Purpose: This program will involve working with macros to perform a variety of tasks.

Download the provided template file, it contains some provided strings as well as code to output the strings to the console.

For each macro, a comment can be found in the text section where the invocation(s) for the macro should go.

Program Specifications
You will need to write the following macros:

1. A macro that will take two 64 bit memory segments as arguments and swap their values. You must use the stack to hold at least one of the values temporarily.

2. A macro that takes a single memory address as an argument. This macro will need to eliminate any leading spaces. Count the number of spaces before any other letter appears. Push each character until (and including) the null character. Pop the characters back into their new place by adjusting the pointer according to the number of spaces counted. The macro should skip the pushes/pops if no leading spaces were found.

3. A macro that takes two arguments, a memory address to a qword variable and a memory address to a string. The string will contain a number in KMB format. The macro will calculate the integer value of the string and store it in the provided variable.

Hint: The text will be formatted as follows:
0 or more spaces
0 or 1 '-' may appear
1 or more numerals ('0' to '9')
0 or 1 '.' may appear
1 or more numerals ('0' to '9')
1 'k'/'K', 'm'/'M', or 'b'/'B'
1 null

For k/K, the value must be multiplied by 1,000.
For m/M, the value must be multiplied by 1,000,000.
For b/B, the value must be multiplied by 1,000,000,000.

Hint: Keep track of the number of digits that appear after
a decimal point. Reduce the power of the KMB
multiplier by that amount before multiplying.

$$14.15k = 1415 \times 10^{(4-2)} = 14,150$$
$$0.9k = 9 \times 10^{(4-1)} = 900$$
$$-16M = -1 \times 16 \times 10^{(6)} = -16,000,000$$

You do not need to check for any errors or overflows.

Submission
Once you are satisfied with the program, upload the
assembly source code (.asm) file to the class website.