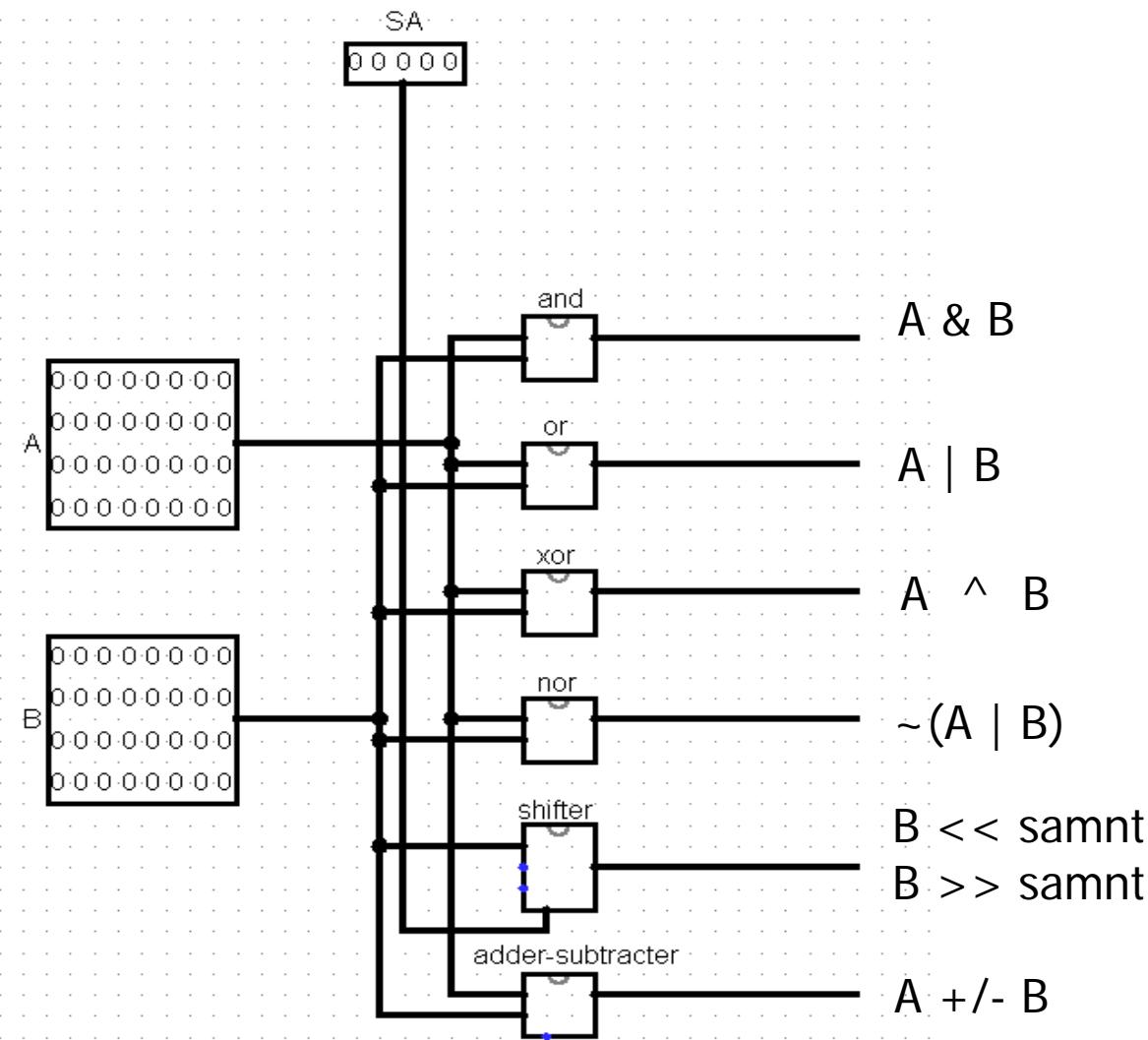


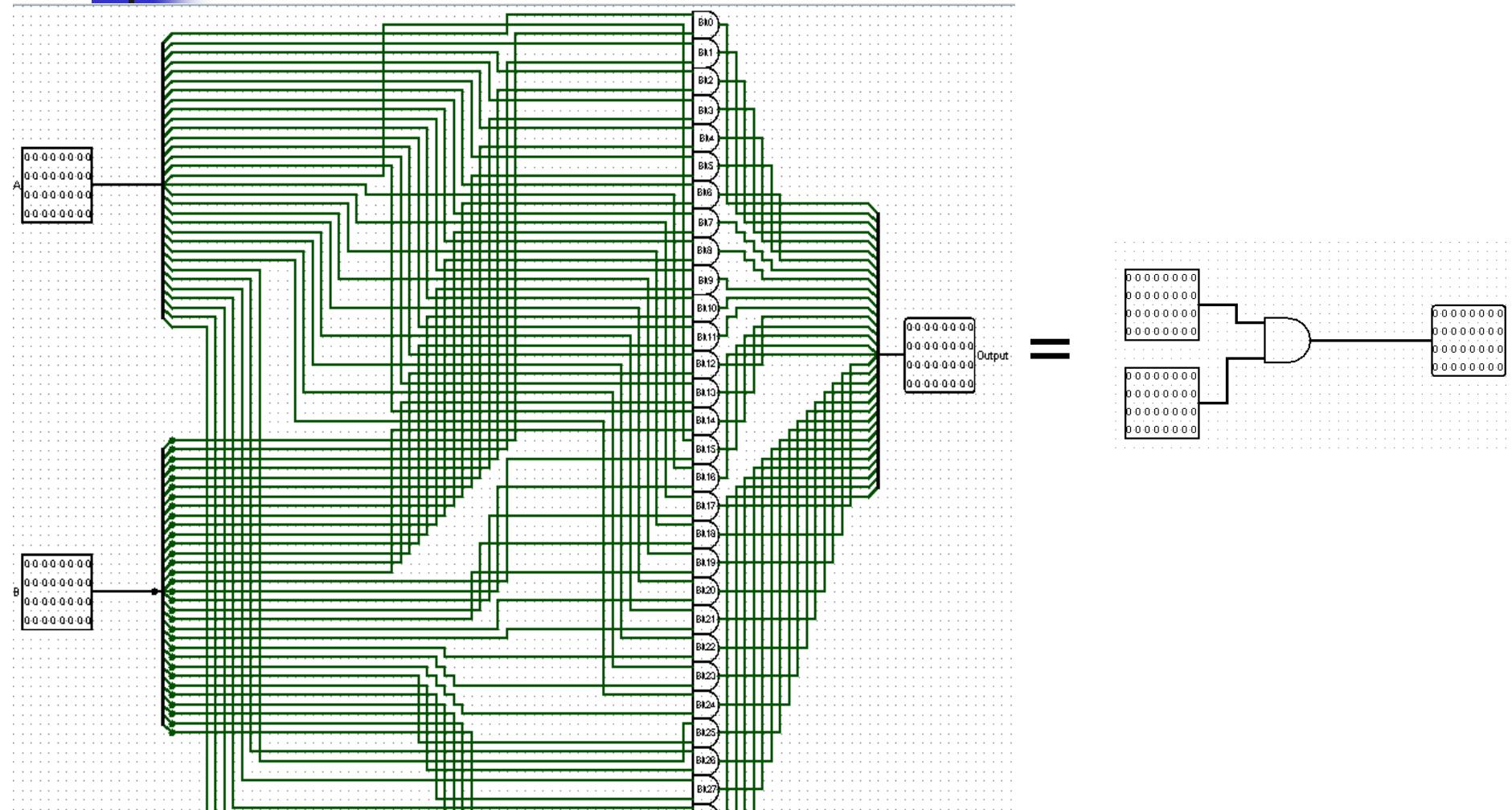
COMP303 - Computer Architecture

32 bit ALU Project

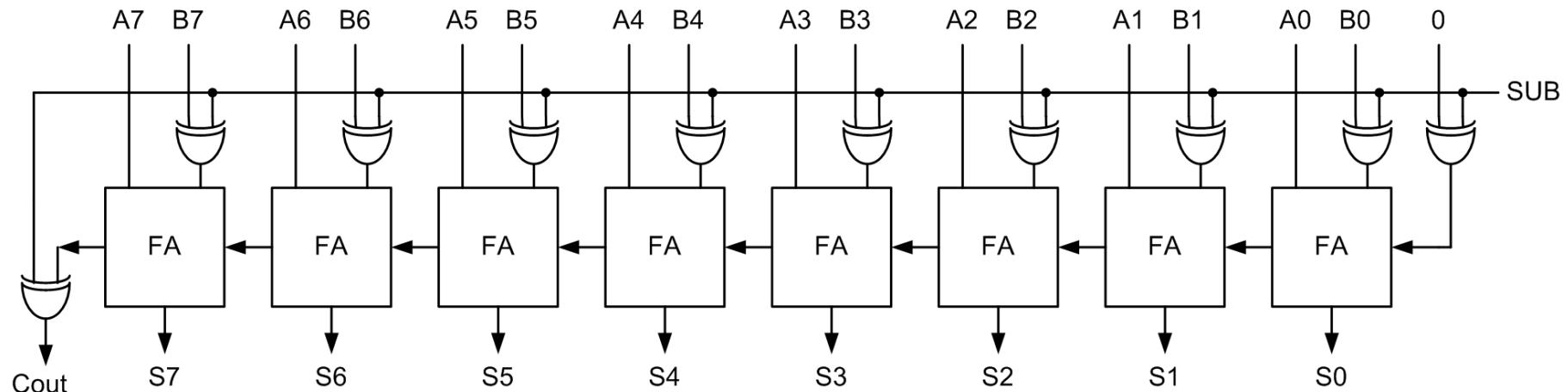
ALU Top Level



