```java
package employee;

import java.io.FileOutputStream;
import java.io.PrintStream;
import java.util.ArrayList;
import java.util.Scanner;

public class main {
    public static void main(String[] args) {
        ArrayList<employee> employees = new ArrayList<>();
        Scanner sc = new Scanner(System.in);

        try (FileOutputStream fos = new FileOutputStream("employee_log.txt", true);
             PrintStream logWriter = new PrintStream(fos)) {

            System.out.println("Enter details for Programmer:");

            System.out.print("Name: ");
            String name = sc.nextLine();

            System.out.print("Employee ID: ");
            String empID = sc.nextLine();

            System.out.print("Address: ");
            String address = sc.nextLine();

            System.out.print("Email: ");
            String email = sc.nextLine();

            System.out.print("Mobile Number: ");
            String mobile = sc.nextLine();

            System.out.print("Basic Pay: ");
            double bPay = sc.nextDouble();
            sc.nextLine();  // consume leftover newline

            System.out.print("Designation: ");
            String des = sc.nextLine();

            // Create Programmer object
            Programmer p = new Programmer(name, empID, address, email, mobile, bPay, des);
            employees.add(p);

            // Print and log pay slips
            PrintStream console = System.out;

            for (employee e : employees) {
                System.setOut(logWriter);
                e.paySlip();
                System.out.println();  // blank line in file

                System.setOut(console);
                e.paySlip();
                System.out.println();  // blank line in console
            }

        } catch (Exception e) {
            e.printStackTrace();
        } finally {
            sc.close();
        }
    }
}
```

```java
package employee;

public class Professor extends employee {
    protected double bPay;
    protected String des;

    public Professor(String emp_name, String emp_id, String address, String mail_id, String mobile_no,
                            double bPay, String des) {
        super(emp_name, emp_id, address, mail_id, mobile_no);
        this.bPay = bPay;
        this.des = des;
    }

    @Override
    public void paySlip() {
        double hra = 0.97 * bPay;
        double da = 0.10 * bPay;
        double pf = 0.12 * bPay;
        double staff_club = 0.001 * bPay;
        double gross = bPay + hra + da;
        double net = gross - (pf + staff_club);

        System.out.println("\nPaySlip for Assistant Professor: " + emp_name);
        display();
        System.out.println("Designation: " + des);
        System.out.println("Basic Pay: " + bPay);
        System.out.println("Gross Salary: " + gross);
        System.out.println("Net Salary: " + net);
    }
}
```

```java
package employee;

public class AssistantProfessor extends employee {
    protected double bPay;
    protected String des;

    public AssistantProfessor(String emp_name, String emp_id, String address, String mail_id, String mobile_no,
                              double bPay, String des) {
        super(emp_name, emp_id, address, mail_id, mobile_no);
        this.bPay = bPay;
        this.des = des;
    }

    @Override
    public void paySlip() {
        double hra = 0.97 * bPay;
        double da = 0.10 * bPay;
        double pf = 0.12 * bPay;
        double staff_club = 0.001 * bPay;
        double gross = bPay + hra + da;
        double net = gross - (pf + staff_club);

        System.out.println("\nPaySlip for Assistant Professor: " + emp_name);
        display();
        System.out.println("Designation: " + des);
        System.out.println("Basic Pay: " + bPay);
        System.out.println("Gross Salary: " + gross);
        System.out.println("Net Salary: " + net);
    }
}
```

```java
package employee;

public class AssociateProfessor extends employee {
    protected double bPay;
    protected String des;

    public AssociateProfessor(String emp_name, String emp_id, String address, String mail_id, String mobile_no,
                              double bPay, String des) {
        super(emp_name, emp_id, address, mail_id, mobile_no);
        this.bPay = bPay;
        this.des = des;
    }

    @Override
    public void paySlip() {
        double hra = 0.97 * bPay;
        double da = 0.10 * bPay;
        double pf = 0.12 * bPay;
        double staff_club = 0.001 * bPay;
        double gross = bPay + hra + da;
        double net = gross - (pf + staff_club);

        System.out.println("\nPaySlip for Associate Professor: " + emp_name);
        display();
        System.out.println("Designation: " + des);
        System.out.println("Basic Pay: " + bPay);
        System.out.println("Gross Salary: " + gross);
        System.out.println("Net Salary: " + net);
    }
}
```

```java
// Source code is decompiled from a .class file using FernFlower decompiler.
package employee;

public class Programmer extends employee {
    protected String des;
    protected double bPay;

    public Programmer(String var1, String var2, String var3, String var4, String var5,
double var6, String var8) {
        super(var1, var2, var3, var4, var5);
        this.bPay = var6;
        this.des = var8;
    }

    public void paySlip() {
        double var1 = 0.97 * this.bPay;
        double var3 = 0.1 * this.bPay;
        double var5 = 0.12 * this.bPay;
        double var7 = 0.001 * this.bPay;
        double var9 = this.bPay + var1 + var3;
        double var11 = var9 - (var5 + var7);
        System.out.println("\nPaySlip for Programmer: " + this.emp_name);
        this.display();
        System.out.println("Designation: " + this.des);
        System.out.println("Basic Pay: " + this.bPay);
        System.out.println("Gross Salary: " + var9);
        System.out.println("Net Salary: " + var11);
    }
}
```

PaySlip for Programmer: ABC
--------------------------------------------------
Employee ID      : 103
Name             : ABC
Address          : SNUC
Email            : ABC@SNUC.com
Mobile No        : 7778889991
--------------------------------------------------
Designation: Assistant Professor
Basic Pay: 78000.0
Gross Salary: 161460.0
Net Salary: 152022.0


PaySlip for Programmer: PQR
--------------------------------------------------
Employee ID      : 1012
Name             : PQR
Address          : SSNCE
Email            : Pqr@ssnce.com
Mobile No        : 7894561230
--------------------------------------------------
Designation: Professor
Basic Pay: 85000.0
Gross Salary: 175950.0
Net Salary: 165665.0


PaySlip for Programmer: XYZ
--------------------------------------------------
Employee ID      : 1036
Name             : XYZ
Address          : SNU Chennai
Email            : xyz@snuchennai.com
Mobile No        : 9632587410
--------------------------------------------------
Designation: Professor
Basic Pay: 950000.0
Gross Salary: 1966500.0
Net Salary: 1851550.0


PaySlip for Programmer: asdf
--------------------------------------------------
Employee ID      : 1112
Name             : asdf
Address          : SNUC
Email            : asdf@snuc.com
Mobile No        : 7894566212
--------------------------------------------------
Designation: Professor
Basic Pay: 115000.0
Gross Salary: 238050.0
Net Salary: 224135.0


PaySlip for Programmer: tsk
--------------------------------------------------
Employee ID      : 1456
Name             : tsk
Address          : chennai
Email            : tsk@gmail.com
Mobile No        : 931476541
--------------------------------------------------
Designation: Associate Professor

Basic Pay: 86000.0
Gross Salary: 178020.0
Net Salary: 167614.0