**C# Assignment -2**

# **Object Oriented Programming**

## **Objective**

* **To write a simple class.**
* **Use exception handling mechanism to handle runtime errors.**

## **Assignments to be done in this session**

1. **Develop Employee Management System for Litware Organization. Write a Class Library project LitwareLib.**
   1. **Add class Employee with following private members:**
      * **EmpNo int**
      * **EmpName string**
      * **Salary double**
      * **HRA double**
      * **TA double**
      * **DA double**
      * **PF double**
      * **TDS double**
      * **NetSalary double**
      * **GrossSalary double.**

**Write methods for accepting EmpNo, EmpName and Salary. HRA, TA, DA, PPF, TDS, NET, GROSS should be calculated automatically. Follow the table for calculations.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Salary** | **HRA % of Salary** | **TA % of Salary** | **DA % of Salary** |
| **<5000** | **10** | **5** | **15** |
| **<10000** | **15** | **10** | **20** |
| **<15000** | **20** | **15** | **25** |
| **<20000** | **25** | **20** | **30** |
| **>=20000** | **30** | **25** | **35** |

## **GrossSalary = Salary + HRA + TA + DA.**

**Calculate PF, TDS and Net salary in a function named “CalculateSalary()”**

## **PF = 10 % of GrossSalary. TDS =18 % of GrossSalary.**

**NetSalary = GrossSalary – (PF + TDS).**

**Program:**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

public class Employee

{

int EmpNo;

string EmpName;

double Salary;

double HRA;

double TA;

double DA;

double PF;

double TDS;

double NetSalary;

double GrossSalary;

//Employee Details//

public void AcceptEmpDetail()

{

Console.WriteLine("Enter Employee Details..\n");

Console.Write("Enter Employee Number:");

EmpNo = Convert.ToInt32(Console.ReadLine());

Console.Write("Enter Employee Name:");

EmpName = Console.ReadLine();

Console.Write("Enter Employee Salary:");

Salary = Convert.ToDouble(Console.ReadLine());

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

Console.WriteLine("Employee Number = {0}\nEmployee Name = {1}\nEmployee Salary = {2} ", EmpNo, EmpName, Salary);

}

public double GrossSal()

{

GrossSalary = 0;

if (Salary < 5000)

{

HRA = 10 \* Salary / 100;

TA = 5 \* Salary / 100;

DA = 15 \* Salary / 100;

GrossSalary = Salary + HRA + TA + DA;

}

else if (Salary < 10000)

{

HRA = 15 \* Salary / 100;

TA = 10 \* Salary / 100;

DA = 20 \* Salary / 100;

GrossSalary = Salary + HRA + TA + DA;

}

else if (Salary < 150000)

{

HRA = 20 \* Salary / 100;

TA = 15 \* Salary / 100;

DA = 25 \* Salary / 100;

GrossSalary = Salary + HRA + TA + DA;

}

else if (Salary < 200000)

{

HRA = 25 \* Salary / 100;

TA = 20 \* Salary / 100;

DA = 30 \* Salary / 100;

GrossSalary = Salary + HRA + TA + DA;

}

else if (Salary >= 20000)

{

HRA = 10 \* Salary / 100;

TA = 5 \* Salary / 100;

DA = 15 \* Salary / 100;

GrossSalary = Salary + HRA + TA + DA;

}

return GrossSalary;

}

public void CalCulateSalary()

{

Console.WriteLine(".........................................................");

Console.Write("PF, TDS and NET Salary of Employee\n\n");

Double GrossSala = GrossSal();

PF = 10 \* GrossSala / 100;

TDS = 18 \* GrossSala / 100;

NetSalary = GrossSala - (PF + TDS);

Console.Write("PF = {0} \nTDS = {1}\nNetSalary = {2}", PF, TDS, NetSalary);

}

public static void Main()

{

Employee emp = new Employee();

emp.AcceptEmpDetail();

Double Gsalary = emp.GrossSal();

Console.WriteLine("Gross Salary : {0} ", Gsalary);

emp.CalCulateSalary();

Console.Read();

}

}

**Outpout:**

****

**e) Write a console application Employee Management which allow HR staff member to register newly joined employee with EmpNo, EmpName and Salary. Display gross salary of employee on console. LitwareLib class Library will be used in Test console application for creating objects and invoking functionality of Employee class. Use Exception Handling mechanism wherever necessary.**

**Program:**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Xml.Schema;

using static System.Console;

using static System.Convert;

namespace Employee\_Management

{

public class InsertEmp

{

class Employee

{

public int[] EmpNum = new int[50];

public string[] EmpName = new string[50];

public float[] EmpSalary = new float[50];

int count = 0;

public void RegisterEmp()

{

int n;

Console.Write("Enter number of employee which you want to register:");

n = int.Parse(Console.ReadLine());

Console.WriteLine("Register Record of {0} Employee", n);

for (int i = 0; i < n; i++)

{

Console.WriteLine("Employee Details", (i + 1));

Console.Write("Enter Employee Number:");

EmpNum[i] = int.Parse(Console.ReadLine());

