Loan Calculator Assignment:

PublicClassForm1

PrivateSubbtnLoanAmount\_Click**(**ByValsenderAsObject**,** ByValeAsSystem**.**EventArgs**)** HandlesbtnLoanAmount**.**Click

DimrateAs-------'interest rate

'length of loan in years

DimmonthlyPaymentAsDecimal'monthly payment

DimisValidAs------'determine validity of amount and rate

'loan amount calculated using PV

DimtotalPaidAsDecimal'total amount spent

'total interest paid

'monthly interest rate

Dim“”AsInteger'term of loan in number of years

'Get montly payment

GetDollarAmount**(**Me**.**txtMonthlyPay**,** monthlyPayment**,** isValid**)**

IfisValidThen

'Get interest rate

GetPercentAmount**(**Me**.**txtRate**,** rate**,** isValid**)**

EndIf

IfisValidThen

'Get length of loan

IfMe**.**cboLengthYears**.**SelectedIndex **>=** 0Then

lengthOfLoan **=** Val**(**Me**.**cboLengthYears**.**SelectedItem**)** 'user selected item

Else

IfIsNumeric**(**Me**.**cboLengthYears**.**Text**)** Then

lengthOfLoan **=** Val**(**Me**.**cboLengthYears**.**Text**)** 'user typed value

Else

isValid **=** False

EndIf

EndIf

EndIf

IfisValidThen

'Proceed with the Present Value calculation if all input values are valid

monthlyRate **=** rate **/** 12

term **=** lengthOfLoan **\*** 12

loanAmount **=** PV**(**monthlyRate**,** term**, -**monthlyPayment**)**

totalPaid **=** monthlyPayment **\*** term

decAmtPaidInterest **=** totalPaid **-** loanAmount

'Display information

Me**.**lblAnswer**.**Text **=** "For monthly payments of " **& \_**

Format**(**monthlyPayment**,** "Currency"**) & \_**

" for " **&** lengthOfLoan **&** " years at " **&** Format**(**rate**,** "percent"**) & \_**

" interest:" **&** vbCrLf **&** "The loan amount is " **& \_**

Format**(**loanAmount**,** "Currency"**) &** vbCrLf **& \_**

"The total amount paid is " **&** Format**(**totalPaid**,** "Currency"**) & \_**

vbCrLf **&** "The total interest paid is " **&** Format**(**decAmtPaidInterest**,** "Currency"**)**

Else

'Display an error message if any of the input values are not valid

Me**.**lblAnswer**.**Text **=** "Data is Invalid"

EndIf

EndSub

'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.

'

SubGetDollarAmount**(**ByValtxtUserDataAsTextBox**,** ByRefdollarsAsDecimal**,** ByRefisValidAsBoolean**)**

DimtestAmountAsString

isValid **=** False'assume nonnumeric data

IftxtUserData**.**Text **<>** NothingThen

testAmount **=** txtUserData**.**Text'data typed

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

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

IfIsNumeric**(**testAmount**)** Then'numeric data

dollars **=** Val**(**testAmount**)**

isValid **=** True

EndIf

EndIf

EndSub

'Processes data in a text 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 text box.

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

'in the text box.

'

SubGetPercentAmount**(**ByValtxtUserDataAsTextBox**,** ByRefpercentAsDouble**,** ByRefisValidAsBoolean**)**

DimtestAmountAsString

isValid **=** False'assume nonnumeric data

IftxtUserData**.**Text **<>** NothingThen

testAmount **=** txtUserData**.**Text

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

IfIsNumeric**(**testAmount**)** Then'numeric data

IfVal**(**testAmount**) >** 1Then'convert data

percent **=** Val**(**testAmount**) /** 100

Else

percent **=** Val**(**testAmount**)**

EndIf

isValid **=** True

EndIf

EndIf

EndSub

PrivateSubInputValues\_Changed**(**ByValSENDERAsSystem**.**Object**,** ByValeAsSystem**.**EventArgs**)** HandlestxtMonthlyPay**.**TextChanged**,** cboLengthYears**.**TextChanged**,** cboLengthYears**.**SelectedIndexChanged**,** txtRate**.**TextChanged

Me**.**lblAnswer**.**Text **=** Nothing

EndSub

EndClass