CSCI 4591: Computer Architecture
HW Assignment # 5

Due Date: March 7, 2021 @ 12:55 PM

1)   Express the following numbers in IEEE 32-bit (single precision) floating point format:

   1) -5.5 = -101.1 x 10^2 0|129

            1 1000 0001 0110000000000000000000000

      calculator:

   2) 0.0005 = 0.00000000001 = 1.0 x 10^{-9} 0|118

            0 0111 0110 00000000000000000000000

   3) 0.1 = 0.0001100110011001101 = 1.100110011001100 × 10^{-4} 0|123

            0 0111 1011 10011001100110100000000

2)   The following numbers use the IEEE 32-bit (single precision) floating-point format. What is the equivalent decimal value?

   3) 1 10000011 11000000000000000000000 = -1 | exp = 131| fraction= .11   = $(1.11 \times 2^{131-127})$ = -17.76

   calculator: -28

   4) 1 01111110 10100000000000000000000 = -1 | exp = 126 | fraction= .101   = $(1.01 \times 2^{126-127})$ = -.5505

   calculator : -0.8125

Create the text file using Microsoft Word, Open Office Writer, or a text editor. Name the document as follows:
FirstName_LastName_HW5

Rubric for Grading:

Description	Points
Question 1	30
Question 2	20
Total Points	**50**