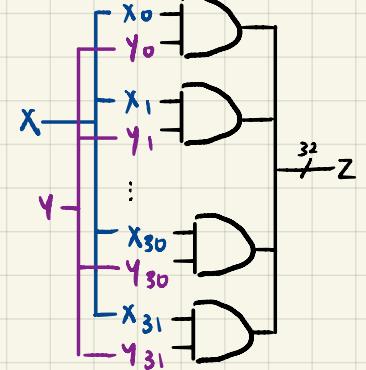
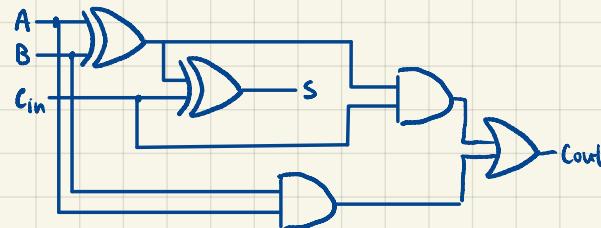


Lab 2A

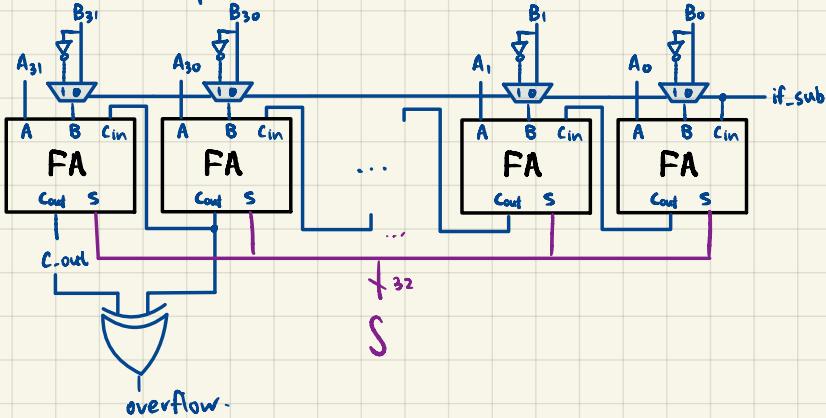
32-bit Bitwise AND



