

MIS 216  
FALL 2020  
PROJECT 5

Loops

1. You will add this to your project already built
2. Find your folder on your desktop (or copy from miscapstone to your desktop)
  - a. Click on the .sln file and Visual Studio should open
3. Fix any errors noted in Entropy for Project 4.
4. Create a 7<sup>th</sup> form in your project, name this new form: **Loops** (use prior instructions to help you build the 7th form)
  - a. Change the text property of the form to be: Loops – Your Last Name.
5. To save effort, only add a new menu item in the top menu strip on the first form to take you to the new form as in (please keep the Exit commands):
  - a. The code for the 7th Button:

```
Loops newProject7 = new Loops();  
newProject7.Show();
```
6. Create the following form (read instructions on next page)

Loops - My Name

Laptop Current Price

Desired Price

Calculate Reduction in Price

Current Population

Growth Rate (as in .04)

Number of Years

Calculate Future Population

Celsius and Fahrenheit

lstAnswers

- a. Name all your objects clearly as in :
    - i. txtLaptopCurrentPrice
    - ii. txtDesiredPrice
    - iii. lstAnswer
  - b. and likewise the corresponding variables that have the data type of the variable and matching the text box name as in:
    - i. dblLaptopCurrentPrice = 0;
    - ii. dblDesired Price = 0;
    - iii. intCounter = 0;
    - iv. dblTotal = 0;
    - v. const dblYearlyDeduction = .10
7. Read Exercise 4-1 on page 139 for help with the first calculation. You will calculate using a loop the number of years it will take for the Laptop to be less than or equal to your desired price.
- a. You should clear the list box as the first line of code (before while) in the calculation area as in : lstAnswer.Items.Clear()
  - b. Also set before the while statement dblTotal to be the current price
  - c. The formula (to help you get started in the while)
    - i.  $dblTotal = dblTotal * (1 - dblYearlyDeduction)$
  - d. Your list box should show (if you start with 1000)
    - i. Year 0: \$1000.00
    - ii. Year 1: \$900.00
    - iii. Year 2: \$810.00 (continue until you hit your target price)
8. Read Exercise 4-4 on page 139 for help with the second group / calculation
- a. Follow the same process as in #7 above.
  - b. To help you, the formula would be to ADD versus SUBTRACT as in:
    - i.  $dblTotal = dblTotal + (dblTotal * desiredGrowthRate)$
    - ii. Sample list box output would be (don't forget to clear)
      1. Year 0: - 10,000
      2. Year 1: - 10,500 (if the growth is 5%) etc.
9. Read Exercise 4-3 on page 139 for help with the third button.
- a. Sample output in the list box (don't forget to clear)
    - i. F: -40; C: -40
    - ii. F: -30, C: -34.4
    - iii. F: -20, C: -28.9
    - iv. Continue.. (you can check them in Google)
10. Save, test!
11. Once you complete and test
- a. Close Visual Studio (Visual Studio must be closed to copy the folders)
  - b. Copy your entire folder from your desktop to your [\\miscalpstone\mis216\S20Folder](#)
  - c. DO NOT PLACE IN THE GRADED FOLDER