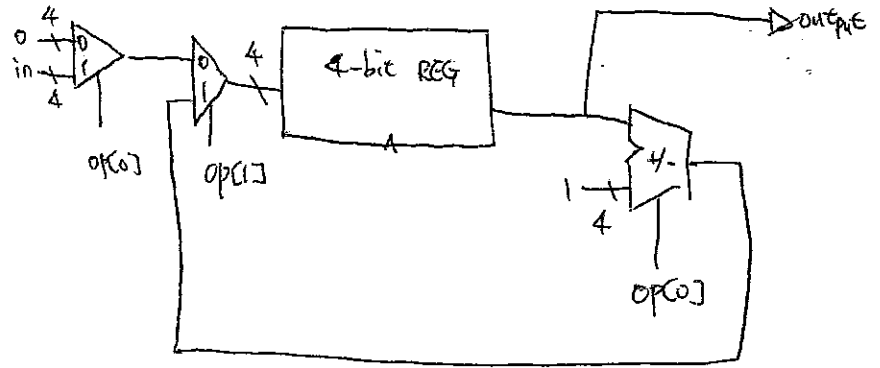


# 4-bit counter

operation	op	semantics
reset	00	$C \leftarrow 0$
load	01	$C \leftarrow in$
inc	10	$C \leftarrow C+1$
dec	11	$C \leftarrow C-1$



# Stack

W	op	operation	semantics	MUX <sub>0</sub>	MUX <sub>1</sub>	W <sub>stack</sub>	W <sub>top</sub>	Sub
0	0	read	$Rdata \leftarrow stack[top]$	0	0	0	0	*
0	1	top	$Rdata \leftarrow top$	1	*	0	0	*
1	0	push	$top++ ; stack[top] \leftarrow Wdata$	*	1	1	1	0
1	1	pop	$top--$	*	*	0	1	1

↑ this one must be zero; it can't be "don't care".

