16.317: Microprocessor Systems Design I

Fall 2013

Lecture 8: Key Questions

September 20, 2013

1. Show the results of running the following program if DATA_SEG_ADDR = 1200H, assuming the memory contents shown:

DATA_SEG_ADDR:0000		
DATA_SEG_ADDR:INIT_TABLE	11	22
	33	44
	55	66
	77	88
	99	AA
	BB	CC
	DD	EE
	FF	16
	03	17

```
MOV  AX, DATA_SEG_ADDR
MOV  DS,AX
MOV  SI,[INIT_TABLE]
LES  DI,[INIT_TABLE+02H]
MOV  AX,[INIT_TABLE+06H]
MOV  SS,AX
MOV  AX,[INIT_TABLE+08H]
MOV  BX,[INIT_TABLE+0AH]
MOV  CX,[INIT_TABLE+0CH]
MOV  DX,[INIT_TABLE+0EH]
```

2. Describe the x86 flags.

3. Describe the operation of the ADD, ADC, and INC instructions.

4. Describe the operation of the SUB, SBB, DEC, and NEG instructions.