SUMMER 2016 CS61C DISCUSSION PREPARATION NOTES

ALEX JING

Contents

1. Great Resources outside the class

- HKN test bank
- Piazza
- Ask around, especially if you are not from Berkeley. At the very least, you could probably know a few good restaurant

2. Unsigned Integers

Very important to have on cheat sheet: **Hex to binary conversion Table**
4-bits correspond to one hexadecimal digit:

0000 = 0	0001 = 1	0010 = 2	0011 = 3
0100 = 4	0101 = 5	0110 = 6	0111 = 7
1000 = 8	1001 = 9	1010 = a	1011 = b
1100 = c	1101 = d	1110 = e	1111 = f

3. Signed Integers w/ Two's complement

- One's complement vs. Two's complement:
  The only difference between this two is that when flipping the sign, we would add 1 after flipping all the bits.
  Why is this important?
  First, think about flipping the sign of 0, which should give you back 0. But One's complement would have two representations of 0. Waste.
  Also with Two's complement, all arithmetic operations just become very intuitive.
- Know the range well. This applies to all number rep schemes.

4. Bitwise Operator Trick: Masking

- Bitwise operation tricks: set, unset, toggle, parity test etc. (http://www.catonmat.net/blog/low-level-bit-hacks-you-absolutely-must-know/)