Assignment-5(part:2)

```
/*
Lab Assignment 5 - Part 2
PRN : 21070126013
Name : Aniket Singh
Batch : AIML A1

Problem Statement :  In this exercise, take an abstract class which is defined below and
                     develop two classes. The abstract class represents the basic building block
                     for employees in a personnel database. The two classes are NormalEmployee and Bo
nusEmployee.
*/


import java.util.Scanner;

// TestEmployee.java
public class TestEmployee {
    public static void main(String[] args) {


        Scanner scanner = new Scanner(System.in);

        while (true) {
            System.out.println("Select Employee Type:");
            System.out.println("1. Normal Employee");
            System.out.println("2. Bonus Employee");
            System.out.println("3. Exit");

            System.out.print("Enter your choice: ");
            int choice = scanner.nextInt();
            scanner.nextLine();

            switch (choice) {
                case 1:
                    // Calculate normal employee salary
                    System.out.println("Normal Employee");

                    System.out.print("Enter name of the Employee:");
                    String name = scanner.nextLine();
                    System.out.print("Enter address of the Employee: ");
                    String address = scanner.nextLine();
                    System.out.print("Enter Gross Wage for Employee: ₹");
                    int normalGrossWage = scanner.nextInt();
                    System.out.print("Enter Total Working Days for Employee: ");
                    int normalTotalWorkingDays = scanner.nextInt();
                    System.out.print("Enter Paid Days for Employee: ");
                    int normalPaidDays = scanner.nextInt();
                    scanner.nextLine();

                    // create NormalEmployee object
                    NormalEmployee normalEmployee = new NormalEmployee(name, address, normalGrossWag
e, normalTotalWorkingDays, normalPaidDays);
```

```
                    System.out.println("Name: " + normalEmployee.getName());
                    System.out.println("Address: " + normalEmployee.getAddress());
                    System.out.println("Gross Wage: " + normalEmployee.getGrossWage());
                    System.out.println("Total Working Days: " + normalEmployee.getTotalWorkingDays
());
                    System.out.println("Paid Days (Days Worked): " + normalEmployee.getPaidWorkingDay
s());
                    System.out.println("Salary Slip for Normal Employee");
                    double normalMonthlySalary = normalEmployee.calculateMonthlySalary();
                    System.out.println();

                    break;
                case 2:
                    // Calculate bonus employee salary
                    System.out.println("Bonus Employee");
                    // Get input from user for Employee
                    System.out.print("Enter name of the Employee:");
                    name = scanner.nextLine();
                    System.out.print("Enter address of the Employee:");
                    address = scanner.nextLine();
                    System.out.print("Enter Gross Wage for Employee: ₹");
                    normalGrossWage = scanner.nextInt();
                    System.out.print("Enter Total Working Days for Employee: ");
                    normalTotalWorkingDays = scanner.nextInt();
                    System.out.print("Enter Paid Days for Employee: ");
                    normalPaidDays = scanner.nextInt();
                    System.out.print("Enter Bonus % for Employee: ");
                    int bonusMonthlyBonus = scanner.nextInt();

                    // create NormalEmployee object
                    BonusEmployee bonusEmployee = new BonusEmployee(name, address, normalGrossWage, n
ormalTotalWorkingDays, normalPaidDays ,bonusMonthlyBonus);


                    System.out.println("Name: " + bonusEmployee.getName());
                    System.out.println("Address: " + bonusEmployee.getAddress());
                    System.out.println("Gross Wage: ₹" + bonusEmployee.getGrossWage());
                    System.out.println("Total Working Days: " + bonusEmployee.getTotalWorkingDays());
                    System.out.println("Paid Days (Days Worked): " + bonusEmployee.getPaidWorkingDays
());
                    System.out.println("Salary Slip for Normal Employee");
                    double bonusMonthlySalary = bonusEmployee.calculateMonthlySalary();
                    System.out.println();
                    break;
                case 3:
                    System.out.println("Exiting...");
                    break;
                default:
                    System.out.println("Invalid choice. Please select a valid option.");
                    break;
            }
        }
    }
}
```

```
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Lab Assignment 5 - Part 2
PRN : 21070126013
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Name : Aniket Singh
Batch : AIML A1

Problem Statement :  In this exercise, take an abstract class which is defined below and
                     develop two classes. The abstract class represents the basic building block
                     for employees in a personnel database. The two classes are NormalEmployee and Bo
nusEmployee.
