

COP 2200 Introduction to C

Homework 1

Feng-Hao Liu

In this assignment, you are going to turn in **a single** cpp file. Your goal is to calculate the areas of the following: (1) the circle of radius r , (2) the smallest square that contains the circle (think about what the width is), and (3) the difference.

We break down things into the following tasks:

- **Task 1:** you should print “Enter an integer for the radius:” in the first line.
- **Task 2:** let the user input the integer as the radius. You can assume that the user enters the integer correctly.
- **Task 3:** in the next line, print “The area of the circle is: ” and then print a floating number followed the colon. (The floating number should be the area, not something arbitrary.)
- **Task 4:** in the next line, print “The area of the square is: ” and then print an integer followed the colon.
- **Task 5:** in the next line , print “The difference is: ” and then print a floating number followed by the colon.

To achieve the task, you must learn (1) how to declare variables of different types, e.g. **int**, **double**, (2) how to manipulate operations on the variables, and (3) how to handle input/output (cin/cout, printf/scanf).

In addition to writing codes, you should think about why in task 3 you need to output a floating number, but in task 4 you only need to output an integer.

