

15-213 – “The class that gives CMU its Zip!”

# Introduction to Computer Systems

Fahim Dalvi  
29 August, 2013

# Introduction

- <http://www.qatar.cmu.edu/~kharras/courses/15213-f13/>
- Everything related to the course can be found on the above link
- <https://autolab.cs.cmu.edu/15213w-f13>
- Everything related to the labs(writeup, starter code etc.)

# Office Hours

- Sunday – 2:00 PM to 3:30 PM
- Tuesday – 2:00 PM to 3:30 PM
- Use Piazza for immediate help!
- Bring your questions to the recitations

# C Workshop

- Saturday at 01:00 PM
- Delivered by Prof. Saquib!

# Unix Basics

- Use the `unix.qatar.cmu.edu` machines and NOT your local machines for all the labs.
- `ssh/scp` (on Mac/Unix)
- Putty/Filezilla (on Windows)
- `tar (xvf)`
- Learn to use an editor well (eg. vim, emacs) and stick with it.

# Review: Bits and Bytes

- Endianness
  - Big Endian : Least significant byte has highest address
  - Little Endian : Least significant byte has lowest address
  - Ex: 0x12345678(Big Endian) → 0x78563412(Little Endian)
- Sizes
  - Unsigned, int, long int → 4 bytes
  - Char → 1 byte
  - Short → 2 bytes
  - Float → 4 bytes
  - Double → 8 bytes
  - Pointer\* → 4 bytes(32-bit), 8 bytes(64-bit)

# Review: Operations

- $\&$ ,  $|$ ,  $\wedge$ ,  $\sim$
- $\ll$ ,  $\gg$  (arithmetic vs. logical)
- $!$  (logical not)

# First Lab!

- Autolab: <https://autolab.cs.cmu.edu/15213w-f13>
- Change your nickname!
- Once a lab is out, it can be viewed on the Autolab website along with its details.
- To submit, upload the required file and wait for a few seconds for Autolab to give you a score.
- **Note:** You can submit as many times as you want until the lab is due.



# Datalab!

- 12-13 Puzzles
- Bit operations only!
- Limited number of operations

# Style

- <http://www.cs.cmu.edu/~213/codeStyle.html>
- Make sure you read through it since we'll use it as a rubric when we grade your labs.
- Look out for:
  - Comments
  - Magic numbers (without #define)
  - Line length
  - Consistency

# Cheating Policy

- Simple – Don't do it
- MOSS checker built right into Autolab