

# COP 2200 Introduction to C

## Homework 4

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In this assignment, you are going to turn in a **single** cpp file. Your goal is to design a little number guessing game. The purpose is to practice while and if. There will be only one single task, and everything can be written inside the main function.

**Task 1:** You define an integer variable **int**  $x$ , and you assign  $x$  an arbitrary value you like. Then you are going to ask the user to guess what  $x$  is. We let the user guess up to 10 times.

Your program starts like this:

1. First the program prints “Guess the number:”
2. Then the user enters one number.
3. Then the program prints “This is attempt 1, and the user guesses XXX”, where XXX depends on the user’s input.
4. Then the program prints one of the three depending on the situation: (1) “Correct!”, or (2) “The guess is too small”, or (3) “The guess is too large”.
5. If the user guesses correctly, end the game. Otherwise, repeat from step 1. Your program should print “This is attempt Y, and the user guesses ZZZ”, depending on how many times the user had tried before.
6. If the user fails 10 times, the program prints “Fail the game!”, and terminates the game.