Write a *trap* routine that inputs and echoes a string of characters from the keyboard until it finds a “carriage return” character (ASCII x0D). This is similar to the C/C++ function *gets()*:

- The routine should be invoked with a TRAP x40 instruction.
- The string of characters should be stored in the buffer pointed to by R0 (i.e., prior to invoking the routine, you should load R0 with the *address* of the character buffer.
- The routine should not store the carriage return character, but should append the NULL character to the end of the string.
- The routine should leave all registers, except R0 and R7, intact.

You can use the following code as a “skeleton” for your program. This code first sets up the trap vector (which would normally be performed by the operating system), loads R0 with the address of a buffer, and then calls the routine:

```
.ORIG x3000
  LEA R0, MyTrapRoutine ; Initialize Trap Vector
  STI R0, MyTrapVector
  LEA R0, MessageBuffer
  TRAP x40
  PUTS
  HALT
MyTrapVector .FILL x40
MyTrapRoutine
      ......
MessageBuffer .BLKW 80
```

To turn in your program, you should use the checkin program.