**Object-Oriented Programming**

**Exercise 1 - Employee**

A company employs workers who are paid a weekly wage according to the number of hours they work. Each employee is paid a rate according to their experience.

Define an object EMPLOYEE which has the following fields: -

EmpID String

EmpName String

EmpRate Single

EmpHours Integer

EmpWage Single

The object should also have the following methods: -

WKInitialise Sets up a WORKER and sets the five fields.

E.g.

ID = 1000

Name = Patel

Rate = 6.75

WKCalWage Calculate the Wage by multiplying the Hours by Rate.

The EmpHours will need to be entered.

The code for the program is on the following pages. The code employs OOP techniques to define an EMPLOYEE object.

**Task 1**

Simply setup the program as shown and test that it works correctly.

**Task 2**

Amend the program as follows:

* Divide the EmployeeName into EmployeeForename and EmployeeSurname and amend the program to ensure it still functions correctly.
* Add a facility to ensure that EmployeeTax is calculated. Simply calculate the tax as 20% (0.2) of the EmployeeWage. This will involve an additional method called WKTax. You may choose to have the tax rate as a parameter passed to the method WKTax.
* Add a facility to given the employee a pay rise. The method WKPayRise has already been written and included in the class definition.

**Public Class Employee**

Private EmpID As String

Private EmpName As String

Private EmpRate As Single

Private EmpHours As Integer

Private EmpWage As Single

Public Property ID()

Get

Return EmpID

End Get

Set(ByVal value)

EmpID = value

End Set

End Property

Public Property Name()

Get

Return EmpName

End Get

Set(ByVal value)

EmpName = value

End Set

End Property

Public Property Rate()

Get

Return EmpRate

End Get

Set(ByVal value)

EmpRate = value

End Set

End Property

Public Property Hours()

Get

Return EmpHours

End Get

Set(ByVal value)

EmpHours = value

End Set

End Property

Public Property Wage()

Get

Return EmpWage

End Get

Set(ByVal value)

EmpWage = value

End Set

End Property

Public Sub WKInitialise(ByVal EID As String, ByVal EName As String,

ByVal ERate As Single)

EmpID = EID

EmpName = EName

EmpRate = ERate

EmpHours = 0

EmpWage = 0

End Sub

Public Sub WKCalWage(ByVal CHours As Single)

EmpHours = CHours

EmpWage = EmpRate \* EmpHours

End Sub

Public Sub WKPayRise(ByVal PRate As Single)

EmpRate = PRate

End Sub

End Class

Public Class frmWorker

Dim EmployeeID As String

Dim EmployeeName As String

Dim EmployeeRate As Single

Dim EmployeeHours As Integer

Dim EmployeeWage As Single

Dim Emp1 As New Employee

Private Sub cmdNEmployee\_Click(ByVal sender As System.Object,

ByVal e As System.EventArgs) Handles cmdNEmployee.Click

EmployeeID = InputBox("Enter ID")

EmployeeName = InputBox("Enter Name")

EmployeeRate = InputBox("Enter Rate")

Call Emp1.WKInitialise(EmployeeID, EmployeeName, EmployeeRate)

txtID.Text = Emp1.ID

txtName.Text = Emp1.Name

txtRate.Text = Format(Emp1.Rate, "Currency")

End Sub

Private Sub cmdHours\_Click(ByVal sender As System.Object,

ByVal e As System.EventArgs) Handles cmdHours.Click

EmployeeHours = InputBox("Enter Hours")

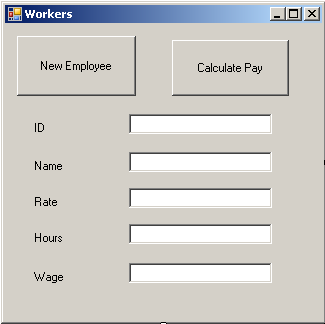
Call Emp1.WKCalWage(EmployeeHours)

txtHours.Text = Emp1.Hours

txtWage.Text = Format(Emp1.Wage, "Currency")

End Sub

End Class



**cmdNEmployee cmdHours txtID txtName txtRate txtHours txtWage**