*/

import java.text.DecimalFormat;
// BonusEmployee.java
public class BonusEmployee extends Employee {
    int monthlyBonusPercentage ;

    public BonusEmployee(String name, String address, int grossWage, int totalWorkingDays, int paidWo
rkingDays,int monthlyBonusPercentage)
    {
        super( name,  address, grossWage, totalWorkingDays,paidWorkingDays);
        this.monthlyBonusPercentage = monthlyBonusPercentage;

    }

    @Override
    public double calculateMonthlySalary() {
        DecimalFormat df = new DecimalFormat("#.##");
        // Calculate basic wage, HRA, EPF, ESI, and other allowances for NormalEmployee
        double normalBasicWage = grossWage / totalWorkingDays * paidWorkingDays * .45 ;
        double normalHRA = normalBasicWage * 0.40; //  HRA is 40% of basic wage
        double normalEPF = (normalBasicWage >= 15000) ? normalBasicWage * 0.12 : normalBasicWage * 0.
15; //  EPF is 12% of basic wage if basic wage is greater than or equal to 15000, else 15%
        double normalConveyanceAllowances = Double.parseDouble(df.format((1600.0 / totalWorkingDays)
 * paidWorkingDays)); //  Conveyance Allowances is (1600/total working days) * paid days
        double normalMedicalAllowances = Double.parseDouble(df.format((1250.0 / totalWorkingDays) * p
aidWorkingDays)); //  Medical Allowances is (1600/total working days) * paid days
        double normalOtherAllowances = ((grossWage / totalWorkingDays) * paidWorkingDays) - (normalHR
A + normalBasicWage + normalConveyanceAllowances + normalMedicalAllowances); //  other allowances is
 (gross wage/total working days) * paid days - SUM(HRA, basic wage, Conveyance Allowances, Medical Al
lowances)
        //total earnings =  SUM(HRA,basic wage ,Conveyance Allowances,Medical Allowances, other allow
ances  )
        double totalEarnings = normalHRA + normalBasicWage + normalConveyanceAllowances + normalMedic
alAllowances +
                normalOtherAllowances;
        double normalESI = (grossWage <= 21000) ? totalEarnings * 0.0075 : 0; //  ESI/Health Insuranc
e is 0.75% of basic wage if gross wage is less than or equal to 21000, else 0
        double totalDeductions = normalEPF + normalESI ;
        double netSalary =  totalEarnings - totalDeductions ;
        double netSalaryWithBonus = netSalary + (netSalary * monthlyBonusPercentage / 100);

        // Print pay slip
        System.out.print("-------------------------------------------------------------------------
");
        System.out.println("\nGross Wage\t\t\t\t" + grossWage);
        System.out.println("Total Working Days\t\t" + totalWorkingDays + "\t\t\t\t\tPaid Days\t\t\t"
 + paidWorkingDays);
        System.out.println("LOP days\t\t\t\t" + (totalWorkingDays - paidWorkingDays) + "\t\t\t\t\tLea
ves Taken");
        System.out.println("\nEarnings\t\t\t\t\t\t\t\tDeductions");
        System.out.println("Basic Wage\t\t\t\t" + normalBasicWage + "\t\t\t\tEPF\t\t\t\t\t₹" + normal
EPF);
```

```
        System.out.println("HRA\t\t\t\t\t\t₹" + normalHRA + "\t\t\t\tESI\t\t\t\t\t" + normalESI);
        System.out.println("Conveyance Allowances\t" + normalConveyanceAllowances);
        System.out.println("Medical Allowances\t\t" + normalMedicalAllowances);
        System.out.println("Other Allowances\t\t" + normalOtherAllowances);
        System.out.println("\nTotal Earnings\t\t\t" + totalEarnings + "\t\t\tTotal Deductions\t" + to
talDeductions);
        System.out.println("\nNet Salary\t\t\t\t" + netSalaryWithBonus);

        return netSalaryWithBonus;
    }


    // Getter for monthlyBonus
    public int getMonthlyBonus() {
        return monthlyBonusPercentage;
    }

    // Setter for monthlyBonus
    public void setMonthlyBonus(int monthlyBonusPercentage) {
        this.monthlyBonusPercentage = monthlyBonusPercentage;

    }
}
```

```
/*
/*
Lab Assignment 5 - Part 2
PRN : 21070126013
Name : Aniket Singh
Batch : AIML A1

Problem Statement :  In this exercise, take an abstract class which is defined below and
                     develop two classes. The abstract class represents the basic building block
                     for employees in a personnel database. The two classes are NormalEmployee and Bo
nusEmployee.
