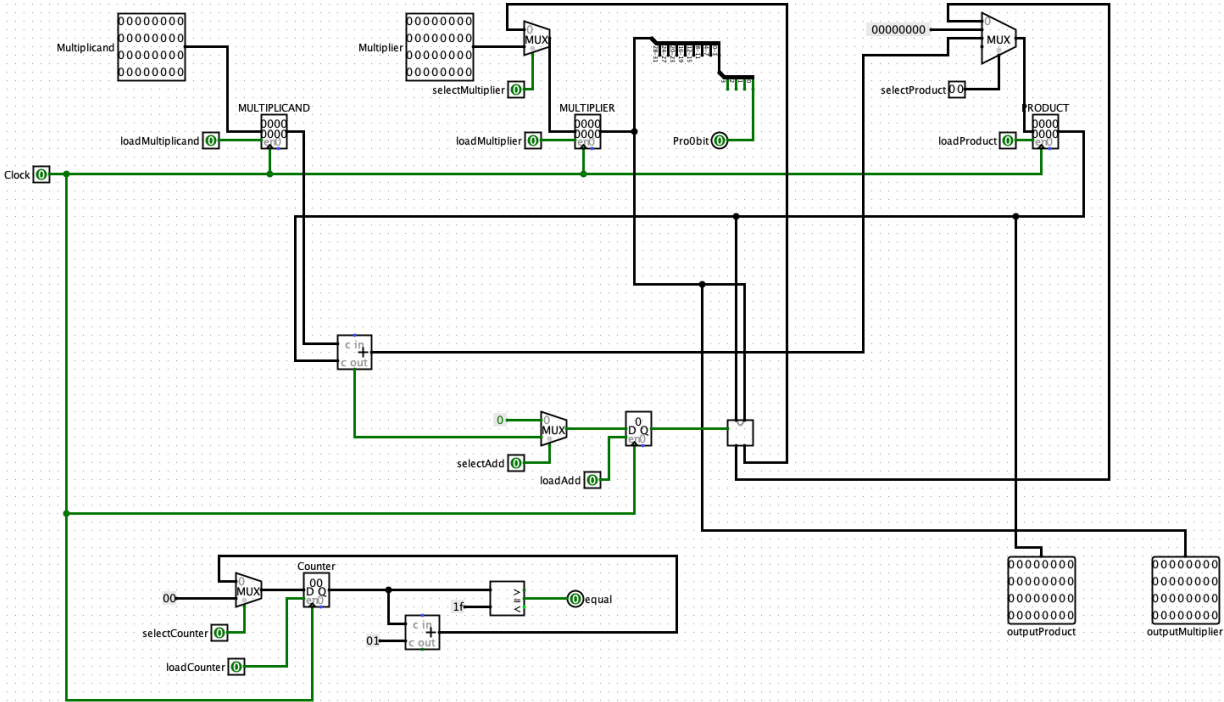


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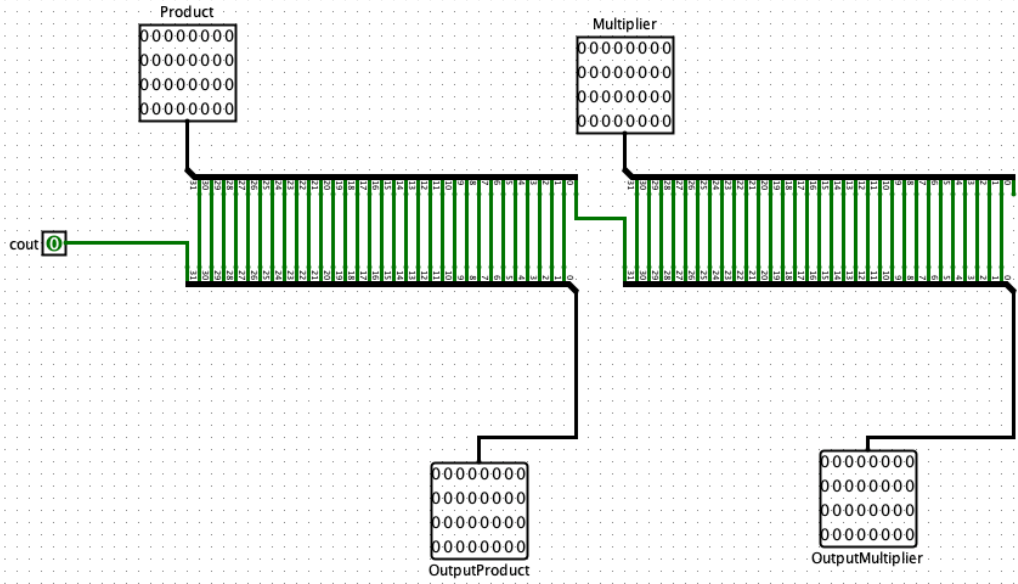
CANER KARAKAŞ

