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COP2360 C# Programming I

# **Module 4 ASSIGNMENT Chapter 6 - Problem 7: Present Value**

SCREENSHOT:

Graphical user interface, text, application, email

Description automatically generated

CODE:

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace Present\_Value

{

public partial class presentValueForm : Form

{

public presentValueForm()

{

InitializeComponent();

}

//exit button

private void exitButton\_Click(object sender, EventArgs e)

{

this.Close();

}

//clear button

private void clearButton\_Click(object sender, EventArgs e)

{

futureValueInputBox.Text = "";

interestValueInputBox.Text = "";

yearsValueInputBox.Text = "";

calculationResults.Text = "";

futureValueInputBox.Focus();

}

//PresentValue method that performs the calculation

private double PresentValue(double f, double r, double n)

{

double p = f / (Math.Pow((1 + r), n));

return p;

}

//calculate button

private void calculateButton\_Click(object sender, EventArgs e)

{

//declaring variables for storing user input

double futureval, interest, years, presentval;

//testing if future value input was vaild

if (double.TryParse(futureValueInputBox.Text, out futureval))

{

//testing if interest rate input was valid

if (double.TryParse(interestValueInputBox.Text, out interest))

{

//testing if years input was valid

if (double.TryParse(yearsValueInputBox.Text, out years))

{

//running my method to provide output for user

presentval = PresentValue(futureval, interest, years);

calculationResults.Text = presentval.ToString("c");

}

else

{

MessageBox.Show("Please enter a valid years value.");

}

}

else

{

MessageBox.Show("Please enter a valid interest rate.");

}

}

else

{

MessageBox.Show("Please enter a valid future value.");

}

}

}

}

//Collaboration Statement: I worked alone