

Purpose: More practice with control structures.

For this lab you will write a small program that prints a few “shapes” using asterisks. Your program will prompt the user to select a shape by entering a number (square or triangle for B grade, add the zig-zag for the A grade). It will then prompt for the size, and then if a square or triangle is selected it will prompt for “not filled” or “filled”, and if a zig-zag is selected it will prompt for the number of repetitions. (See back for an example run). After printing a shape, your program will loop back and prompt again for another. One of the “shape selections” will cause the program to exit.

Notes:

For pre-lab, draw a flowchart of your code and make a serious attempt at writing it. Bring this to lab. It will be checked at the beginning of lab and will be a part of your total lab grade.

Have your code behave exactly (and format exactly) as shown below for the sample run.

Suggestion: work on how to draw a square first. Use “nested `for` loops” for this (one inside the other). For the unfilled square, substitute spaces for the asterisks on the “inside” (how do you know if a given location is “inside” the square?). The triangle code can be similar, but with a few small changes (mine had only two small changes).

Sample output from your program for each of the three grades:

Enter shape (1) Square, (2) Triangle, (3) Zig-zag (4) Quit: 1
Enter size: 6
Enter (0) No fill, (1) Fill: 1

Enter shape (1) Square, (2) Triangle, (3) Zig-zag (4) Quit: 2
Enter size: 7
Enter (0) No fill, (1) Fill: 0
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Enter shape (1) Square, (2) Triangle, (3) Zig-zag (4) Quit: 3
Enter size: 4
Enter number of zigs: 3
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Enter shape (1) Square, (2) Triangle, (3) Zig-zag (4) Quit: 4