

# CS 1428 Honors

## Lab 3

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### Questions

1. (15 pts) Write a simple program that functions as a basic exponentiation tool. You should prompt the user for both a number and the power to raise it to. Then the program should calculate and output to stdout the result. Name your program lab3h\_part1.cpp
2. (25 pts) If you did not use a switch statement last week in your calculator program, convert it now so that it does. Ensure your program continues to meet all requirements after conversion. Name your program lab3h\_part2.cpp
3. (60 points) Create a program named lab3h\_part3.cpp that functions as a number guessing game. Requirements:
  - You should prompt the user for the range they wish to be guessing from, ie. 1-10.
  - The user should be prompted to input the high and low limits as separate integers.
  - The game should then begin, and the user should be prompted for their first guess.
  - The user will submit their guess and one of four things should happen:
    - (a) The guess is correct – output a statement informing them they guessed correctly as well as the number of tries it took them to get it right.
    - (b) The guess was too low – output a statement indicating that the guess was incorrect and inform them that the guess was too low.
    - (c) The guess was too high – output a statement that the guess was incorrect and inform them that the guess was too high.
    - (d) The guess was out of range – output a statement that the guess was out of range and inform them of the correct range.
  - At the end of the game, ask the user whether or not they want to play again. If they do, start the game over again.
  - For this program I have supplied a starter file to handle the random number generation. You MUST use this file in order for your program to work correctly. ( unless you really want to show off )

## Deliverables

Hard copy of the source code you wrote (lab2h\_part1.cpp, lab2h\_part2.cpp, and lab2h\_part3.cpp) and the answers to the questions. Soft copy (upload to homework upload) of all your source code files.



Changing the names would be easier, but if you're not comfortable lying, try only making friends with people named Alice, Bob, Carol, etc.