PATP – operations for example 0

Macro Step	Mnemonic	Macro Operation	Micro Step	Micro Operations	Control Step	Control Actions	Comments
1	CLEAR	$[D0] \leftarrow 0$	1	$[ALU(Q)] \leftarrow [D0]$	1	E_{D0}	(Not strictly required)
			2	$[ALU(F)] \leftarrow 00$ ("Zero")	1	$F_1=0$ & $F_2=0$	
			3	$[ALUreg] \leftarrow [ALU]$	1	C_{ALUR}	
			4	$[D0] \leftarrow [ALUreg]$	2	E_{ALUR}, C_{D0}	
2	INC1	$[D0] \leftarrow [D0] + 1$	5	$[ALU(Q)] \leftarrow [D0]$	3	E_{D0}	
			6	$[ALU(F)] \leftarrow 01$ ("Q+1")	3	$F_1=0$ & $F_2=1$	
			7	$[ALUreg] \leftarrow [ALU]$	3	C_{ALUR}	
			8	$[D0] \leftarrow [ALUreg]$	4	E_{ALUR}, C_{D0}	
3	INC1	$[D0] \leftarrow [D0] + 1$	9	$[ALU(Q)] \leftarrow [D0]$	5	E_{D0}	
			10	$[ALU(F)] \leftarrow 01$ ("Q+1")	5	$F_1=0$ & $F_2=1$	
			11	$[ALUreg] \leftarrow [ALU]$	5	C_{ALUR}	
			12	$[D0] \leftarrow [ALUreg]$	6	E_{ALUR}, C_{D0}	
4	DEC1	$[D0] \leftarrow [D0] - 1$	13	$[ALU(Q)] \leftarrow [D0]$	7	E_{D0}	
			14	$[ALU(F)] \leftarrow 11$ ("Q-1")	7	$F_1=1$ & $F_2=1$	
			15	$[ALUreg] \leftarrow [ALU]$	7	C_{ALUR}	
			16	$[D0] \leftarrow [ALUreg]$	8	E_{ALUR}, C_{D0}	