

# 16.317: Microprocessor Systems Design I

Fall 2013

## Lecture 30: Key Questions

November 22, 2013

1. **Example:** Translate these x86 operations to PIC code. Assume that there are registers defined for each x86 register (e.g. AL, AH, BL, BH, etc.)

- OR AL, BL

- SUB BL, AL

- JNZ label

- JL label

- SAR AL, 1

- ROL AL, 5

2. Describe how to work with multi-byte data.

3. Translate these x86 operations to PIC code. Assume that there are registers defined for each x86 register (e.g. AL, AH, BL, BH, etc.). 16-bit values (e.g., AX) must be dealt with as individual bytes

- `MOVZX AX, BL`

- `MOVSX AX, BL`

- `INC AX`

- `SUB BX, AX`

- `RCL AX, 5`