

ITGM 315 – 1-2-3 Knockout – Optional Exercise

DATE DUE: no later than start of class 12

Hand in through the Dropbox

Make sure your files are working with Visual Studio 2010!

This is an **optional exercise**. You are not required to hand this in. This covers material up to and including Functions. **If you have handed in** Exercise 1,2,3 and you do better on this Exercise than on any of 1,2, or 3 this grade will knock-out the lowest grade for those exercises.

1-2-3 Knockout:

Write a program in C++ that prints the numbers from 1 to 100. But for multiples of three print “Knock” instead of the number and for multiples of five print “Out”. For numbers which are multiples of both three and five print “KnockOut”.

1. Your program must contain at least one function used in a non-trivial way
2. The output should be neatly formatted

Next, allow the player to repeatedly input a number from 1 to 100 and the output is to be the number, Knock, Out, or KnockOut according to the rules above. Keep track of how many times the word KnockOut is printed and report the result when the player wants to quit the game.

Your program should print the table of results and then repeat the KnockOut game until the player is ready to quit.

Submission Guidelines:

DO NOT RENAME YOUR PROJECT DIRECTORY, just your zip file. The IDE uses the project name internally and your .sln file will not work properly if you rename the project even if your .cpp file is fine.

Submit your files as *LastnameFirstnameKnockOut.zip*

Grading Guidelines

Design and Debugging (30 points)

- 30 points if the program works exactly as stated in the design specifications given.
- 15 points if the program compiles, does not crash, and displays some of the behavior but has some or minor bugs or omissions.
- 0 points if the program does not compile, or compiles but crashes immediately, crashes part way through, or has major bugs or omissions.

Use of loops (20 points)

- 20 points if the program uses loops where appropriate and with correct syntax
- 10 points if the program has bugs with respect to the loops
- 0 points if the program does not use loops correctly

Use of User-Defined Functions (30 points)

- 30 points if functions are used properly
- 15 points if the program has bugs but uses the correct ideas and concepts in the right places
- 0 points if the program does not include any user-defined functions, or uses them incorrectly.

Coding Style (10 points)

Use of Comments (10 points)