculation()
     {    da=0.97*basic_pay;
          hra=0.1*basic_pay;
          pf=0.12*basic_pay;
          staff_club=0.001*basic_pay;
          gross_salary=da+hra+pf+staff_club+basic_pay;
          net_salary=gross_salary-(pf+ staff_club);
```

```
    }
    public void printProgrammer()
    {    super.printEmployee();
         System.out.println("Employee basic salary: "+
basic_pay);
         System.out.println("Employee gross salary: "+
gross_salary);
         System.out.println("Employee net salary: "+ net_salary);


System.out.println("----------------------------------------");
    }
}
```

Salary.java

```
package payroll;

public class Salary {

    public static void main(String[] args) {
         Employee emp;
         Programmer prog;
         AssociateProfessor aprof;
         AssistantProfessor asprof;
         Professor prof;
         emp=new
Employee("A",800001,"Chennai","acc@gmail.com",800000001);
         prog=new Programmer("B",800002,"Chennai",acc@gmail.com,
800000002,40000);
         aprof=new
AssociateProfessor("C",800003,"Chennai",acc@gmail.com ,
800000003,50000);;
         asprof=new
AssistantProfessor("D",800004,"Chennai",acc@gmail.com ,
800000004,60000);
         prof=new Professor("E",800005,"Chennai",acc@gmail.com ,
800000005, 70000);
         emp.printEmployee();


System.out.println("----------------------------------------");
         prog.calculation();
         prog.printProgrammer();
         aprof.calculation();
         aprof.printAssociateProfessor();
         asprof.calculation();
         asprof.printAssistantProfessor();
         prof.calculation();
         prof.printProfessor();
    }

}
```

OUTPUT:

```
Name : A
Account: 800001
Email: acc@gmail.com
Mobile: 8000000001
---------------------------------------

Name : B
Account: 800002
Email: acc@gmail.com
Mobile: 8000000002
Employee basic salary: 40000.0
Employee gross salary: 87640.0
Employee net salary: 82000.0
---------------------------------------

Name : C
Account: 800003
Email: acc@gmail.com
Mobile: 8000000003
Employee basic salary: 50000.0
Employee gross salary: 109550.0
Employee net salary: 103500.0
---------------------------------------

Name : D
Account: 800004
Email: acc@gmail.com
Mobile: 8000000004
Employee basic salary: 60000.0
Employee gross salary: 131460.0
Employee net salary: 124200.0
---------------------------------------

Name : E
Account: 800005
Email: acc@gmail.com
Mobile: 8000000005
Employee basic salary: 70000.0
Employee gross salary: 153370.0
Employee net salary: 144900.0
---------------------------------------
```

RESULT:

Thus a java console application is developed to generate pay slips. The output is verified