*/


// Employee.java
public abstract class Employee {
    private String name;
    private String address;
    protected int grossWage;
    protected int totalWorkingDays;
    protected int paidWorkingDays;




    public Employee(String name, String address, int grossWage, int totalWorkingDays, int paidWorking
Days) {
        this.name = name;
        this.address = address;
        this.grossWage = grossWage;
        this.totalWorkingDays = totalWorkingDays;
        this.paidWorkingDays =  paidWorkingDays;

    }
```

```
    // Getters and Setters for name, address, and basicSalary
    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getAddress() {
        return address;
    }

    public void setAddress(String address) {
        this.address = address;
    }

    public int getGrossWage() {
        return grossWage;
    }

    public void setGrossWage(int basicSalary) {
        this.grossWage = basicSalary;
    }

    public int getTotalWorkingDays() {
        return totalWorkingDays;
    }

    public void setTotalWorkingDays(int totalWorkingDays) {
        this.totalWorkingDays = totalWorkingDays;
    }

    public int getPaidWorkingDays() {
        return paidWorkingDays;
    }

    public void setPaidWorkingDays(int paidWorkingDays) {
        this.paidWorkingDays = paidWorkingDays;
    }

    public abstract double calculateMonthlySalary();

}
```

```
/*
/*
Lab Assignment 5 - Part 2
PRN : 21070126013
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Problem Statement :  In this exercise, take an abstract class which is defined below and
                     develop two classes. The abstract class represents the basic building block
                     for employees in a personnel database. The two classes are NormalEmployee and Bo
```

```
nusEmployee.
*/

import java.text.DecimalFormat;

// NormalEmployee.java
public class NormalEmployee extends Employee {

    public NormalEmployee(String name, String address, int grossWage, int totalWorkingDays, int paidW
orkingDays)
    {super( name,  address, grossWage, totalWorkingDays,paidWorkingDays);

    }

    @Override
    public double calculateMonthlySalary() {
        DecimalFormat df = new DecimalFormat("#.##");

        // Calculate basic wage, HRA, EPF, ESI, and other allowances for NormalEmployee
        double normalBasicWage = grossWage / totalWorkingDays * paidWorkingDays * .45 ;
        double normalHRA = normalBasicWage * 0.40; //  HRA is 40% of basic wage
        double normalEPF = (normalBasicWage >= 15000) ? normalBasicWage * 0.12 : normalBasicWage * 0.