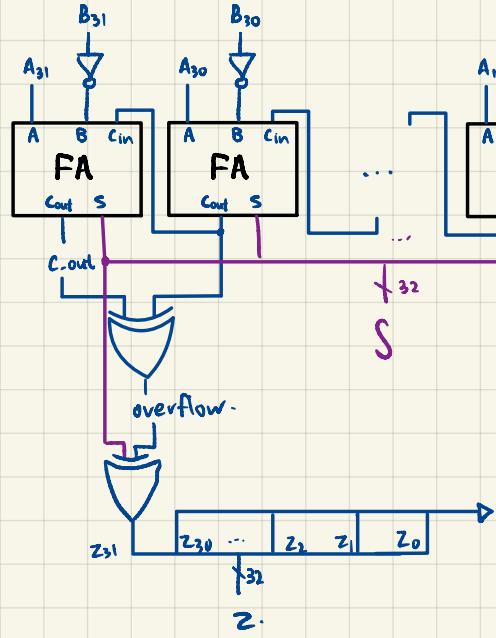
Full Adder



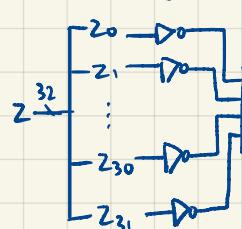
Ripple-Carry Adder/Subtractor



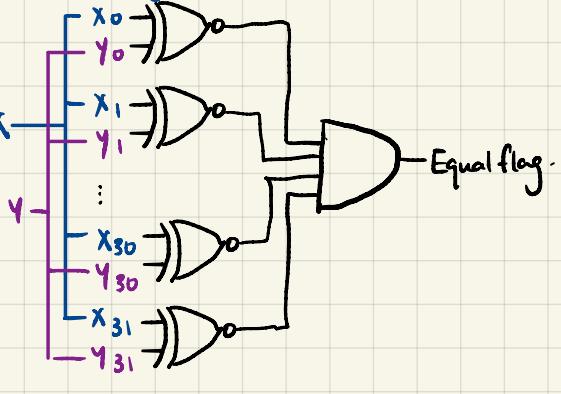
