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**Subject: OOP Lab Assignment 2**

**Title: Employee and Manager Salary**

**Employee and Manager Salary and Tax Management System**

Design a Java-based system to manage employee details, salary calculations, and tax deductions under the New Tax Regime. The system should include the following:

1. **Employee Class**:
   * Attributes to store employee details such as:
     + empName: Employee's name
     + empID: Unique identifier for the employee
     + position: Employee's job position
     + daysPresent: Number of days the employee was present
     + teamName: The name of the team the employee belongs to
     + managerName: Name of the employee's manager
     + Basic Salary: Employee Basic Salary in amount
   * Method to calculate the employee's salary based on:
     + Basic Salary
     + HRA (House Rent Allowance): calculate on Basic Salary
     + DA (Dearness Allowance): calculate on Basic Salary
     + TA (Travel Allowance): calculate on Basic Salary
     + Bonus: calculate on Basic Salary
   * Method to calculate tax based on the New Tax Regime.
2. **Manager Class**:
   * Inherits from the Employee class.
   * Additional attribute:
     + Bonus: The percentage bonus decided by the manager for employees in his team.
   * Method to apply the bonus on the salary of team members before calculating tax.
3. **System Constraints**:
   * Each team must have only one manager.
   * Employees can belong to only one team.
   * The manager is responsible for deciding the bonus for their team, and the bonus is applied to the gross salary before tax calculation.
   * Bonus is calculated on Basic Salary: if basic salary is 1000 and bonus is 10% so bonus will be 100
4. **Objective**:
   * To implement a system that efficiently calculates employee salaries and deducts taxes based on the New Tax Regime.
   * To allow managers to provide salary bonus to team members as part of their management responsibilities.

**Code:**

class Employee {

String empName, empID, position, teamName, managerName;

int daysPresent;

double basicSalary;

Employee(String empName, String empID, String position, int daysPresent, String teamName, String managerName, double basicSalary) {

this.empName = empName;

this.empID = empID;

this.position = position;

this.daysPresent = daysPresent;

this.teamName = teamName;

this.managerName = managerName;

this.basicSalary = basicSalary;

}

void printDetails() {

System.out.println("Employee ID: " + empID);

System.out.println("Name: " + empName);

System.out.println("Position: " + position);

System.out.println("Team: " + teamName);

System.out.println("Manager: " + managerName);

System.out.println("Days Present: " + daysPresent);

System.out.println("Basic Salary: " + basicSalary);

}

double calculateSalary(double bonusPercentage) {

double hra = basicSalary \* 0.2;

double da = basicSalary \* 0.1;

double ta = basicSalary \* 0.05;

double bonus = basicSalary \* (bonusPercentage / 100);

return basicSalary + hra + da + ta + bonus;

}

double calculateBonus(double bonusPercentage) {

return basicSalary \* (bonusPercentage / 100);

}

double calculateTax(double grossSalary) {

if (grossSalary <= 250000) return 0;

else if (grossSalary <= 500000) return grossSalary \* 0.05;

else if (grossSalary <= 750000) return grossSalary \* 0.1;

else if (grossSalary <= 1000000) return grossSalary \* 0.15;

else if (grossSalary <= 1250000) return grossSalary \* 0.2;

else if (grossSalary <= 1500000) return grossSalary \* 0.25;

else return grossSalary \* 0.3;

}

}

class Manager extends Employee {

double teamBonus;

Manager(String empName, String empID, String position, int daysPresent, String teamName, double basicSalary, double teamBonus) {

super(empName, empID, position, daysPresent, teamName, empName, basicSalary);

this.teamBonus = teamBonus;

}

}

public class SalarySystem {

public static void main(String[] args) {

Employee emp1 = new Employee("John Doe", "E123", "Developer", 22, "Tech", "Alice Smith", 500000);

Manager mgr = new Manager("Alice Smith", "M001", "Manager", 22, "Tech", 800000, 10);

double empBonusAmount = emp1.calculateBonus(mgr.teamBonus);

double empGrossSalary = emp1.calculateSalary(mgr.teamBonus);

double empTax = emp1.calculateTax(empGrossSalary);

double empNetSalary = empGrossSalary - empTax;

double mgrBonusAmount = mgr.calculateBonus(0);

double mgrGrossSalary = mgr.calculateSalary(0);

double mgrTax = mgr.calculateTax(mgrGrossSalary);

double mgrNetSalary = mgrGrossSalary - mgrTax;

System.out.println("\nEmployee Details:");

emp1.printDetails();

System.out.println("Bonus Amount: " + empBonusAmount);

System.out.println("Gross Salary: " + empGrossSalary);

System.out.println("Tax Deducted: " + empTax);

System.out.println("Net Salary: " + empNetSalary);

System.out.println("\nManager Details:");

mgr.printDetails();

System.out.println("Bonus Amount: " + mgrBonusAmount);

System.out.println("Gross Salary: " + mgrGrossSalary);

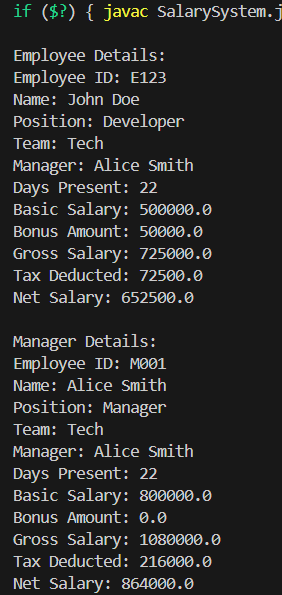
System.out.println("Tax Deducted: " + mgrTax);

System.out.println("Net Salary: " + mgrNetSalary);

}

}

**Output:**

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