This application calculates the amount of money you can borrow and loan amount and the payment. You choose a car or a home loan. Then you choose how much you can borrow or what you want your payment to be. Then select your interest rate, term of the loan and desired payment.

Your assignment is to put together the form design based on the code, which is presented below.

'Unit 5.05 The Loan Analyzer

'Uses Select Case, Interest Rate Calc., radio buttons, Dim Double, Decimal, Boolean, multiple subs

Public Class Form1

'Displays options for choosing loan information and adds

'appropriate choices to list box

'

'post: Options have been displayed.

'

Private Sub ImageClicked(ByVal sender As Object, \_

ByVal e As System.EventArgs) \_

Handles picAuto.Click, picHome.Click

Dim picImageClicked As PictureBox = sender

'Display options for choosing loan information

Me.grpWhatToKnow.Visible = True

Me.btnNewLoan.Visible = True

Me.btnCalculate.Visible = True

'Calculate button should be displayed but disabled

Me.btnCalculate.Enabled = False

'Clear any existing list items

Me.lstTerm.Items.Clear()

'Add appropriate terms to list box depending on image clicked

Select Case picImageClicked.Tag

Case "auto"

Me.lstTerm.Items.Add("2 years")

Me.lstTerm.Items.Add("3 years")

Me.lstTerm.Items.Add("5 years")

Me.lstTerm.Items.Add("7 years")

Case "home"

Me.lstTerm.Items.Add("10 years")

Me.lstTerm.Items.Add("15 years")

Me.lstTerm.Items.Add("30 years")

End Select

End Sub

'Hides loan information options. Clears label text.

'

'post: Loan options have been hidden and text in label

'text set to an empty string.

'

Private Sub btnNewLoan\_Click(ByVal sender As Object, \_

ByVal e As System.EventArgs) Handles btnNewLoan.Click

Me.grpWhatToKnow.Visible = False

Me.radHowMuch.Checked = False

Me.radPaymentSize.Checked = False

Me.lblTermPrompt.Visible = False

Me.lstTerm.Visible = False

Me.lblPrincipalOrPaymentPrompt.Visible = False

Me.txtPrincipalOrPayment.Visible = False

Me.lblRatePrompt.Visible = False

Me.cboInterestRate.Visible = False

Me.btnNewLoan.Visible = False

Me.btnCalculate.Visible = False

Me.lblResult.Text = Nothing

End Sub

'Displays options for entering loan information

'

'post: Options have been displayed.

'

Private Sub WhatDoYouWantToKnow\_Click(ByVal sender As Object, \_

ByVal e As System.EventArgs) Handles radHowMuch.Click, radPaymentSize.Click

Dim radOptionClicked As RadioButton = sender

'Display term options

Me.lblTermPrompt.Visible = True

Me.lstTerm.Visible = True

'Display either principal or payment options

Select Case radOptionClicked.Tag

Case "how much"

Me.lblPrincipalOrPaymentPrompt.Text = "Desired Payment:"

Case "payment size"

Me.lblPrincipalOrPaymentPrompt.Text = "Loan Amount:"

End Select

Me.lblPrincipalOrPaymentPrompt.Visible = True

Me.txtPrincipalOrPayment.Visible = True

Me.txtPrincipalOrPayment.Text = Nothing

'Display interest rate options

Me.lblRatePrompt.Visible = True

Me.cboInterestRate.Visible = True

Me.cboInterestRate.Text = Nothing

End Sub

'Clears the last loan results. Checks for numeric loan information and

'enables the Calcualte button if required data has been entered or

'selected.

'

'post: The Results label has been cleared. The Calculate button has been

'enabled if data has been entered or selected.

'

Private Sub InfoEntered(ByVal sender As Object, \_

ByVal e As System.EventArgs) Handles lstTerm.SelectedIndexChanged, \_

txtPrincipalOrPayment.TextChanged, cboInterestRate.SelectedIndexChanged, \_

cboInterestRate.TextChanged

Me.lblResult.Text = Nothing

Me.btnCalculate.Enabled = False

If Me.txtPrincipalOrPayment.Text <> Nothing And \_

Me.cboInterestRate.Text <> Nothing Then

Me.btnCalculate.Enabled = True

End If

End Sub

'Displays either the monthly payment for a loan or a loan amount that can

'be borrowed.

'

'post: The calculation result for the selected term, principal or

'payment, and interest rate have been displayed.

'

Private Sub btnCalculate\_Click(ByVal sender As Object, \_

ByVal e As System.EventArgs) Handles btnCalculate.Click

Dim term As Integer

Dim principalOrPayment As Decimal

Dim rate As Double

Dim result As Decimal

Dim validData As Boolean

'Get term

term = Val(Me.lstTerm.SelectedItem)

'Get principal or payment

GetDollarAmount(Me.txtPrincipalOrPayment, principalOrPayment, validData)

'Get interest rate if principal or payment is valid

If validData Then

GetPercentAmount(Me.cboInterestRate, rate, validData)

End If

'Calculate result if principal or payment and interest are valid

If validData Then

If Me.radHowMuch.Checked Then

result = PV(rate / 12, term \* 12, -principalOrPayment)

Me.lblResult.Text = "Loan amount: " & Format(result, "Currency")

Else

result = Pmt(rate / 12, term \* 12, -principalOrPayment)

Me.lblResult.Text = "Payment amount: " & Format(result, "Currency")

End If

Else

Me.lblResult.Text = "Data not valid."

End If

End Sub

'Processes data in a text box to read a dollar amount,

'if any

'

'post: dollars has been assigned a number if numeric data

'with or without a $ and commas is stored in the text box.

'isValid has been set to True if a numeric value is stored

'in the text box.

'

Sub GetDollarAmount(ByVal txtUserData As TextBox, ByRef dollars As Decimal, \_

ByRef isValid As Boolean)

Dim testAmount As String

isValid = False 'assume nonnumeric data

If txtUserData.Text <> Nothing Then

testAmount = txtUserData.Text 'data typed

testAmount = testAmount.Replace("$", "") 'delete $

testAmount = testAmount.Replace(",", "") 'delete commas

If IsNumeric(testAmount) Then 'numeric data

dollars = Val(testAmount)

isValid = True

End If

End If

End Sub

'Processes data in a combo box to read a percentage amount,

'if any

'

'post: percent has been assigned a decimal number if numeric data

'with or without a % is stored in the combo box. isValid has been

'set to True if a numeric value is stored in the combo box.

'

Sub GetPercentAmount(ByVal cboUserData As ComboBox, ByRef percent As Double, \_

ByRef isValid As Boolean)

Dim testAmount As String

isValid = False 'assume nonnumeric data

If cboUserData.Text <> Nothing Then

testAmount = cboUserData.Text

testAmount = testAmount.TrimEnd("%") 'delete %

If IsNumeric(testAmount) Then 'numeric data

If Val(testAmount) >= 1 Then 'convert data

percent = Val(testAmount) / 100

Else

percent = Val(testAmount)

End If

isValid = True

End If

End If

End Sub

End Class