Boolean Functions: and, or, xor, nor

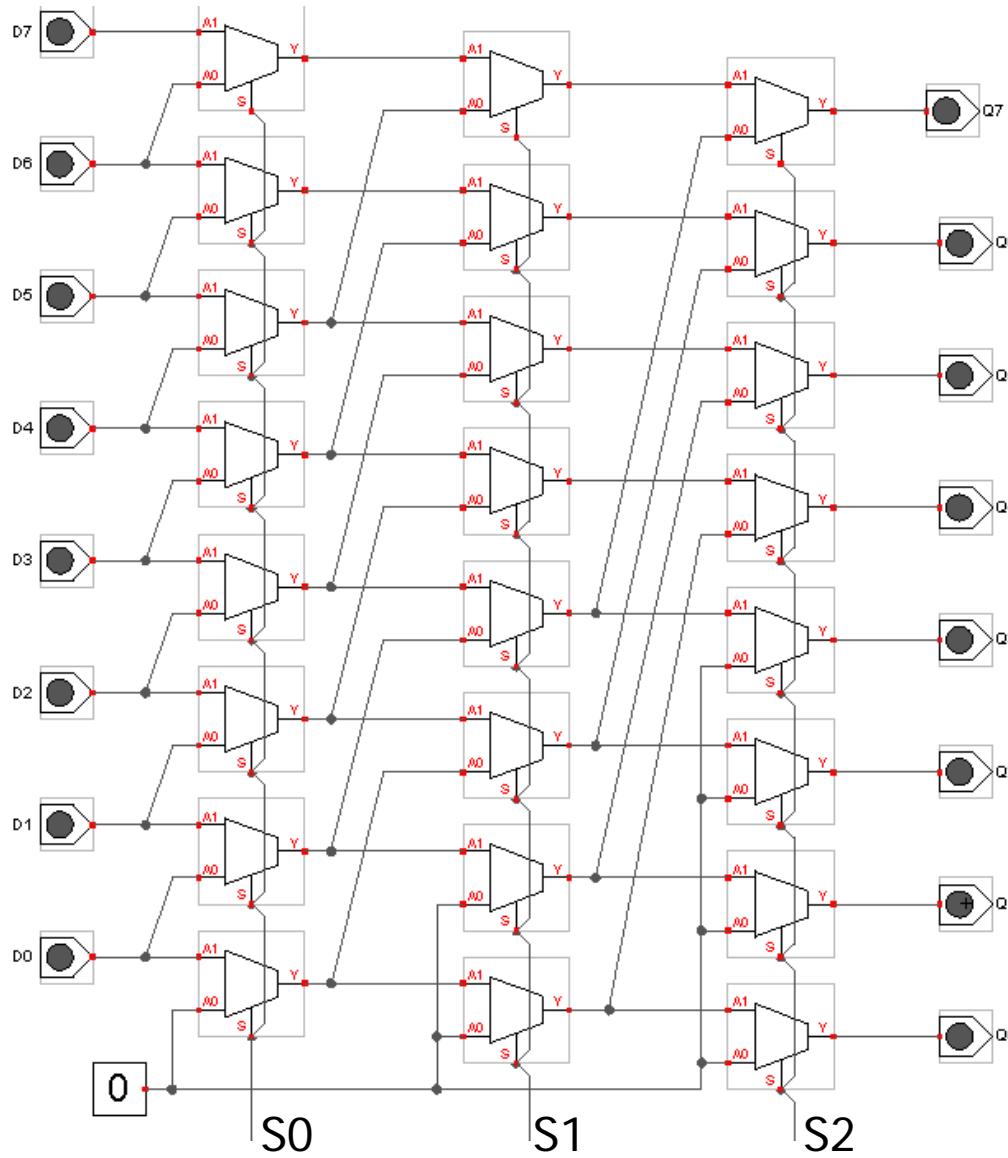


Add - Sub Operations



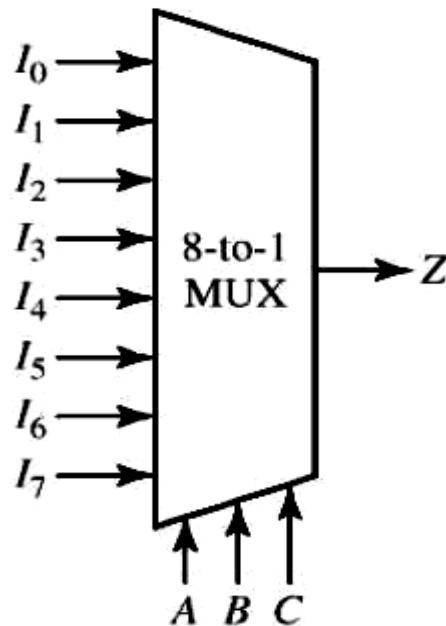
8 bit Adder/Subtractor

Shift Operations (Barrel Shifter)



Barrel Left
shifter (8bit)

MUXing



logic equation for the 8 - to - 1 MUX

$$\begin{aligned} Z = & A'B'C'I_0 + A'B'CI_1 + A'BC'I_2 + A'BCI_3 \\ & + AB'C'I_4 + AB'CI_5 + ABC'I_6 + ABCI_7 \end{aligned}$$