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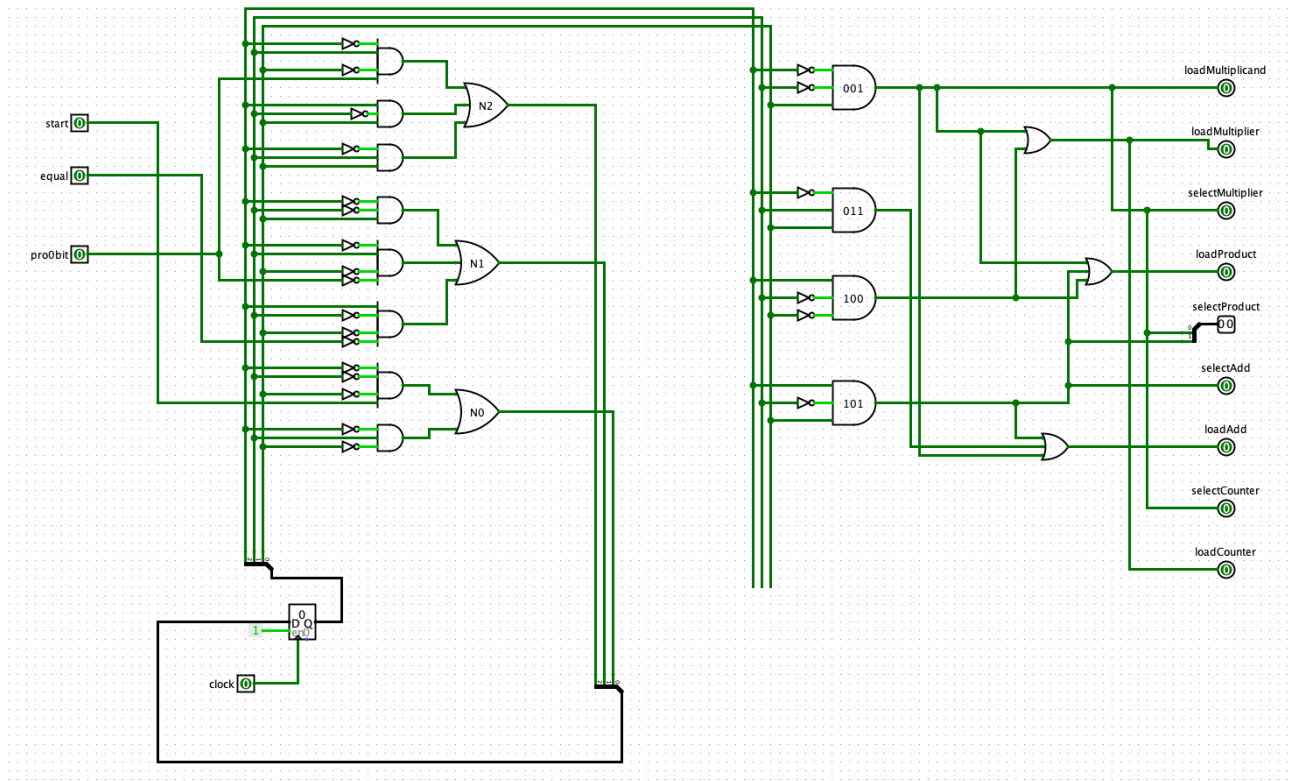
Datapath



