

ASSIGNMENT 3

Write a C++ program called **YourName-Assignment3** (replace **YourName** with your actual name, no spaces) that does the following steps (steps should be in this order and messages and variable names should be exact/as requested):

1. Output a message asking the user for their favorite number "What is your favorite number?".
2. Input a value from the user into integral variable **Number**.
3. Compute the area of the square with the side **Number** and store it in a floating-point variable called **AreaSquare**.
4. Compute the area of the rectangle with the width **Number** and length $2 * \text{Number}$ and store it in a floating-point variable called **AreaRectangle**.
5. Compute the area of the circle with the radius **Number** and store it into a floating-point variable called **AreaCircle**.
6. Output the message "I have used your favorite number in some geometric formula:"
7. Output the data from the table below (use the exact text and replace the yellow text with the values from variables or computed from the program) in a table format with 2 columns and with the format from the blue boxes bello; table lines/borders are not required

Shape	Area
Square with side Number	AreaSquare
Circle with radius Number	AreaCircle
Rectangle with width Number and length $2 * \text{Number}$	AreaRectangle

Column1

Width=50
Align=left
Fill=space

Column 2

Format=fixed floating-point format
Width=7
Align=right
Precision=2 decimals
Fill=underscore
Required decimal point and leading/trailing zeros

Your program should be user-friendly (prompt user for input and show a message/explain the output before outputting the numeric value for the area) and programmer-friendly (have comments at the beginning of the code explaining the program and before each line of code explaining what the line is doing) and use only concepts learned in class (so far). The program should work with any number that the user might enter.

For example, if the user enters **5**, the output should look like this:

What is your favorite number: 5

I have used your favorite number in some geometric formula:

Shape	Area
Square with side 5	25.00
Circle with the radius 5	78.50
Rectangle with the width 5 and length 10	50.00

Create a Microsoft Word **screenshots document** called **YourName-Assignment3.docx** (replace **YourName** with your name, no spaces) that contains screenshots of your *entire C++ code* (take multiple screenshots if the code is larger than one screen), and the *entire console output* (take multiple screenshots if the output is larger than one window).

Submit your **YourName-Assignment3.cpp** C++ source code and **YourName-Assignment3.docx** screenshots document files under Assignment3 on eCampus. Do not archive the files or submit other file formats.