1.

**package** org.example;

**import** java.util.Scanner;

**class** Counter{

**private** **int** count=0;

// public void Counter() {

{ count+=1;

}

**public** **void** displaycount() {

System.***out***.println("No of instances created : "+count);

}

}

**public** **class** Prog\_1 {

**public** **static** **void** main(String[] args) {

Counter ct= **new** Counter();

// ct.Counter();

ct.displaycount();

}

}

Ques2. **package** org.example;

**class** Logger{

**private** **static** Logger *log*;

**private** String msg;

**public** **static** Logger getInstance() {

**if** (*log*== **null**)

{

*log*= **new** Logger();

}

**return** *log*;

}

**public** **void** log(String msg) {

**this**.msg=msg;

}

**public** **void** getLog() {

System.***out***.println(msg);

// return this.msg;

}

**public** **void** clearLog() {

msg=**null**;

}

}

**public** **class** ques\_2 {

**public** **static** **void** main(String[] args) {

Logger l1= **new** Logger();

l1.*getInstance*();

l1.log("vaibhav");

l1.getLog();

l1.clearLog();

l1.getLog();

}

}

Ques 3. //package org.example;

//

//import java.util.Scanner;

//

//class Employee{

// private static int totemp=0;

// private static double totsal=0;

// private int empid;

// private String name;

// private double sal;

//

// public Employee(int empid,String name,double totsal,int totemp){

// this.name=name;

// this.empid=empid;

// totemp+=1;

// totsal+=sal;

// }

// public void setName(String name) {

// this.name = name;

// }

// public void setSal(double sal) {

// this.sal = sal;

// }

// public void setEmpid(int empid) {

// this.empid = empid;

// }

//

// public void applyRaise(double percentage) {

//

// totsal=0;

// double raise=(percentage/100)\*this.sal;

// this.sal+=raise;

// totsal+=sal;

// totsal=totsal\*totemp;

// }

// public static double getTotsal() {

// return totsal;

// }

// public double getSal() {

// return sal;

// }

// public int getTotemp() {

// return totemp;

// }

// public String getName() {

// return name;

// }public int getEmpid() {

// return empid;

// }

//public class assign5ques3 {

//

// public static void main(String[] args) {

// Scanner sc = new Scanner(System.in);

//

// int choice;

// do {

// System.out.println("==== Employee Management Menu ====");

// System.out.println("1. Add Employee");

// System.out.println("2. Display Total Employees");

// System.out.println("3. Display Total Salary Expense");

// System.out.println("4. Apply Raise to All Employees");

// System.out.println("5. Update Salary of an Employee");

// System.out.println("6. Display All Employee Details");

// System.out.println("7. Exit");

// System.out.print("Enter your choice: ");

// choice = sc.nextInt();

//

// switch (choice) {

// case 1:

// Employee emp= new Employee();

// System.out.println("Enter EMployee Name");

// emp.setName(sc.nextLine());

// System.out.println("Enter EMployee ID");

// emp.setEmpid(sc.nextInt());

// System.out.println("Enter EMployee salary");

// emp.setSal(sc.nextFloat());

// break;

// case 2:

// System.out.println("Total employee: "+emp.getTotemp());

// break;

// case 3:

// System.out.println("Total sal expense"+emp.getTotsal());

// break;

// case 4:

// System.out.println("Enter perncent raise");

// double percent=sc.nextDouble();

// emp.applyRaise(percent);

// System.out.println("Total sal expense after raise");

// break;

// default:System.out.println("exit");

// break;

// }

// }

//}

//}

package org.example;

import java.util.ArrayList;

import java.util.List;

import java.util.Scanner;

class Employee {

private static int totemp = 0;

private static double totsal = 0;

private int empid;

private String name;

private double sal;

// Constructor

// Correct constructor for Employee class

public Employee(int empid, String name, double sal) {

this.empid = empid;

this.name = name;

this.sal = sal;

totemp += 1; // Increment total employees

totsal += sal; // Add to total salary expense

}

// Getter and Setter methods

public void setName(String name) {

this.name = name;

}

public void setSal(double sal) {

totsal -= this.sal; // Subtract old salary before updating

this.sal = sal;

totsal += sal; // Add new salary to total salary expense

}

public void setEmpid(int empid) {

this.empid = empid;

}

public static int getTotemp() {

return totemp;

}

public static double getTotsal() {

return totsal;

}

public double getSal() {

return sal;

}

public String getName() {

return name;

}

public int getEmpid() {

return empid;

}

// Method to apply raise to individual employee

public void applyRaise(double percentage) {

totsal -= this.sal; // Remove old salary

double raise = (percentage / 100) \* this.sal;

this.sal += raise;

totsal += this.sal; // Add updated salary to total salary

}

@Override

public String toString() {

return "Employee ID: " + empid + ", Name: " + name + ", Salary: " + sal;

}

}

public class assign5ques3 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

List<Employee> employeeList = new ArrayList<>();

int choice;

do {

System.out.println("==== Employee Management Menu ====");

System.out.println("1. Add Employee");

System.out.println("2. Display Total Employees");

System.out.println("3. Display Total Salary Expense");

System.out.println("4. Apply Raise to All Employees");

System.out.println("5. Update Salary of an Employee");

System.out.println("6. Display All Employee Details");

System.out.println("7. Exit");

System.out.print("Enter your choice: ");

choice = sc.nextInt();

sc.nextLine(); // Consume newline

switch (choice) {

case 1:

// Add a new employee

System.out.print("Enter Employee Name: ");

String name = sc.nextLine();

System.out.print("Enter Employee ID: ");

int empid = sc.nextInt();

System.out.print("Enter Employee Salary: ");

double salary = sc.nextDouble();

Employee emp = new Employee(empid, name, salary);

employeeList.add(emp);

System.out.println("Employee added successfully!");

break;

case 2:

// Display total employees

System.out.println("Total Employees: " + Employee.getTotemp());

break;

case 3:

// Display total salary expense

System.out.println("Total Salary Expense: " + Employee.getTotsal());

break;

case 4:

// Apply raise to all employees

System.out.print("Enter the percentage raise: ");

double percentage = sc.nextDouble();

for (Employee employee : employeeList) {

employee.applyRaise(percentage);

}

System.out.println("Applied a " + percentage + "% raise to all employees.");

break;

case 5:

// Update salary of a specific employee

System.out.print("Enter Employee ID to update salary: ");

int updateId = sc.nextInt();

Employee empToUpdate = null;

for (Employee employee : employeeList) {

if (employee.getEmpid() == updateId) {

empToUpdate = employee;

break;

}

}

if (empToUpdate != null) {

System.out.print("Enter new salary: ");

double newSalary = sc.nextDouble();

empToUpdate.setSal(newSalary);

System.out.println("Salary updated successfully!");

} else {

System.out.println("Employee not found.");

}

break;

case 6:

// Display all employee details

for (Employee employee : employeeList) {

System.out.println(employee);

}

break;

case 7:

// Exit the program

System.out.println("Exiting the program...");

break;

default:

System.out.println("Invalid choice. Please try again.");

}

} while (choice != 7);

sc.close();

}

}