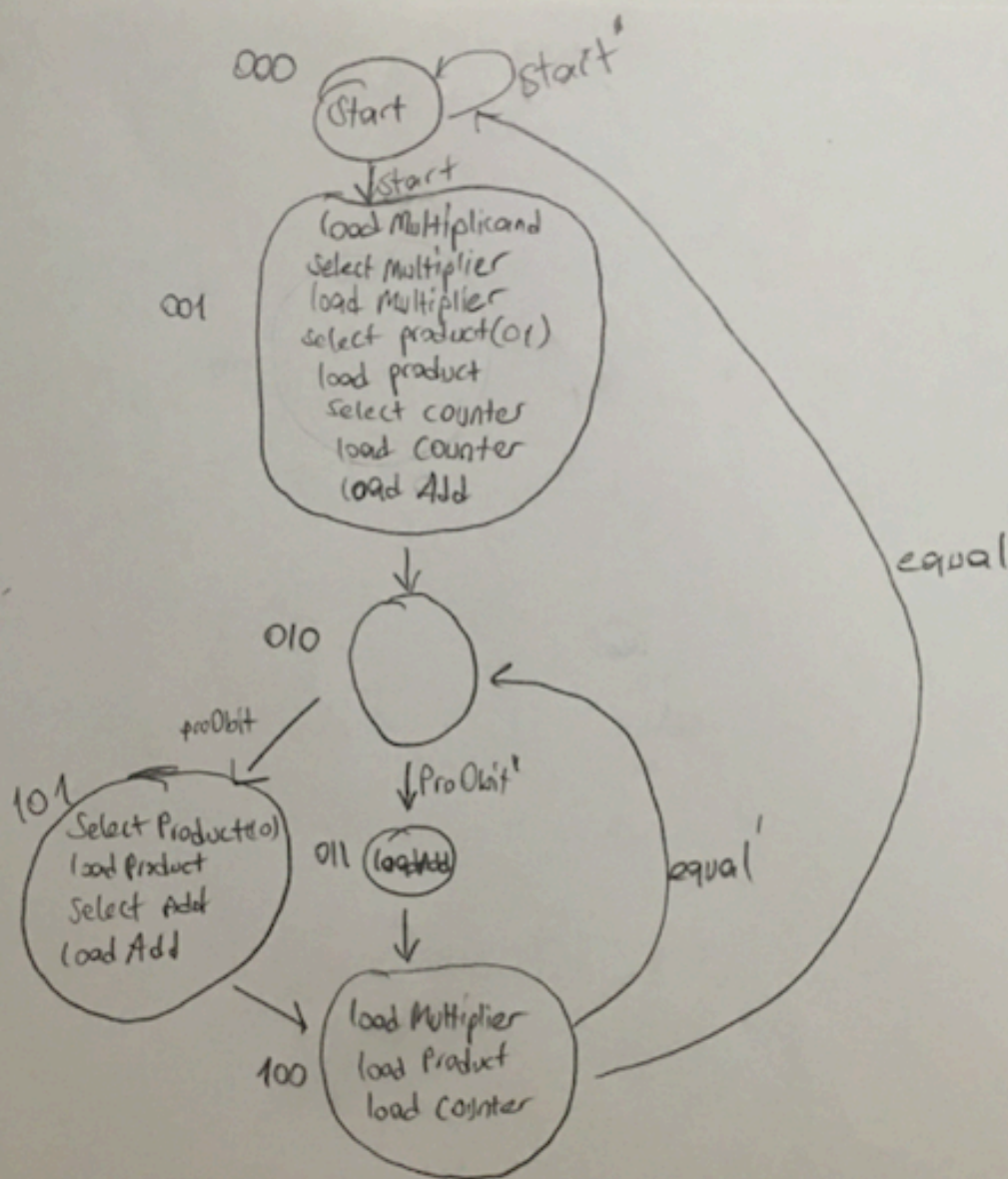
64-bit Shifter



CONTROL UNIT



S2 S1 S0	Start	Equal	Pro0bit	N2	N1	N0
0 0 0	0	x	x	0	0	0
0 0 0	1	x	x	0	0	1
0 0 1	x	x	x	0	1	0
0 1 0	x	x	1	1	0	1
0 1 0	x	x	0	0	1	1
1 0 1	x	x	x	1	0	0
0 1 1	x	x	x	1	0	0
1 0 0	x	0	x	0	1	0
1 0 0	x	1	x	0	0	0



$$\begin{aligned}
 N_2 &= s_2' s_1 s_0' \text{ Pro0bit} + s_2 s_1' s_0 + s_2' s_1 s_0 \\
 N_1 &= s_2' s_1' s_0 + s_2' s_1 s_0' \text{ Pro0bit}' + s_2 s_1' s_0' \text{ Equal}' \\
 N_0 &= s_2' s_1' s_0' s_0 + s_2' s_1 s_0'
 \end{aligned}$$

TESTS