Set Less Than



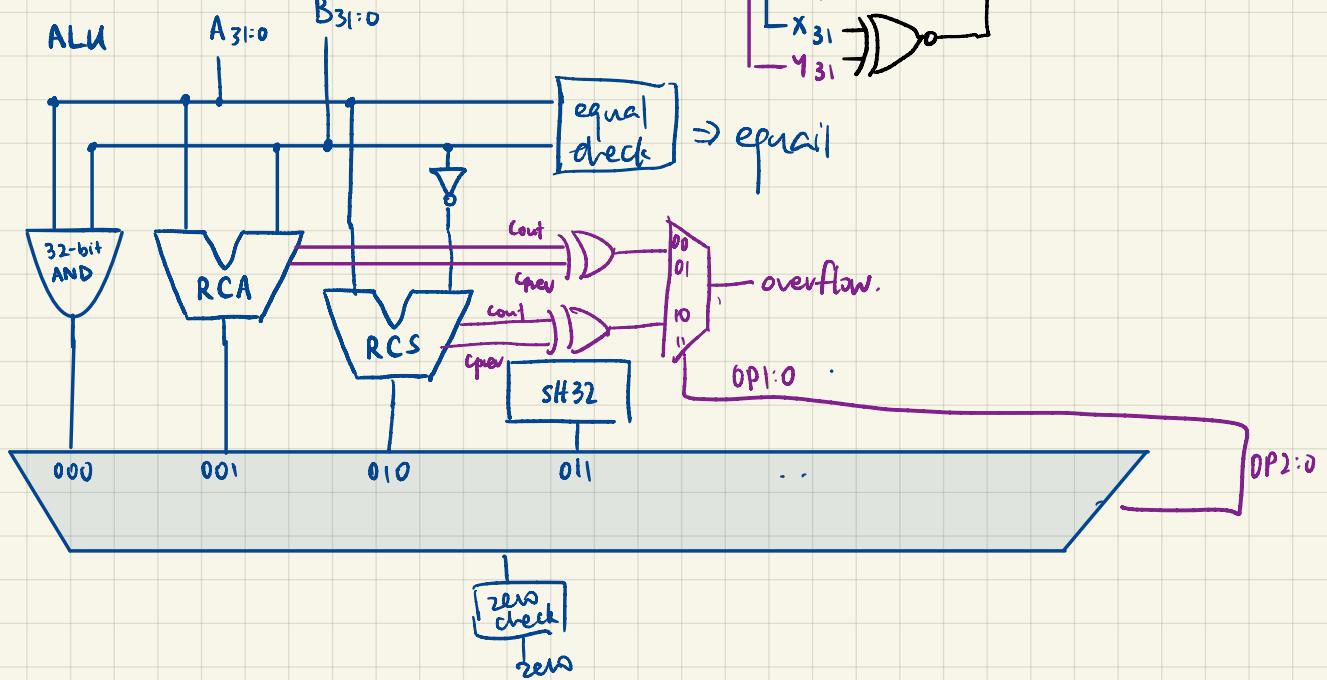
zero flag



Equal flag



ALU

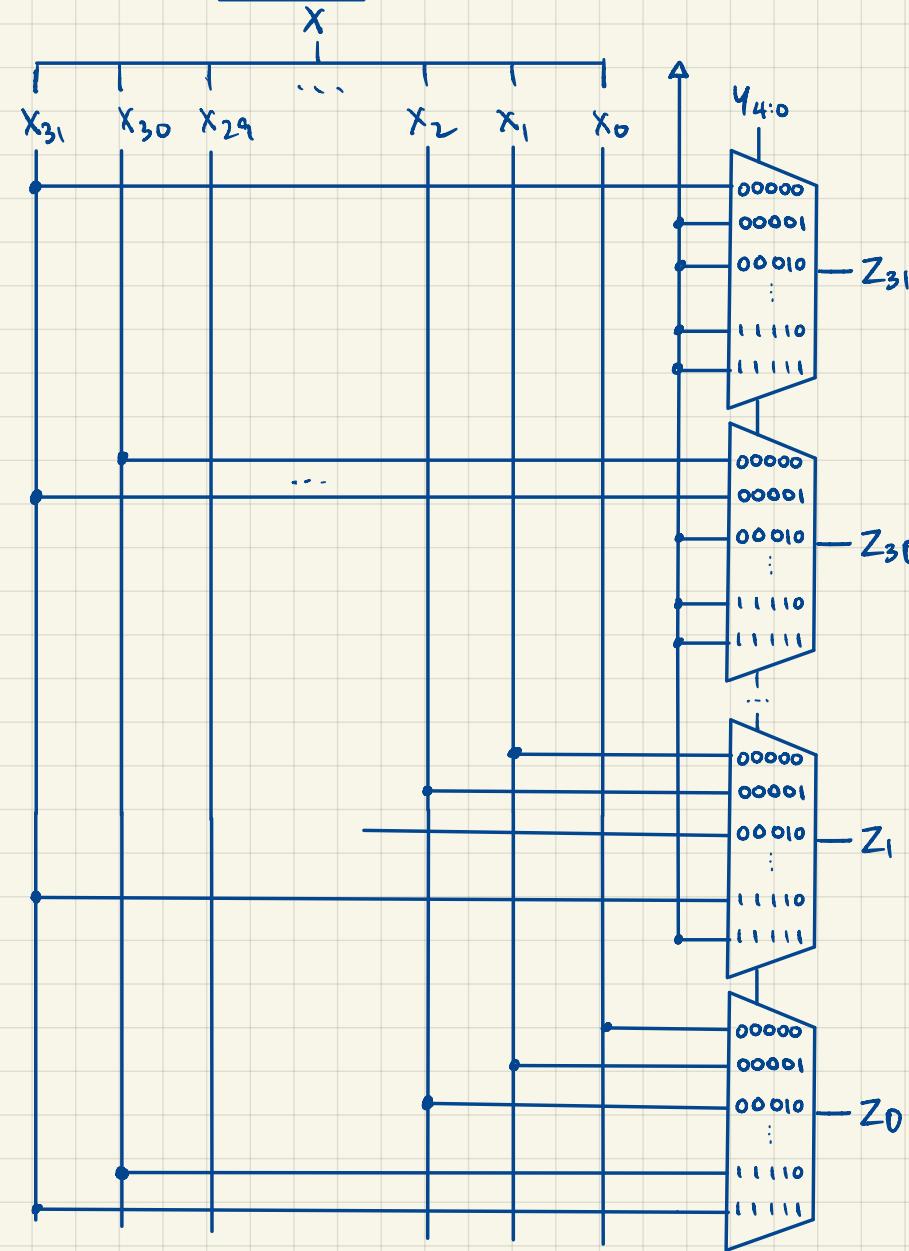


Code can be found at:

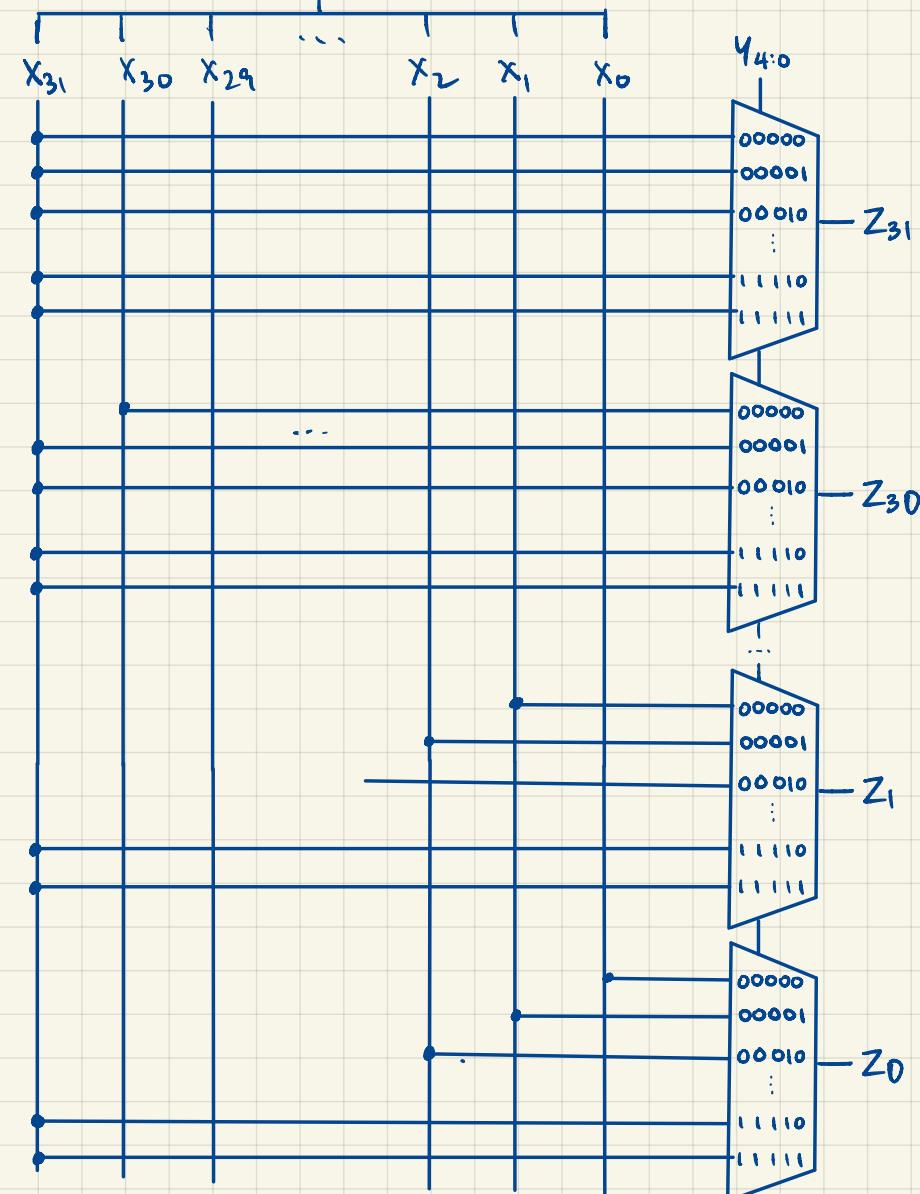
github.com/angiewy1/cs1410_lab2

Lab 2B

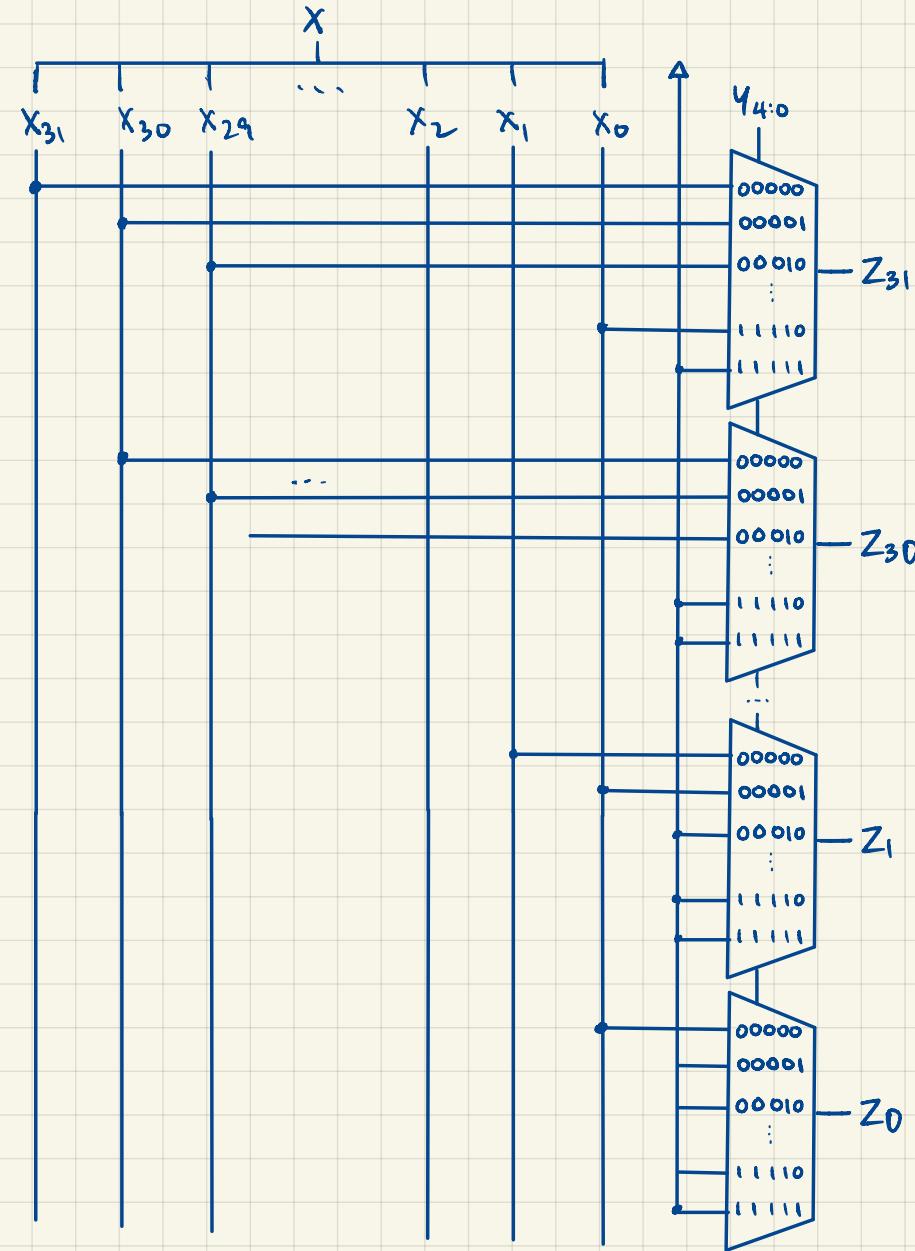
SRL



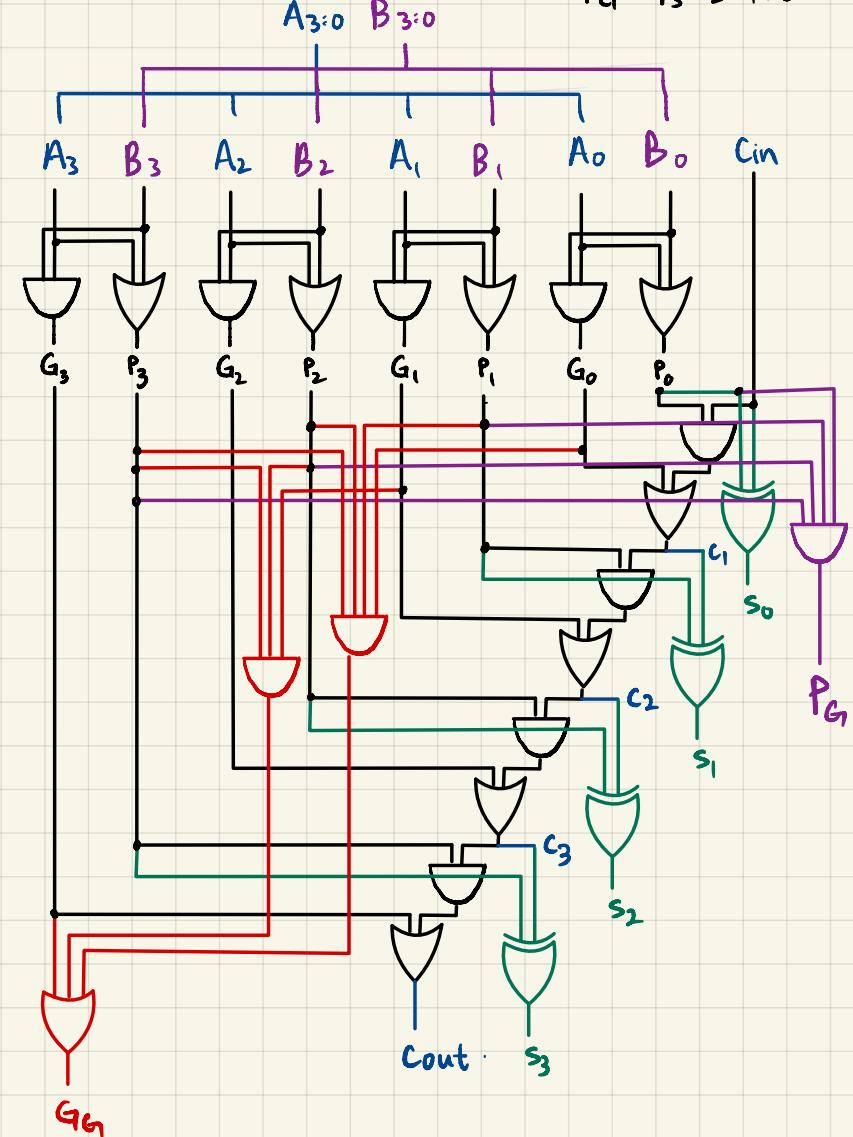
