State Table 1 Dimensi

S1	S0	$A_i(t)$	$B_i(t)$	$A_i(t + 1)$
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	0
0	1	1	0	1
0	1	1	1	0
1	0	0	0	0
1	0	0	1	1
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

K-Map

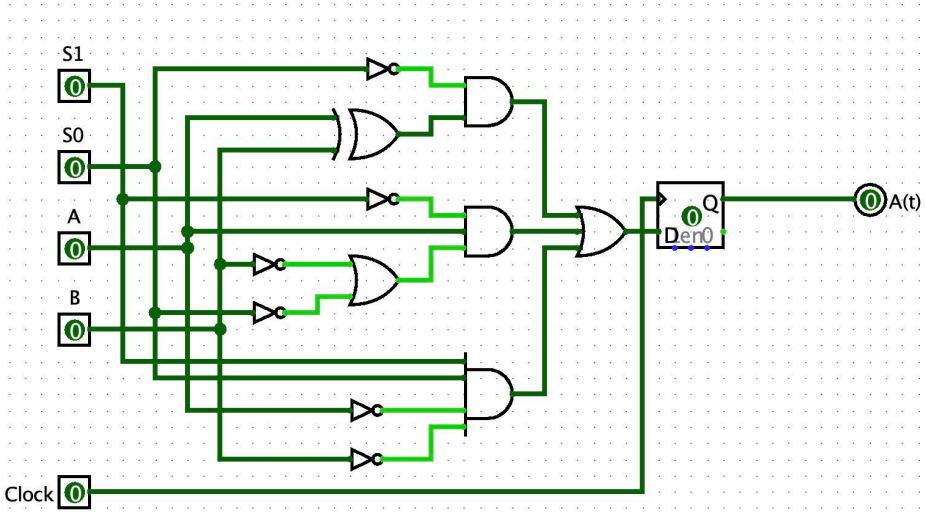
		A_i			
	0	1	1	1	
	0	0	0	1	S0
S1	1	0	0	0	
	0	1	0	1	
		B_i			

