Lab #3

Memory and Registers

1- Consider the following .data segment: (ASCII value of “a” is 61h)

```
L1 dw 435
L2 db "a","b","c","d","e",0
L3 db 0A1h, 0B2h, 0C3h
L4 dw 23o
```

Consider the following program fragment:

```
mov eax, [L3]
inc eax
mov [L2], eax
mov bx, [L1]
mov eax, L3
inc eax
mov [eax], bx
```

After the code finishes executing, what are the contents of the 13 memory bytes starting at address L1, on a machine using Little Endian?

Memory Layout

2- Consider the following .data segment:

A db "d", 0, "af", 27o, 0

B dw 011FAh

C times 2 dw -15

D db 043h, 0AAh

E dw 009h

F dw -34o, 0

Show the contents of the memory bytes starting at address A, in hex, on a machine that uses Little Endian. Indicate labels as well .

3- Consider now the following program fragment:

Memory and Registers

L1 L2 L3 L4 L5

03 00 00 00 6C 6C 6F 00 A1 B2 C3 13 00 FF FE

```
mov     eax, [L2]
inc     eax
mov     [L3], eax
mov     ebx, [L1]
mov     eax, L5
sub     eax, ebx
mov     word [eax], 01970h
```

Write the content of relevant registers and of RAM (i.e., 15 byte values) after each instruction is executed on a Little Endian machine.