COP2010 Project #1

50 pts – Due by start of class on 9/15

You are going to create an application to calculate the area and perimeter of either a circle or rectangle. You will have text boxes to enter length, width, and radius. There will be two buttons with one for calculating the circle and one for calculating the rectangle.

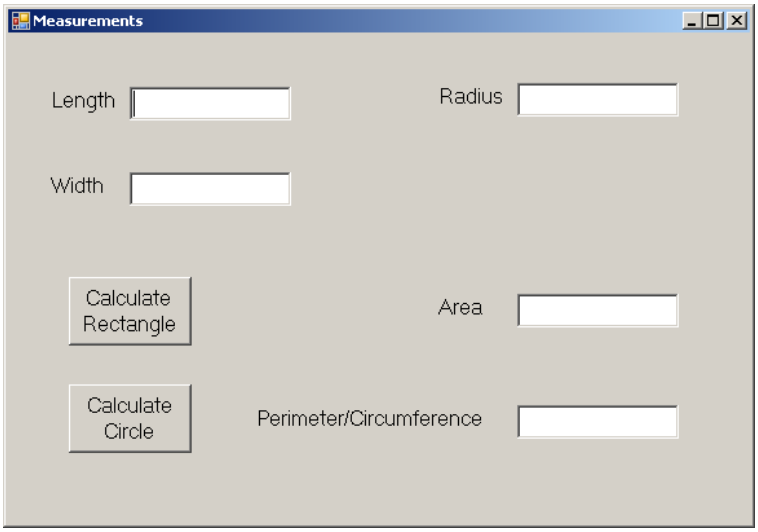
Objectives:

- Learn to parse data from a text box
- Use arithmetic calculations on variables
- Use tostring to output to a text box
- Learn to use try/catch for catching errors
- Use .Clear to clear text boxes

Requirements

1. Read the projects and assignments requirements pdf in the course documents section of canvas. You need to follow all of the guidelines for this project.
2. Store input values into local variables of type double
3. Store the calculated values into separate variables of type double
4. To calculate area, perimeter use the formulas below
    a. Are of circle: Math.PI * (radius * radius)
    b. Perimeter of circle: Math.PI * 2 * radius
    c. Area of rectangle: length * width
    d. Perimeter of rectangle: 2(length) + 2(width)
    e. Note: when you start typing Math.PI intellisense will give prompts (it is part of the math class provided by the Visual Studio IDE)
5. Use .clear method to clear text boxes. Clear length and width text boxes when calculating a circle and clear radius text box when calculating a rectangle

Example form: not required to match layout, but must have text boxes, buttons, labels, etc.



Grading Rubric (possible 50 pints):

A submitted project must compile and run or it will be graded with zero points

Description	Itemized Value	Total Possible	Total Earned
Correct Output for text boxes: Radius, Area, Perimeter	6 pts each box	18	
Correct naming of all event handlers	All or nothing	10	
Correct naming of all variables	All or nothing	10	
Proper comments and documentation	NA	5	
working try/catch for input error	All or nothing	5	
Text boxes clear	All or nothing	2	

Extra Credit: 2 points

If the basic requirements are met you can get a possible of 2 extra points for formatting the output of the calculations so they only display to four decimal places.