CS 240
Fall 2019

Project 0
First DOS Program

Assigned: Thursday, September 5, 2019
Due: 10:00 p.m., Friday, September 6, 2019

Here is a minimal DOS program to add two 16-bit unsigned integers (computes $result = x + y$):

```
TITLE minimal

; minimal.asm
; Professor Bailey
; Spring 2019

; Adds two 16-bit unsigned integers.

INCLUDE CS240.inc
.8086

.data
x WORD 265
y WORD 197
result WORD ?

.code
main PROC
     mov ax, @data      ; load data segment register...
     mov ds, ax         ; ...with location of our data
     mov ax, x          ; move x to the accumulator
     add ax, y          ; add y to the accumulator
     mov result, ax     ; store the result in memory
     call DumpRegs      ; display all registers
     mov ax, 4C00h      ; DOSfunction 4C: exit with termination code...
     int 21h            ; ...exit
main ENDP
END main
```

Listing for `minimal.asm`

Place this code in the file `minimal.asm` and assemble it using

```
C:\> makeasm minimal
```

Run the resulting program to verify that it correctly calculates the result:

```
C:\> minimal
```

How to submit.

1. At the DOS prompt, remove the flash drive.
2. Reboot the computer into Windows (or your operating system)
3. Reinsert the flash drive.
4. Transfer the files to `gemini.cs.hamilton.edu` (if you don't know how to do this, you'll need to research it).
5. Log in to `gemini.cs.hamilton.edu`
6. `[user@gemini ~]$ cs240`
7. `[user@gemini ~]$ submit`

Submit will not be open until 24 hours before the assignment is due. You may submit as many times as you want up to the deadline. Your final submission will be used in grading.