CS 240
Fall 2019

Project 5
Stack Procedures

Assigned: Monday, October 7, 2019
Due: 10:00 p.m., Sunday, October 13, 2019

Introduction. There are two problems here. Do them, commenting neatly and copiously. Use `.8086` mode and 16-bit registers as usual. For each problem, write your procedure, any supporting procedures, and code that tests the procedures. The code you turn in should *not* include an entry point so it can linked to other code (using `makeasms`). Make wise choices about data types and memory usage. In all cases write the best code that you can.

1. Write a procedure `SafeRead` for allowing a user to enter (via keyboard) a string of characters to a buffer, taking steps to ensure there are no buffer overruns or underruns. Pass the buffer offset and its size on the stack (push the offset first). Input is terminated by `ENTER` or `control-c`, the latter of which should abort the program with an appropriate error message. You should support the backspace character in the appropriate way as well. The result string should be properly null-terminated and should not include the terminating `ENTER`.

2. Study DOS function `2Ch`. Implement a procedure `Delay` which takes a single parameter on the stack: the number of milliseconds and returns only after that time has elapsed.

How to submit. Submit the file `project5.asm` using the standard course submission procedure below.

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.