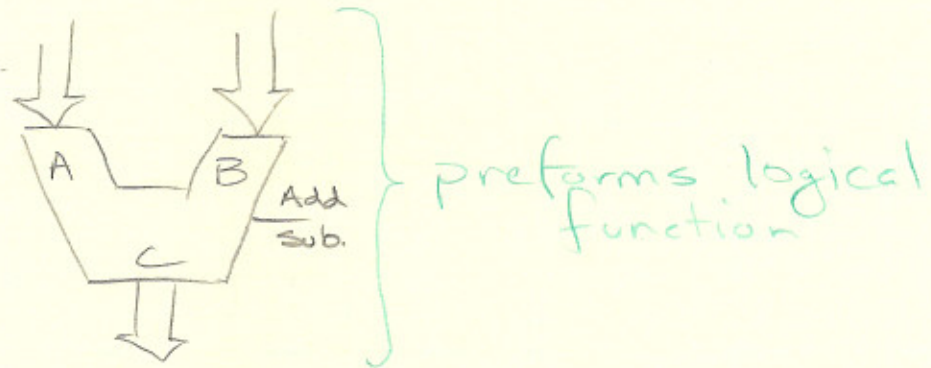
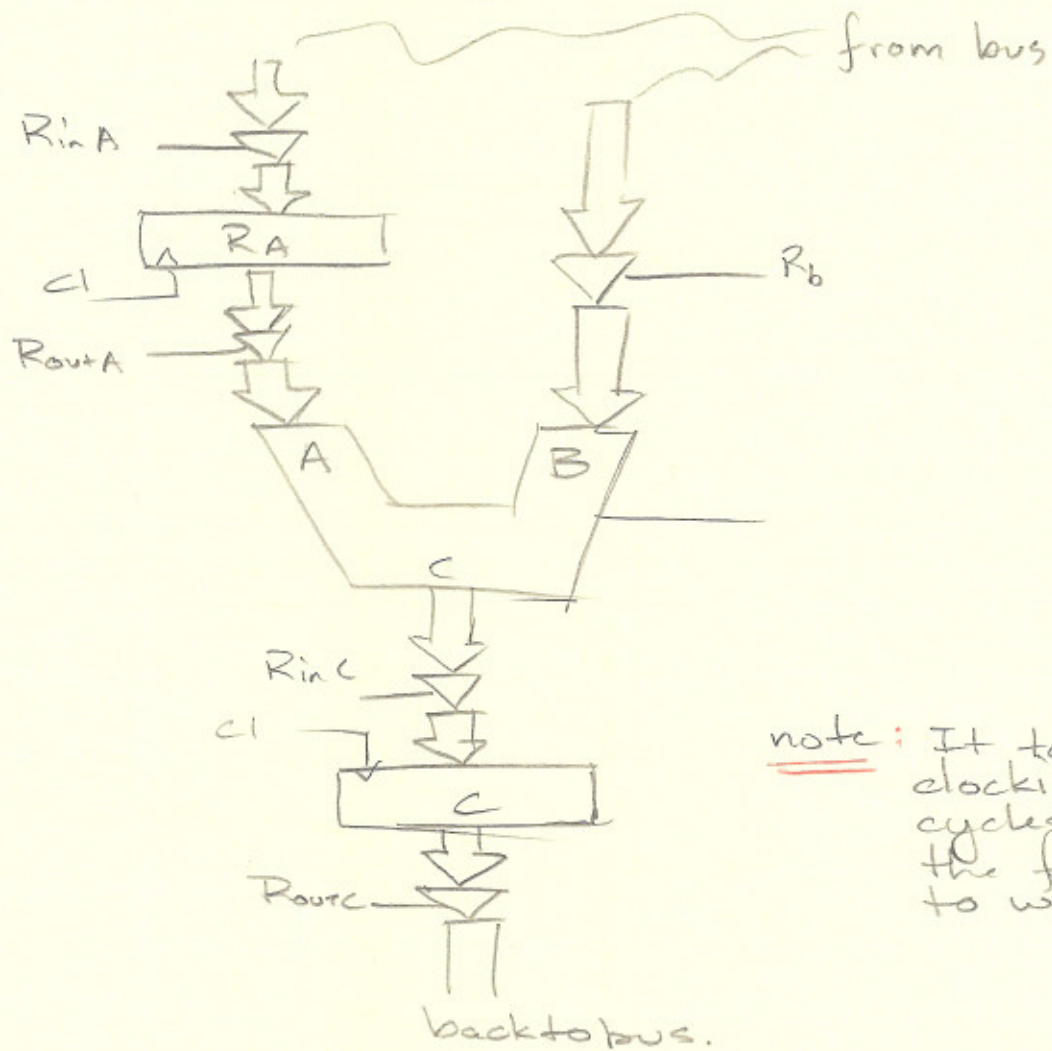


