

## Assign 02

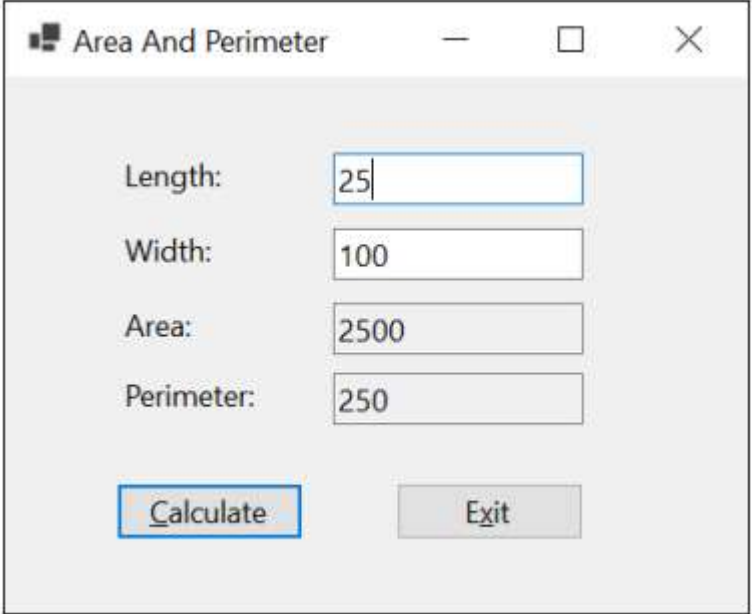
Due date and time: 02/08/2023 11:59 pm

Total points: 5

### Objective

The objective of this assignment is to practice decision structures, data conversion and simple event handling in a C# desktop application using VS 2022 IDE.

Create a form that accepts the length and width of a rectangle from the user and then calculates the area and perimeter of the rectangle.



The screenshot shows a Windows application window titled "Area And Perimeter". Inside the window, there are four text boxes arranged vertically. The first is labeled "Length:" and contains the number "25". The second is labeled "Width:" and contains the number "100". The third is labeled "Area:" and contains the number "2500". The fourth is labeled "Perimeter:" and contains the number "250". The "Area" and "Perimeter" text boxes are disabled, indicated by their gray background. At the bottom of the form, there are two buttons: "Calculate" and "Exit". The "Calculate" button is highlighted with a blue border.

### Instructions:

1. Create a new window form project named AreaAndPerimeter.
2. Add labels, text boxes, and buttons to the default form and set the properties of the form and its controls so they appear as shown above. When the user presses the Enter key, the Click event of the Calculate button should fire. When the user presses the Esc key, the Click event of the Exit button should fire. Area and Perimeter textboxes are readonly. 2 points

3. Create an event handler for the Click event of the Calculate button. This event handler should get the values the user enters for the length and width, calculate and display the area (length x width) and perimeter ( $2 \times \text{length} + 2 \times \text{width}$ ), and move the focus to the Length text box. It should provide for decimal entries, but you can assume that the user will enter valid decimal values. 2 points
4. Create an event handler for the Click event of the Exit button that closes the form. 0.5 pt.
5. Save the project and all its files. Test the application to be sure it works correctly

**Documentation:** Add proper single line or multiline comments to the code you have written to explain what the code does. 0.5 pt.

**Submission:**

1. A compressed zip folder of C# solution to canvas Assign 02 folder.
2. In a separate Word document, include a retrospective that discusses:
  - a. What went well with the assignment?
  - b. What did not go well -- what did you struggle with?

**Note:**

1. The assignment awards 5 points according to the criteria given above. Partial or incorrect completion of the elements will reduce points awarded.
2. The retrospective will not be graded but it is required. Failure to include a retrospective will result in 5% reduction in points.
3. Use best practices to write code. Failure to not follow these best practices will result in 10% reduction in points.