Frequently Asked Questions

- Lectures will be recorded from today by using the default Blackboard recording options
- Lecture discussions/scratches will be posted after class.
- Lab will start from the week of June 1, 2020.
- Lab problems will be posted at the beginning of every lab

Bits, Bytes, and Words

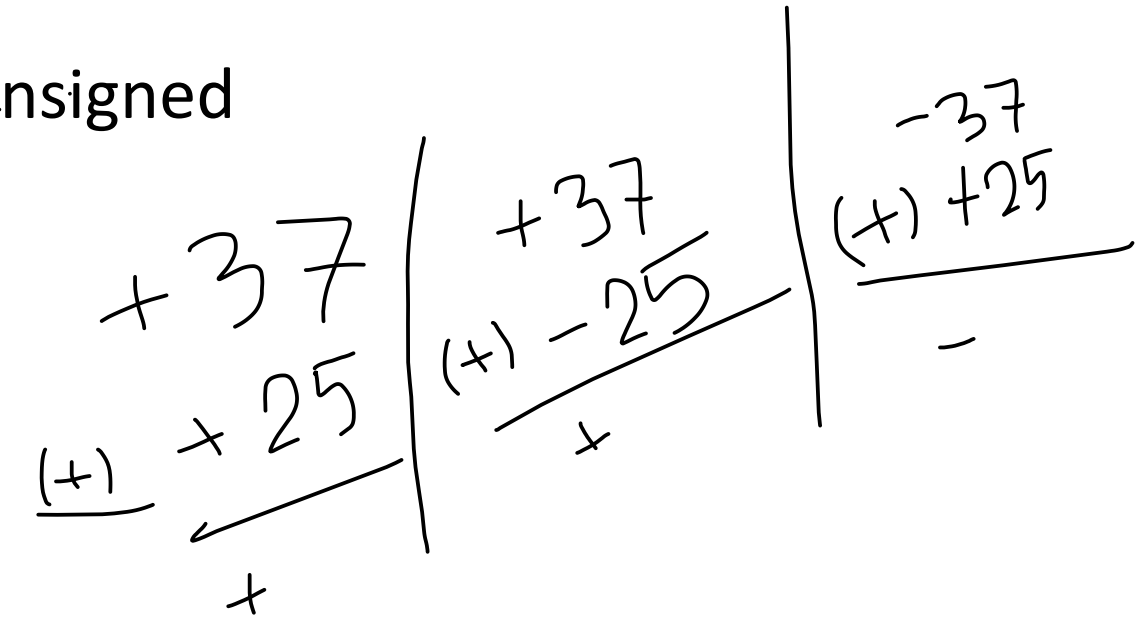
- 4 bits = 1 nibble Ex: 0101
- 8 bits = 1 byte Ex: 00001111
- 16 bits = 1 word Ex: 00001111 01001111
- 2 bytes = 1 word

A quick review

- Radix complement, also known as r's complement
- Diminished radix complement, also known as (r-1)'s complement
- In decimal number system (base or radix, r=10),
  - r's complement is 10's complement
  - (r-1)'s complement is 9's complement
- In binary number system (base or radix r=2),
  - r's complement is 2's complement
  - (r-1)'s complement is 1's complement
- Know how to find the radix complement and diminished radix complement of a number in both the decimal and binary number system

Signed Binary Numbers

- Signed and unsigned



- In signed-magnitude system, you need to compare sign (+ , -)

- Add the following two numbers: 0000 0110 and 0000 1000.
- 0000 1110
- 255 1111 1111 because 2^8 = 256, from 0 to 255
- 256 1 0000 0000---unsigned number

- 2^10=1024 from 0 to 1023…to represent 1023 you need 10 bits at least
- Next class: Binary codes and Binary logic (Lecture-1.3, sections 1.7 and 1.9)