

16.317: Microprocessor Systems Design I

Fall 2015

Lecture 3: Key Questions September 9, 2015

1. Describe the basic characteristics of processor registers.
2. Describe the basic characteristics of processor memory.
3. What does it mean for data to be aligned? What is the impact of mis-aligned data?

4. What is “little endian” data?

5. **Example:** Given the memory contents shown below:

	Lo		Hi	
0x200C	40	96	2C	00
0x2010	55	12	CD	AB
0x2014	01	23	88	99

What is the value of:

- The word at address 0x200D?
- The double word at address 0x2012?

Are these data aligned?

6. Describe the general characteristics of the x86 architecture.

7. Briefly describe the x86 registers.

8. Describe the different memory spaces in the x86 architecture.