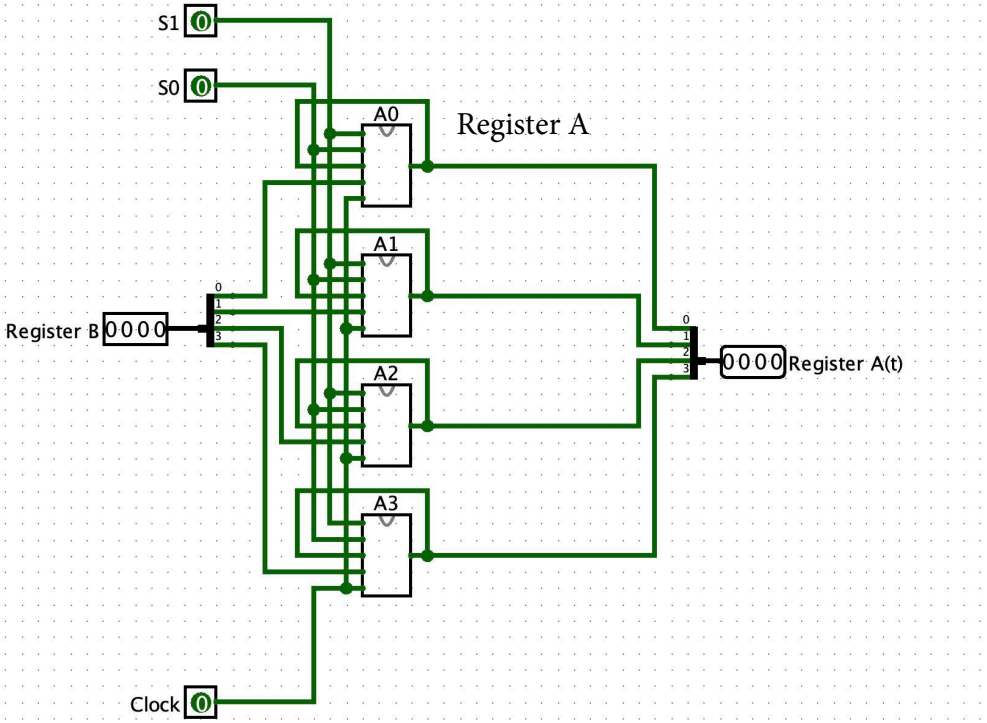
Optimisasi

$A_i(t + 1) = S0'A_i'B_i + S1'S0'A_i + S1'A_iB_i' + S0'A_iB_i' + S1S0A_i'B_i'$
$A_i(t + 1) = S0'(A_i \text{ XOR } B_i) + S1'A_i(B_i' + S0') + S1S0A_i'B_i'$