SRA

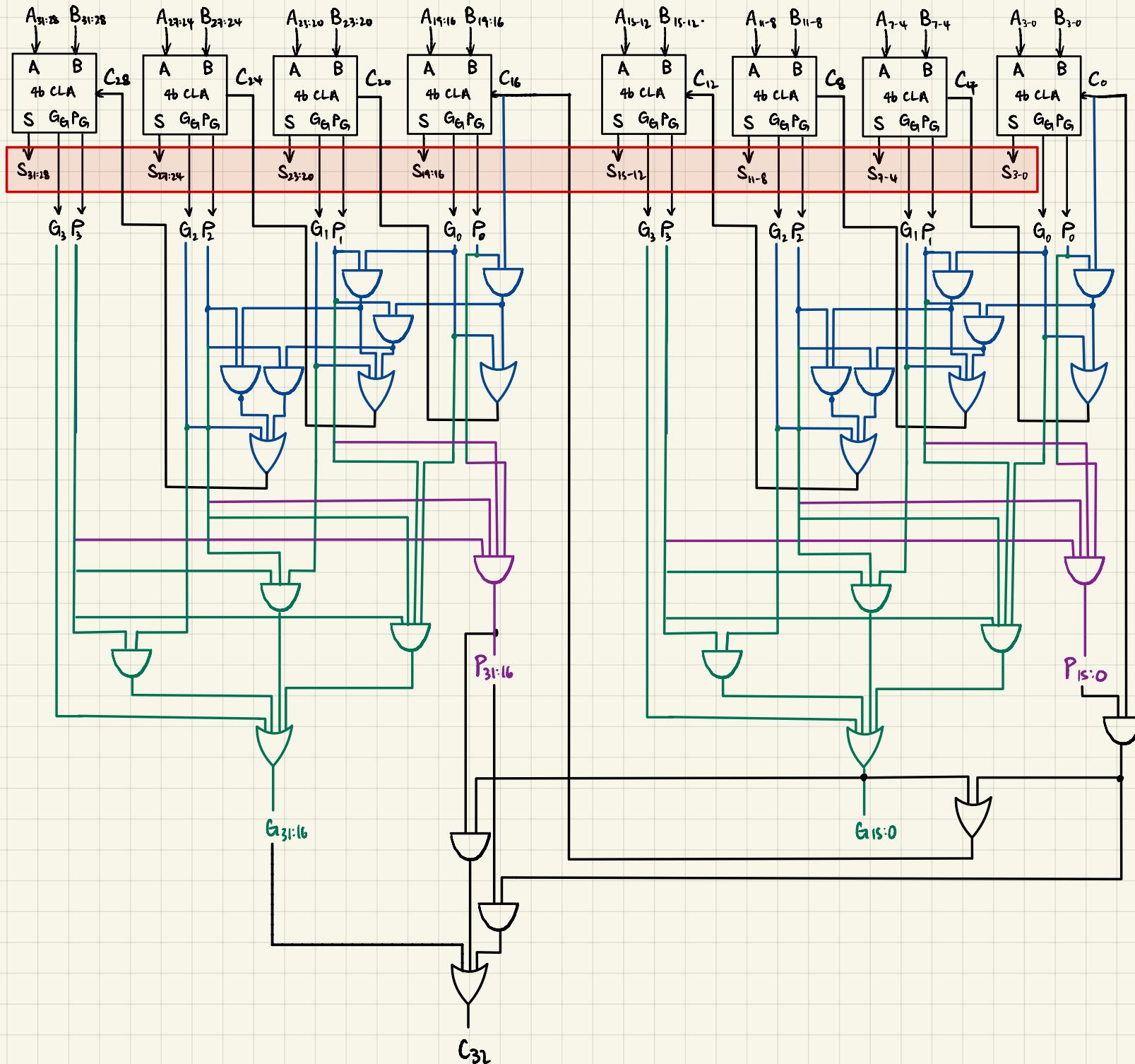


SLL



4-bit CLA





32-bit CLA

$$C_1 = G_0 + P_0 C_0$$

$$C_2 = G_1 + P_1 G_0 + P_1 P_0 C_0$$

$$C_3 = G_2 + P_2 G_1 + P_2 P_1 G_0 + P_2 P_1 P_0 C_0$$

$$C_4 = G_3 + P_3 G_2 + P_3 P_2 G_1 + P_3 P_2 P_1 G_0 \\ + P_3 P_2 P_1 P_0 C_0$$