15; //  EPF is 12% of basic wage if basic wage is greater than or equal to 15000, else 15%
        double normalConveyanceAllowances = Double.parseDouble(df.format((1600.0 / totalWorkingDays)
 * paidWorkingDays)); //  Conveyance Allowances is (1600/total working days) * paid days
        double normalMedicalAllowances = Double.parseDouble(df.format((1250.0 / totalWorkingDays) * p
aidWorkingDays)); //  Medical Allowances is (1600/total working days) * paid days
        double normalOtherAllowances = ((grossWage / totalWorkingDays) * paidWorkingDays) - (normalHR
A + normalBasicWage + normalConveyanceAllowances + normalMedicalAllowances); //  other allowances is
 (gross wage/total working days) * paid days - SUM(HRA, basic wage, Conveyance Allowances, Medical Al
lowances)
        //total earnings =  SUM(HRA,basic wage ,Conveyance Allowances,Medical Allowances, other allow
ances  )
        double totalEarnings = normalHRA + normalBasicWage + normalConveyanceAllowances + normalMedic
alAllowances +
                    normalOtherAllowances;
        double normalESI = (grossWage <= 21000) ? totalEarnings * 0.0075 : 0; //  ESI/Health Insuranc
e is 0.75% of basic wage if gross wage is less than or equal to 21000, else 0
        double totalDeductions = normalEPF + normalESI ;
        double netSalary =  totalEarnings - totalDeductions ;
        // Print pay slip
        System.out.print("-------------------------------------------------------------------------
");
        System.out.println("\nGross Wage\t\t\t\t" + grossWage);
        System.out.println("Total Working Days\t\t" + totalWorkingDays + "\t\t\t\t\tPaid Days\t\t\t"
 + paidWorkingDays);
        System.out.println("LOP days\t\t\t\t" + (totalWorkingDays - paidWorkingDays) + "\t\t\t\t\tLea
ves Taken");
        System.out.println("\nEarnings\t\t\t\t\t\t\t\tDeductions");
        System.out.println("Basic Wage\t\t\t\t" + normalBasicWage + "\t\t\t\tEPF\t\t\t\t\t" + normalE
PF);
        System.out.println("HRA\t\t\t\t\t\t" + normalHRA + "\t\t\t\tESI\t\t\t\t\t" + normalESI);
        System.out.println("Conveyance Allowances\t" + normalConveyanceAllowances);
        System.out.println("Medical Allowances\t\t" + normalMedicalAllowances);
        System.out.println("Other Allowances\t\t" + normalOtherAllowances);
        System.out.println("\nTotal Earnings\t\t\t" + totalEarnings + "\t\t\tTotal Deductions\t" + to
talDeductions);
        System.out.println("\nNet Salary\t\t\t\t" + netSalary);

        return netSalary;
```

```
    }
}
```

```
OUTPUT:
Select Employee Type:
1. Normal Employee
2. Bonus Employee
3. Exit
Enter your choice: 1
Normal Employee
Enter name of the Employee:Sourav sharma
Enter address of the Employee: Octavia heights(204/2)
Enter Gross Wage for Employee: ?21000
Enter Total Working Days for Employee: 30
Enter Paid Days for Employee: 29
Name: Sourav sharma
Address: Octavia heights(204/2)
Gross Wage: 21000
Total Working Days: 30
Paid Days (Days Worked): 29
Salary Slip for Normal Employee
------------------------------------------------------------------------
Gross Wage                              21000
Total Working Days              30                                      Paid Days
29
LOP days                                1                                       Leaves Taken

Earnings                                                                        Deductions
Basic Wage                              9135.0                          EPF
1370.25
HRA                                             3654.0                          ESI
152.25
Conveyance Allowances   1546.67
Medical Allowances              1208.33
Other Allowances                4756.0

Total Earnings                  20300.0                 Total Deductions        1522.5

Net Salary                              18777.5

Select Employee Type:
1. Normal Employee
2. Bonus Employee
3. Exit
Enter your choice: 2
Bonus Employee
Enter name of the Employee:Charan Patra
Enter address of the Employee:Geet Govind Heights(403/1)
Enter Gross Wage for Employee: ?21000
Enter Total Working Days for Employee: 30
Enter Paid Days for Employee: 29
Enter Bonus % for Employee: 20
Name: Charan Patra
Address: Geet Govind Heights(403/1)
Gross Wage: ?21000
Total Working Days: 30
Paid Days (Days Worked): 29
Salary Slip for Normal Employee
```

```
--------------------------------------------------------------------------
Gross Wage                              21000
Total Working Days              30                                      Paid Days
29
LOP days                                1                                       Leaves Taken

Earnings                                                                        Deductions
Basic Wage                              9135.0                          EPF
?1370.25
HRA                                             ?3654.0                         ESI
152.25
Conveyance Allowances   1546.67
Medical Allowances              1208.33
Other Allowances                4756.0

Total Earnings                  20300.0                 Total Deductions        1522.5

Net Salary                              22533.0

Select Employee Type:
1. Normal Employee
2. Bonus Employee
3. Exit
Enter your choice: 3
Exiting...
```

java_Assignments/Assignment_5 at main · AniketSingh1m/java_Assignments

Contribute to AniketSingh1m/java_Assignments development by creating an account on GitHub.

https://github.com/AniketSingh1m/java_Assignments/tree/main/Assignment_5