

CSC 261: Computer Organization and Assembly Language
Summer 2019
Assignment 4

Note: Create one Visual Studio solution per each question. Make sure to rename the folders, say Question 1, Question 2, etc. Put all of them in a folder with the name Assignment-4, zip it and upload it to Canvas. **Do not forget to put comments.**

Question 1 (50 points): Using the windows32 framework, write a complete 80x86 assembly language program that prompts for and inputs four grades with separate dialog boxes, and calculates the sum and the average (sum/4) of the grades. Display the sum and average on two lines of a message box, each line with an appropriate label.

Question 2 (50 points): One way to calculate the harmonic mean of two numbers x and y is using the expression

$$\frac{2xy}{x+y}$$

Using the windows32 framework, write a complete 80x86 assembly language program to prompt for and input two numbers and then calculate and display their harmonic mean in *ddd.d* format.

Hint: Multiply by 20 instead of 2 to get an extra digit. Then after you use the `dtoa` macro to convert the 10-times-too-large number to ASCII, copy (1 byte at a time) the last four characters of the string to the string you will actually display. The string for display might be defined

`hMeanOut BYTE 3 DUP(?), '.', '?', 0`