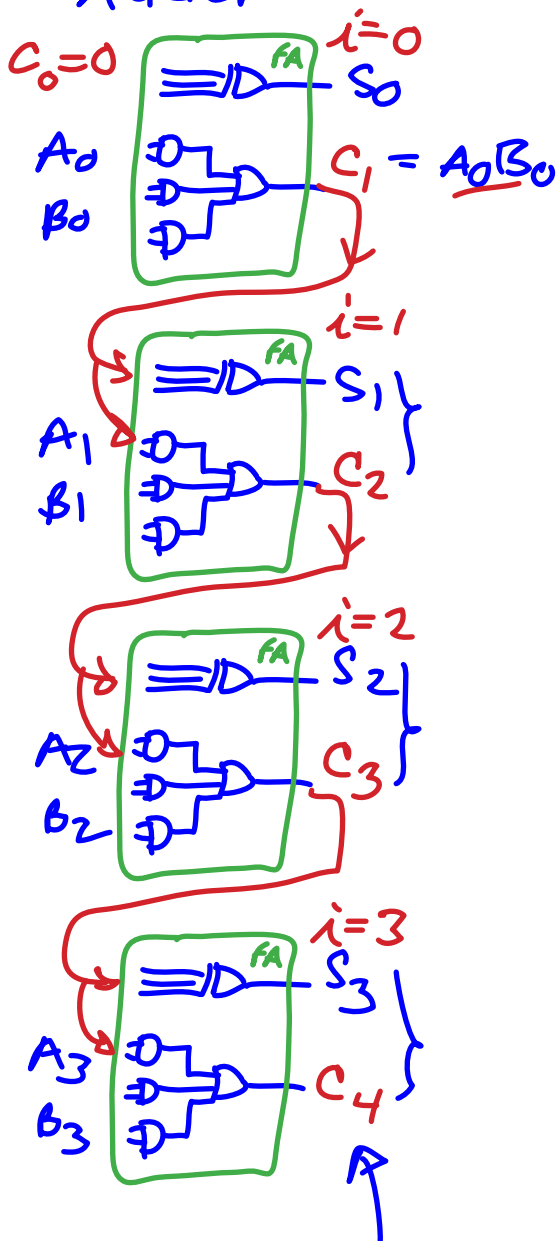


Lab 5 Task 1

Cascaded Adder



8-levels of logic to reach here from A_0, B_0

Make all stages 2 levels!

$$C_1 = A_0 B_0 + B_0 C_0 + A_0 C_0$$

$C_0 = 0$

substitute

$$C_2 = A_1 B_1 + B_1 C_1 + A_1 C_1$$

want all blue

$$C_3 = A_2 B_2 + B_2 C_2 + A_2 C_2$$

want all blue

$C_4 = \text{etc.}$

= very long expression

← 2 levels