8/31/2009

Recitation 0

15-213/18-243

Course Web Site

- http://www.cs.cmu.edu/~213

- Everything is here.
- Bookmark it.
- Best first source of information.
- Email staff at 15-213-staff@cs.cmu.edu

Office Hours

- Mon 1:00-2:00, Ganger, CIC 2208
- Mon 4:30-5:30, Harbuck, GHC 4122 or 4126
- Tue 3:00-4:00, Tuttle, WW Cluster
- Tue 4:00-5:00, Tessa Eng, GHC 4122 or 4126
- Wed 1:00-2:00, Pitelka, WeH 5205
- Wed 3:30-4:30, Dannenberg, GHC 7003
- Wed 4:30-5:30, Stangl, WeH 5205
- Thu 5:30-6:30, Martin, WEH 5419A
- Fri 4:00-5:00, Primero, WW Cluster

Questions?

Autolab

- Get an account.
- https://autolab.cs.cmu.edu/15213-f09/autolab.pl
- Message Board
- Class Status Page

Fish Machines

- Logging in:
- /afs/cs/academic/class/15213-f09/bin/checkin

- ssh –x –l andrewid@ANDREW.CMU.EDU fish.ics.cs.cmu.edu
  - Capitalization is important.
- These machines are 64 bit machines. This means sizeof(void*) = 8 bytes.

Sizes of C Objects (in Bytes)

C Data Type	Typical 32-bit	Intel IA32	x86-64
unsigned [int]	4	4	4
int	4	4	4
long int	4	4	8
char	1	1	1
short	2	2	2
float	4	4	4
double	8	8	8
long double	-	10/12	10/12
char*	4	4	8

Questions about Lecture

- Two's Complement representation of -1
- (-1)*0011 =
- What is Tmax? Binary representation:
- What is Tmin? Binary representation:
- Shifts: Right/Left, Arithmetic/Logical

Questions about the Lab

- Unzip in unix.
  - tar xvf datalab-handout.tar
- Bang returns 0 if x is not equal to zero, 1 if x is equal to zero.
- Any other questions about the puzzles?

Masking

- Have 8 bit number x= 45: 0010 1101
- Only care about bits 4 5 6.
- y = x&56 (What is the bit pattern of 56?)
- y has only the 4th 5th and 6th bits of x. Rest are set to zero.
- How could you mask to get only the 7th bit?

Sample Puzzle

- /* * bitParity - returns 1 if x contains an odd number of 0's
  * Examples: bitParity(5) = 0, bitParity(7) = 1
  * Legal ops: ! ~ & ^ | + << >>
  * Max ops: 20
  * Rating: 4
  */

Ideas for debugging Datalab

- Using an if statement to select only the interesting case to print out.
- Commands offered
  - btest –f
  - fshow
  - ishow
- printf("%x", intvar); /*Prints out the value of the number stored in intvar in hexadecimal.*/

Final Questions?

GO START THE LAB!