CIS40/CNET220 EXERCISE 3

NAME

Base-Plus-Index Exercise

1. In debug, enter your ascii message at offset 200h of the default data segment
    a. Use: e 200 'your message'
    b. Write down your message here _____
2. Assemble the following code at the default location (just enter "a")
    a. Note only the default offset is shown

```
0100        PUSH   DS
0101        MOV    AX,0000
0104        PUSH   AX
0105        MOV    BX,0200
0108        MOV    CX,  "Add length of your message here"
010B        MOV    SI,0000
010E        MOV    AH,02
0110        MOV    DL,[BX+SI]
0112        INT    21
0114        INC    SI
0115        DEC    CX
0116        JNZ    0110
0118        RET
```

3. Save the program (plus the data that is why CX is set to 200 below) to either diskette or the student directory on drive C:

```
N c:\student\ex3
R cx
200
w 100
```

4. Run the code by typing "g" for go, then enter
    a. Instructor Verification of message _____

Register Relative Exercise

5. You need to Modify the statements at 105, 10B, 110, 114, and 116 as follows.
    a. Change statement at 110 to Register relative indexing using only the BX register and a fixed offset of 200h.
        i. The BX register will now assume the function the SI register was performing (i.e. stepping through your message one character at a time)
        ii. 200 which was previously loaded into the BX register (to point to the message) is now part of the instruction.
    b. At statement 105 you need to initialize the BX register to the proper value
    c. At 10B since the SI register is not being used you do not need it any longer
    d. At 114 the SI register is not part of statement 110, so you need to correct this statement to reflect your new Register relative indexing
    e. At 116 your JNZ offset address will change since you deleted instruction 10B
6. Save you new exercise as ex3a
7. Run your code and verify the results
8. Show instructor code and results Verification _____