Console.Write("Enter Employee Name:");

EmpName[i] = Console.ReadLine();

Console.Write("Enter Employee Salary:");

EmpSalary[i] = float.Parse(Console.ReadLine());

Console.WriteLine(".........................................");

count++;

}

}

public void DispalyGSalary()

{

for (int i = 0; i < count; i++)

{

float Grosssalary = 0;

if (EmpSalary[i] < 5000)

{

float HRA = 10 \* EmpSalary[i] / 100;

float TA = 5 \* EmpSalary[i] / 100;

float DA = 15 \* EmpSalary[i] / 100;

Grosssalary = EmpSalary[i] + HRA + TA + DA;

}

else if (EmpSalary[i] < 10000)

{

float HRA = 15 \* EmpSalary[i] / 100;

float TA = 10 \* EmpSalary[i] / 100;

float DA = 20 \* EmpSalary[i] / 100;

Grosssalary = EmpSalary[i] + HRA + TA + DA;

}

else if (EmpSalary[i] < 15000)

{

float HRA = 20 \* EmpSalary[i] / 100;

float TA = 15 \* EmpSalary[i] / 100;

float DA = 25 \* EmpSalary[i] / 100;

Grosssalary = EmpSalary[i] + HRA + TA + DA;

}

else if (EmpSalary[i] < 20000)

{

float HRA = 25 \* EmpSalary[i] / 100;

float TA = 20 \* EmpSalary[i] / 100;

float DA = 30 \* EmpSalary[i] / 100;

Grosssalary = EmpSalary[i] + HRA + TA + DA;

}

else if (EmpSalary[i] > 20000)

{

float HRA = 25 \* EmpSalary[i] / 100;

float TA = 20 \* EmpSalary[i] / 100;

float DA = 30 \* EmpSalary[i] / 100;

Grosssalary = EmpSalary[i] + HRA + TA + DA;

}

Console.WriteLine("Employee Details\nEmployee Number : {1}\nEmployee Name : " +

"{2}\nEmoloyee Salary :{3}\nEmployee GrossSalary : {4}", i,

EmpNum[i], EmpName[i], EmpSalary[i], Grosssalary);

Console.ReadLine();

}

}

}

static void Main(string[] args)

{

Employee emp = new Employee();

emp.RegisterEmp();

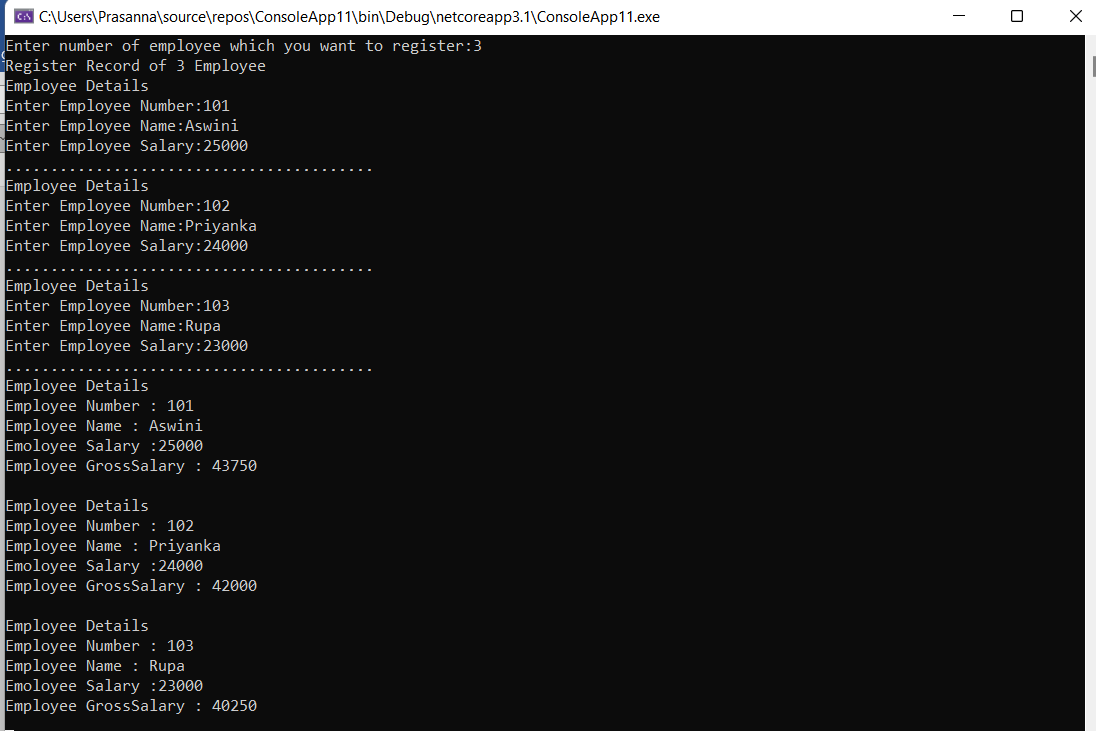
emp.DispalyGSalary();

}

}

}

**Output:**

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