The goal of this assignment is to compute areas of various geometric shapes and print the results out to the terminal.

Assignment
Write a C++ program that computes the area of a geometric shape. Your program will prompt the user for the dimensions and you will compute the resulting area. You will write 3 programs,

- a program to calculate the area of a square
- a program to calculate the area of a rectangle
- a program to calculate the area of a circle

The formulas for calculating areas are:

- area of square = \((\text{length of side}) \times (\text{length of side})\)
- area of rectangle = \((\text{length of side}) \times (\text{width})\)
- area of circle = \((\text{radius}) \times (\text{radius}) \times \pi\)

For each program, prompt the user for the appropriate parameters, store values into local variable(s). Perform area computation, storing the result in a local variable. Then output the result of the computation. As an example consider the following invocation of the rectangle C++ program:

```
$ ./rectangle
This program calculates the area of a rectangle. You will be requested to enter the length and width of a rectangle.

Enter the length (and press return): 13
Enter the width (and press return): 5

Compute area of a rectangle with length (13) and width (5) = 65 units squared
```
The skill set required for this assignment includes:

- Declaring variables
- Properly naming C++ identifiers
- Simple Input/Output, i.e. reading input data from user (keyboard) and printing results out to terminal window
- Simple arithmetic calculations
- Simple problem solving

This graded assignment is worth 100 points and will be counted as part of your Programming grade for the course.

The product that you submit must be your own work. Collaboration is allowed as specified within the syllabus for this course. For this assignment, you are not required to submit an acknowledgement statement.

Your programs must be posted to Blackboard no later than the 12:00 noon Sunday, September 18th.