

Assignment 4

Reading and Exercises

Read pages 186-211 from the textbook and Lesson 4 from the Course Contents section.

Review

Take the review quiz (you can certainly use the book to look things up) at <http://oc.course.com/computerscience/malikcpp4e/index.cfm?page=chapter-selftests&chapter=2>
I will not grade this as part of the assignment, but I might use any of the questions or similar for our Tests.

Questions

- 1) Boolean values in C++ are represented as internally as 0 (false) and anything else (true). What is the result of $(3 < 4) \ \&\& \ (5 > 7)$ as a boolean value and what is its internal representation ?
- 2) Is there any way to write, using the operators ! (not), <, >, <=, >=, || and &&, the opposite of the following: $a < b \ \&\& \ c < d$
The opposite will be a boolean expression using the operators above such that it is true if the above is false, and false if the expression above is true.
- 3) When are braces { } needed as part of an if? (Refer to Lesson 4, online)

C++ Program

Write a program that calculates the area and the perimeter of a rectangle whose dimensions are entered from the keyboard.

Function main should accept the length and width as input from the keyboard and store two integer values, one for the length and the other for the width.

Check that the length/width entered are allowed numbers (non negative). If they are negative, print a message to the effect that the input was wrong, and finish the program without calculating the area or perimeter.

The function main should call two functions written by you: *area* and *perimeter*. These functions, of course, will be called with two parameters (length and width) and should return the value of the area and the value of the perimeter respectively.

Function main should display the results.

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