

**COSC 1420.S01
PROGRAM FOUR**

ASSIGNMENT:

Write a program to calculate and print the result of the following two operations:

$$1/1 + 1/2 + 1/3 + 1/4 + 1/5 + \dots + 1/99999999 + 1/100000000$$

and

$$1/100000000 + 1/99999999 + 1/99999998 + 1/99999997 + \dots + 1/3 + 1/2 + 1/1$$

Results should be totaled and printed once using float variables for each calculation and once using double variables for each calculation. There should be a total of four answers printed. Make sure that the answers are adequately labeled. You may use any of the three loop mechanisms (**while**, **do-while**, or **for**).

EXTRA CREDIT #1: Use only one loop in the program (10 points).

EXTRA CREDIT #2: Write an explanation if any differences exist in your answers (20 points).

TURN IN:

- 1) An electronic copy of the .c file in the project folder as created by Visual Studio. This will be emailed to the instructor with the subject line "COSC 1420.S01 – Lab 4".
- 2) If you wish any feedback on your work, turn in a printed listing of the .c file that you created.

DUE: 13 Feb 2019