ASSIGNMENT 4.

Question 1.

Create a class called Employee that includes three pieces of information as fields-a first name (typeString), a last name (type String) and a monthly salary (type double). Your class should have a constructor that initializes the fields. Provide a getter setter properties for each field. If the monthly salary is not positive, set it to 0.0. Create an overridable method named giveRaise(). Override the ToString() method from object class appropriately here. Write a test application named Employee Test that demonstrates class Employee's capabilities. Create two Employee objects and display the yearly salary for each Employee. Then give each Employee a 10% raise and display each Employee's yearly salary again. Create a class Permanent employee that is derived from employee class and it includes extra fields HRA (hoursing rent allowance), DA (dearness allowance) and Provident Fund. Choose the field types appropriately and also create read only properties for each of these fields. Create fields named Joining Date and Expected Retirement Date. Also create properties for both the fields. Ensure to create constructors and appropriate methods (at least two). Override the giveRaise() method from parent class and ensure that now along with raise in salary, the hra and da are added and the final salary is appropriately calculated. Override the ToString() method appropriately for a permanent employee object. Read about method hiding in .net. In your assignment also demonstrate method hiding in C#. Read about method overloading in C#.net. In your assignment also demonstrate method overloading in C#.

Code:

using System;

namespace Code\_3

{

class Program

{

static void Main(string[] args)

{

Console.WriteLine("----------- EMPOLOYEE ---------");

Employee e1 = new Employee("Pratham", "Dhobi", 67000);

Employee e2 = new Employee("preet", "Shah", 56000);

Employee e3 = new Employee("Soham", "mayani", 69000);

Console.WriteLine("\n BEFORE INCREAMENT...");

Console.WriteLine(e1.ToString());

Console.WriteLine(e2.ToString());

Console.WriteLine(e3.ToString());

Console.WriteLine("\n AFTER INCREAMENT...");

e1.giveRaise(10.0);

e2.giveRaise(10.0);

e3.giveRaise(10.0);

Console.WriteLine(e1.ToString());

Console.WriteLine(e2.ToString());

Console.WriteLine(e3.ToString());

Console.WriteLine("\n\n----------- PERMANENT EMPOLOYEE ---------");

PermanentEmployee pe1 = new PermanentEmployee("Pratham", "Dhobi",

67000, 2000, 1000, 4500, "01-02-2023","10-05-2023");

PermanentEmployee pe2 = new PermanentEmployee("preet", "shah", 56000,

2789, 800, 9500, "01-01-2023", "18-12-2023");

PermanentEmployee pe3 = new PermanentEmployee("Soham", "mayani",

58000, 2239, 900, 1500, "02-10-2023", "15-07-2023");

Console.WriteLine("\n BEFORE INCREAMENT...");

Console.WriteLine(pe1);

Console.WriteLine(pe2);

Console.WriteLine(pe3);

pe1.giveRaise(10.0);

pe2.giveRaise(10.0);

pe3.giveRaise(10.0);

Console.WriteLine("\n AFTER INCREAMENT...");

Console.WriteLine(pe1.ToString());

Console.WriteLine(pe2.ToString());

Console.WriteLine(pe3.ToString());

Console.WriteLine("Hiding");

}

}

public class Employee

{

private String firstName;

private String lastName;

private double monSalary;

public Employee(String first, String last, double sal)

{

firstName = first;

lastName = last;

monSalary = sal;

}

public String First

{

get => firstName;

set => firstName = value;

}

public String Last

{

get => lastName;

set => lastName = value;

}

public double MonSalary

{

get => monSalary;

set

{

if (value < 0.0)

{

monSalary = 0.0;

}

else

{

monSalary = value;

}

}

}

public virtual void giveRaise(double inc)

{

monSalary = monSalary + (monSalary \* inc / 100);

}

public override string ToString()

{

return "Employee Details : " + firstName + " " + lastName +

" Yearly Salary : " + (monSalary)\*12;

}

}

public class PermanentEmployee : Employee

{

private double hra;

private double da;

private double pf;

private String joiningDate;

private String retirementDate;

public PermanentEmployee(String first, String last, double sal, double

hra, double da, double pf, String joiningDate, String retirementDate) :

base(first, last, sal)

{

this.hra = hra;

this.da = da;

this.pf = pf;

this.joiningDate = joiningDate;

this.retirementDate = retirementDate;

this.MonSalary = this.MonSalary + hra + da;

}

public double Hra

{

get => hra;

}

public double Da{

get => da;

}

public double Pf

{

get => pf;

}

public String JoiningDate

{

get => joiningDate;

set => joiningDate = value;

}

public String RetirementDate

{

get => retirementDate;

set => retirementDate = value;

}

public override void giveRaise(double inc)

{

this.MonSalary = this.MonSalary + (this.MonSalary \* inc) / 100 + da +

hra;

}

public override string ToString()

{

return "Permanent Employee Details : " + this.First + " " + this.Last

+

" Joining Date : " + joiningDate +

" Retirement Date : " + retirementDate +

" Yearly Salary : " + (this.MonSalary) \* 12;

}

}

}

OutPut:

