Lecture 5 Notes

Lecture taught by Professor Baumann [*]

2021 January 26

Quiz 1 - Next Tuesday Feb 2nd
Practice: Add $33 + 23$ in signed binary

$$Range : -2^{n-1}...+2^{n-1}-1 \tag{1}$$
$$2^5 = 32 \tag{2}$$
$$2^6 = 64 \tag{3}$$
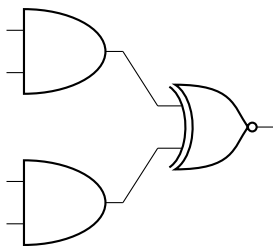$$2^7 = 128 < ---64...+63 \tag{4}$$
$$+33 : 2^5 + 2^0 = 0100001 \tag{5}$$
$$+23 : 2^4 + 2^2 + 2^1 + 2^0 = 0010111 \tag{6}$$
$$0100001 + 0010111 = 0111000 \tag{7}$$
$$= 2^5 + 2^4 + 2^3 = 32 + 16 + 8 = 56 \tag{8}$$

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[*] Notes by John Li