Arithmetic Logic Unit (ALU)

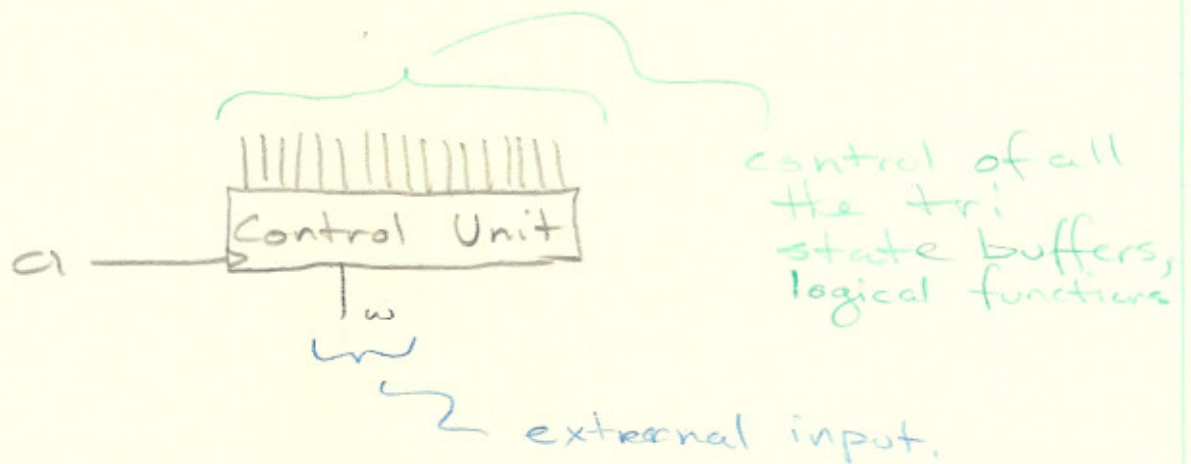


We should use registers to buffer inputs



note: It takes 3 clocking cycles for the function to work.

2
we are missing a control unit, something to activate the state buffers.



We should give the registers in our processor addresses.

$$R_0 = 00$$

$$R_1 = 01$$

$$R_2 = 10$$

$$R_3 = 11$$

Operations

(00) Load $_R_x$, Data

(01) Move $_R_x$, R_y

(10) Add $_R_x$, R_y

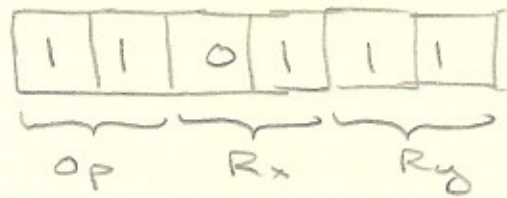
the contents of R_x and R_y are summed and put in R_x

(11) Sub $_R_x$, R_y

$R_x - R_y \rightarrow R_x$

Ex:

instruction register



this would subtract R_3 from R_1 and place it in R_1 .

The internal architecture of the control unit uses multiplexers.