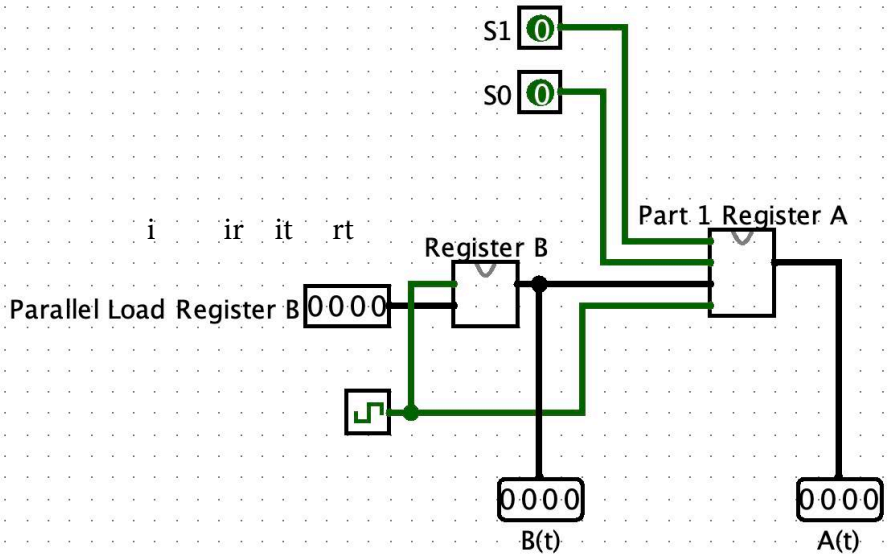
rt

i g e e Register A



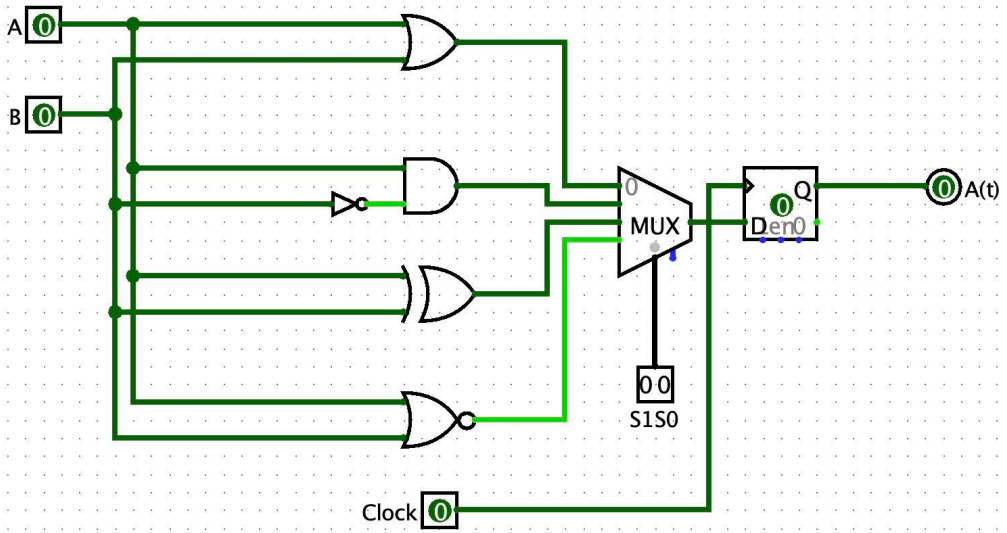


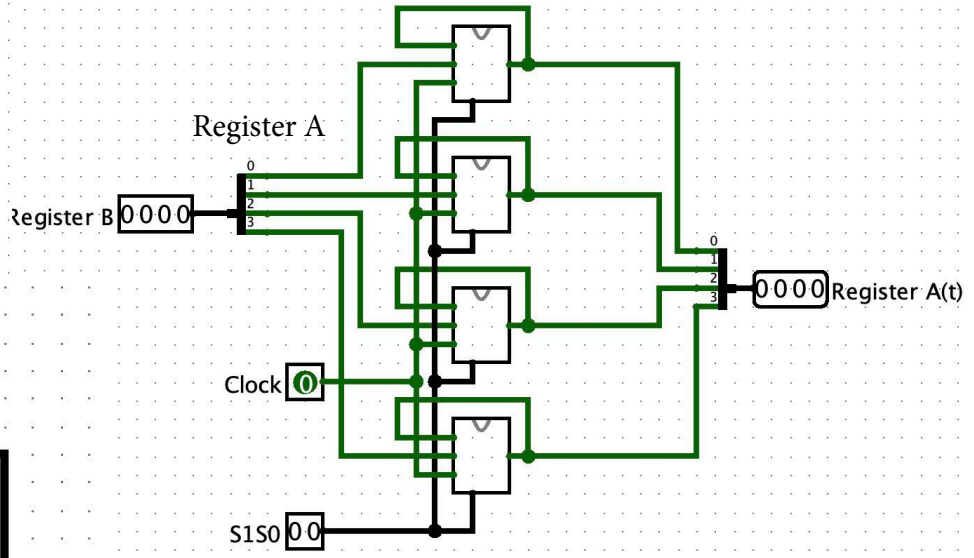
i ir it rt



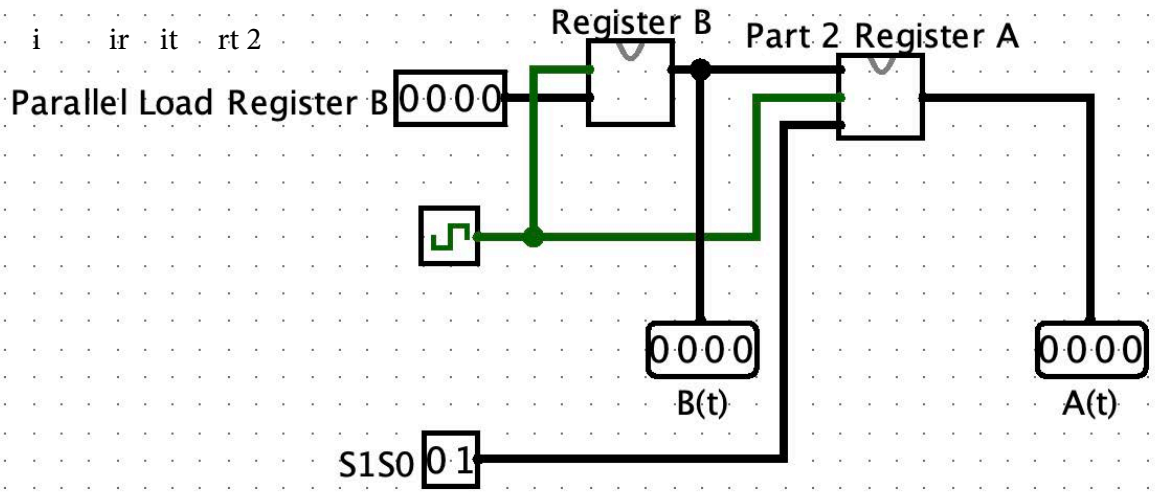
