Create the following program

User Requirements

Create a program that displays an octagon based on the user entry (see figure below).

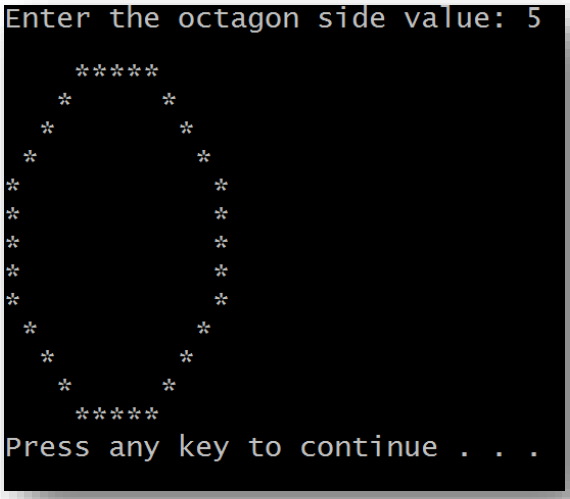

Figure 1: Sample run when user enters 5

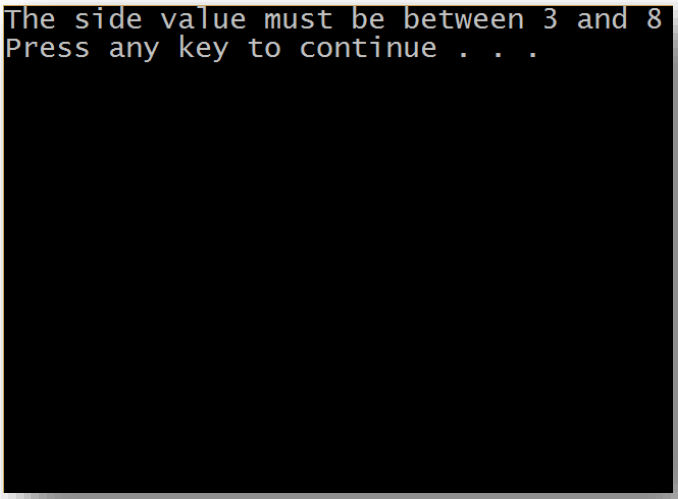

Figure 2: Example of what happens when a user enters an incorrect value

If the user enters a value from 3 to 8, an appropriate octagon will be displayed, otherwise a message is displayed indicating that the user must enter a side value between 3 and 8.

Software Requirements

Create an Octagon class that contains a private instance variable called **side** that determines the size of the octagon displayed on the console (see figure above). Use the information below as a reference when creating your Octagon class. (Note: The + symbol in front represents a public item).

Octagon
+Octagon() +Octagon(const int sidePar) +void setSide(const int sidePar) +int getSide() const +void display(const int sidePar)

The private instance variable side is not the only variable you can create. In fact, you'll probably need to create many more variables to account for the spaces inside and outside of the octagon and the number of stars to draw for any given row. Use any additional variables, getter functions, or setter functions you deem necessary.

Note: Your main program should be as small as possible allowing the class functions to do a majority of the work.

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