rt 2

i g e e Register A

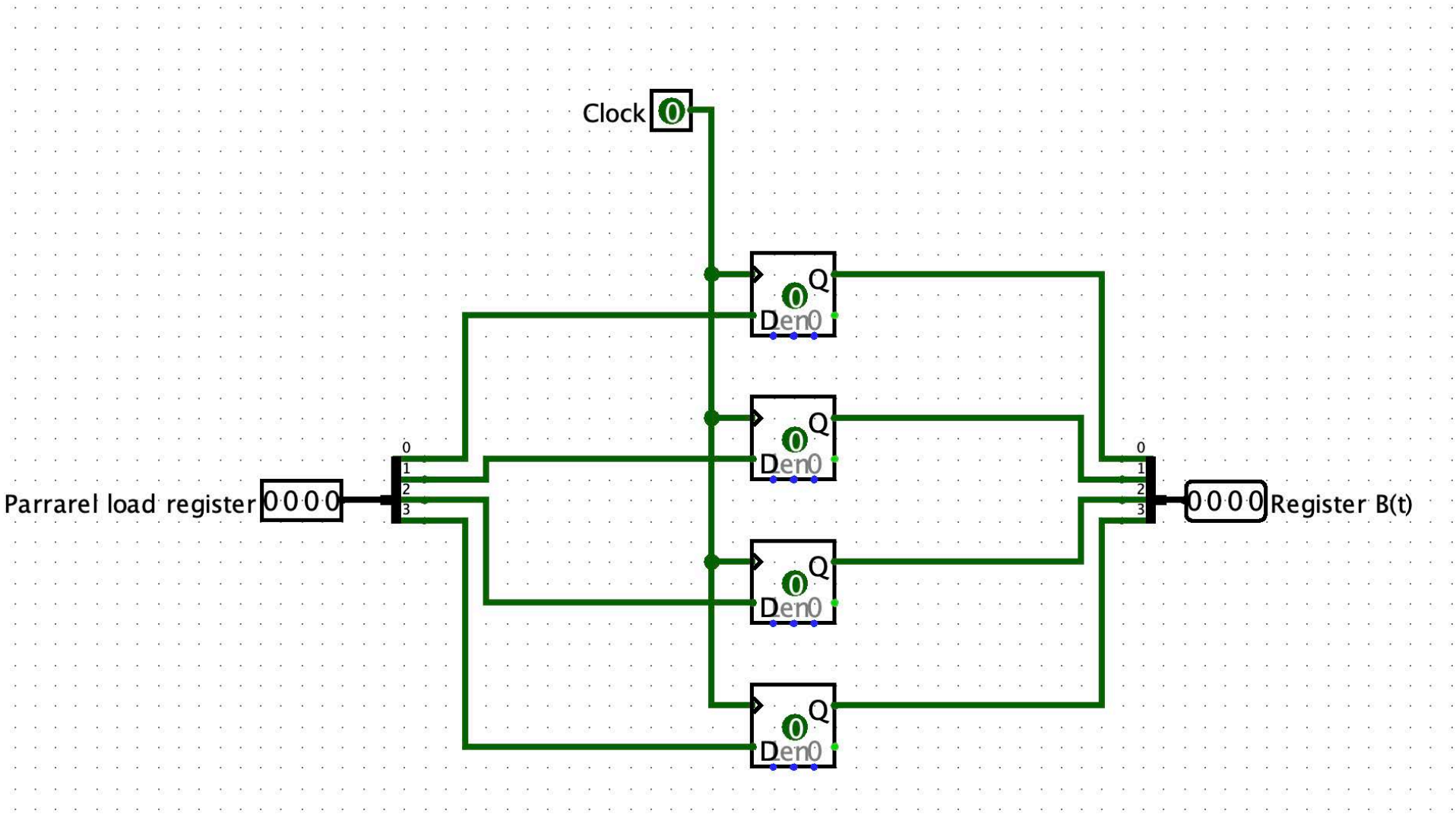




i ir it rt 2



Register B



Jawaban Trivia: Gate cost tanpa MUX = 16, sedangkan menggunakan MUX = 8 sehingga dengan MUX lebih efisien