

$C_0 : A := 0, Q := \text{INBUS}, \text{COUNT} := 0$

$C_1 : M := \text{INBUS}$

$C_2 : Q[-1] := 0$

$C_3 : A := A + M$

$C_4 : Q := Q + M$

$C_5 : M := \sim M + 1 \leftarrow \text{COMPLEMENT2}$

$C_6 : A[6:0].Q[7:-1] := A[7:0].Q[7:0], A[7] := A[7] \leftarrow \text{RSHIFT}$

$C_7 : A[7:0].Q[7:0] := A[6:0].Q[7:0], Q[0] := 0 \leftarrow \text{LSHIFT}$

$C_8 : \text{COUNT} := \text{COUNT} + 1$

$C_9 : \text{OUTBUS} := A$

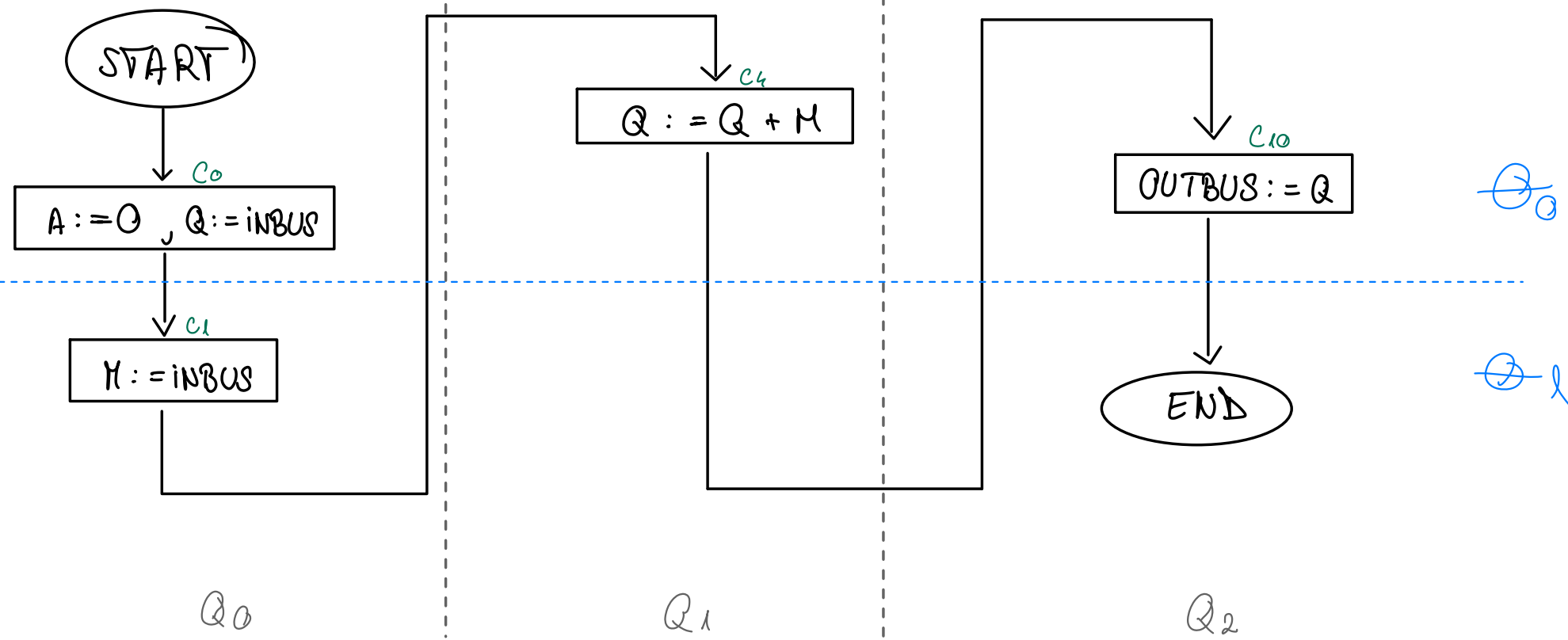
$C_{10} : \text{OUTBUS} := Q$

TEST1 :  $Q[0]Q[-1]$

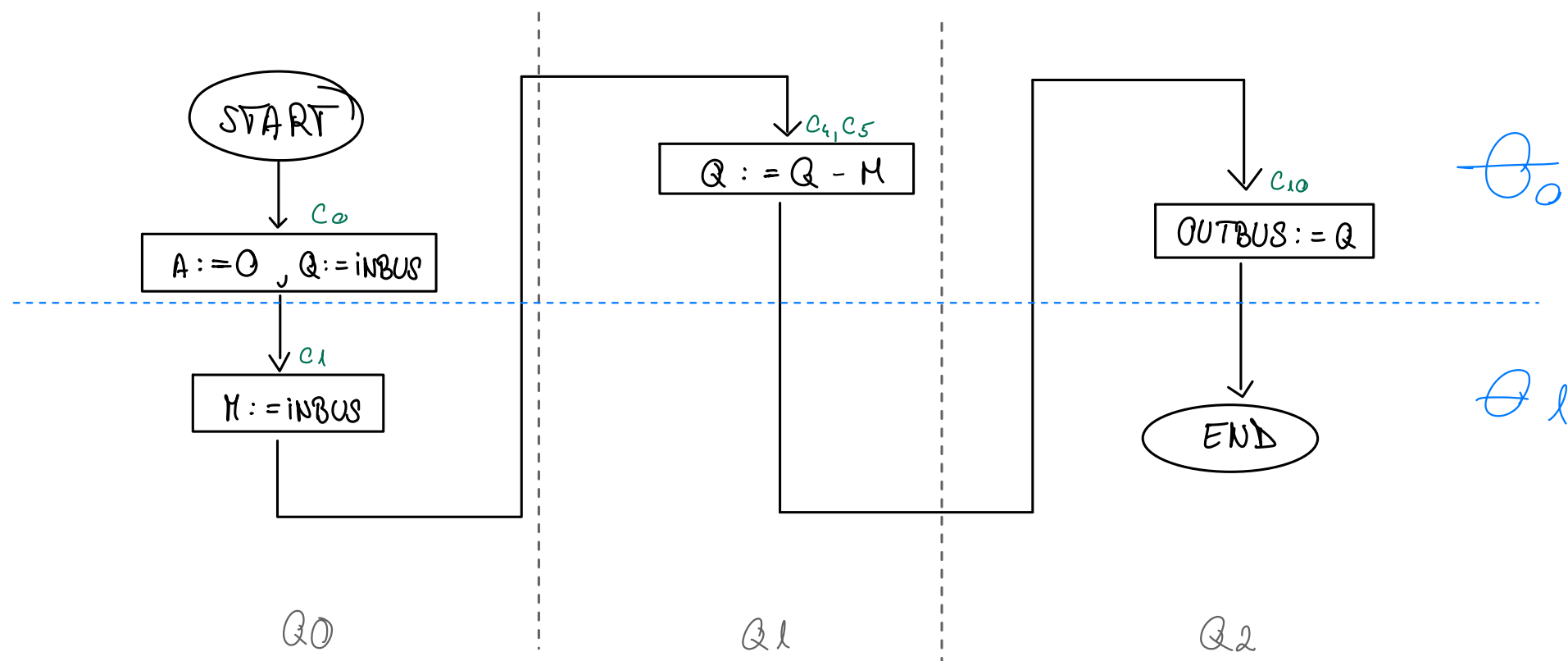
TEST2 : COUNT

TEST3 :  $A[7]$

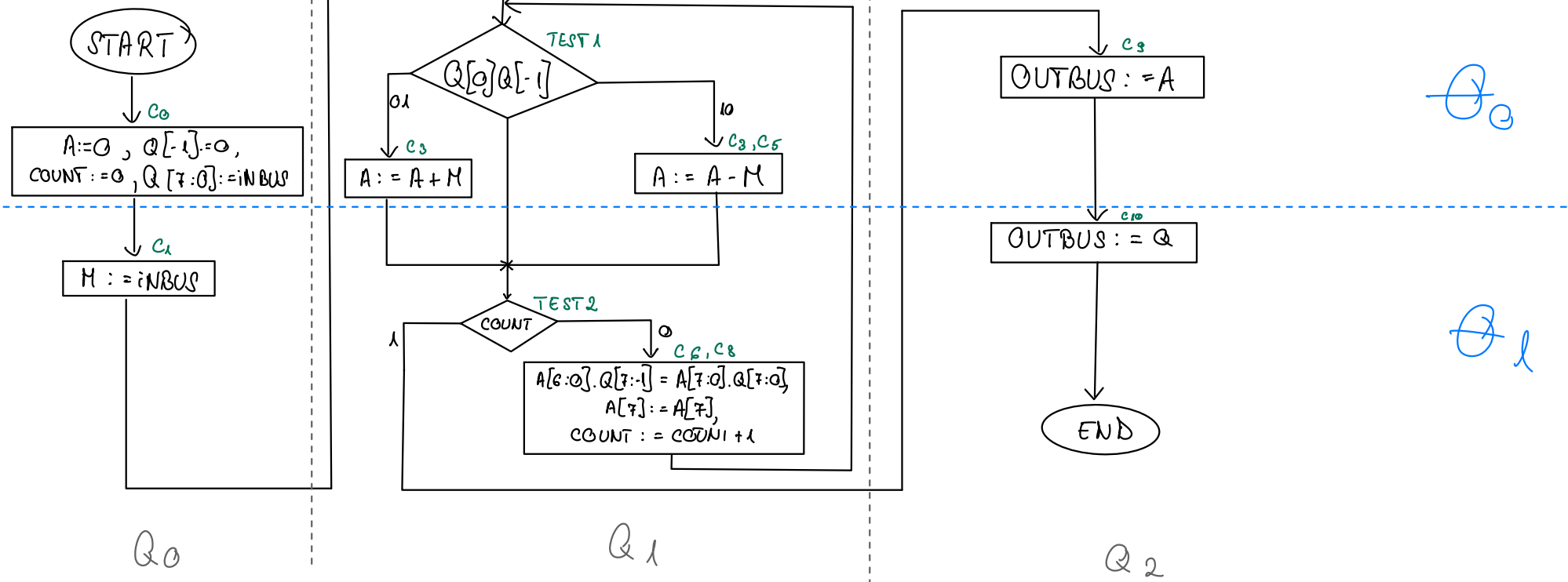
## ADDITION



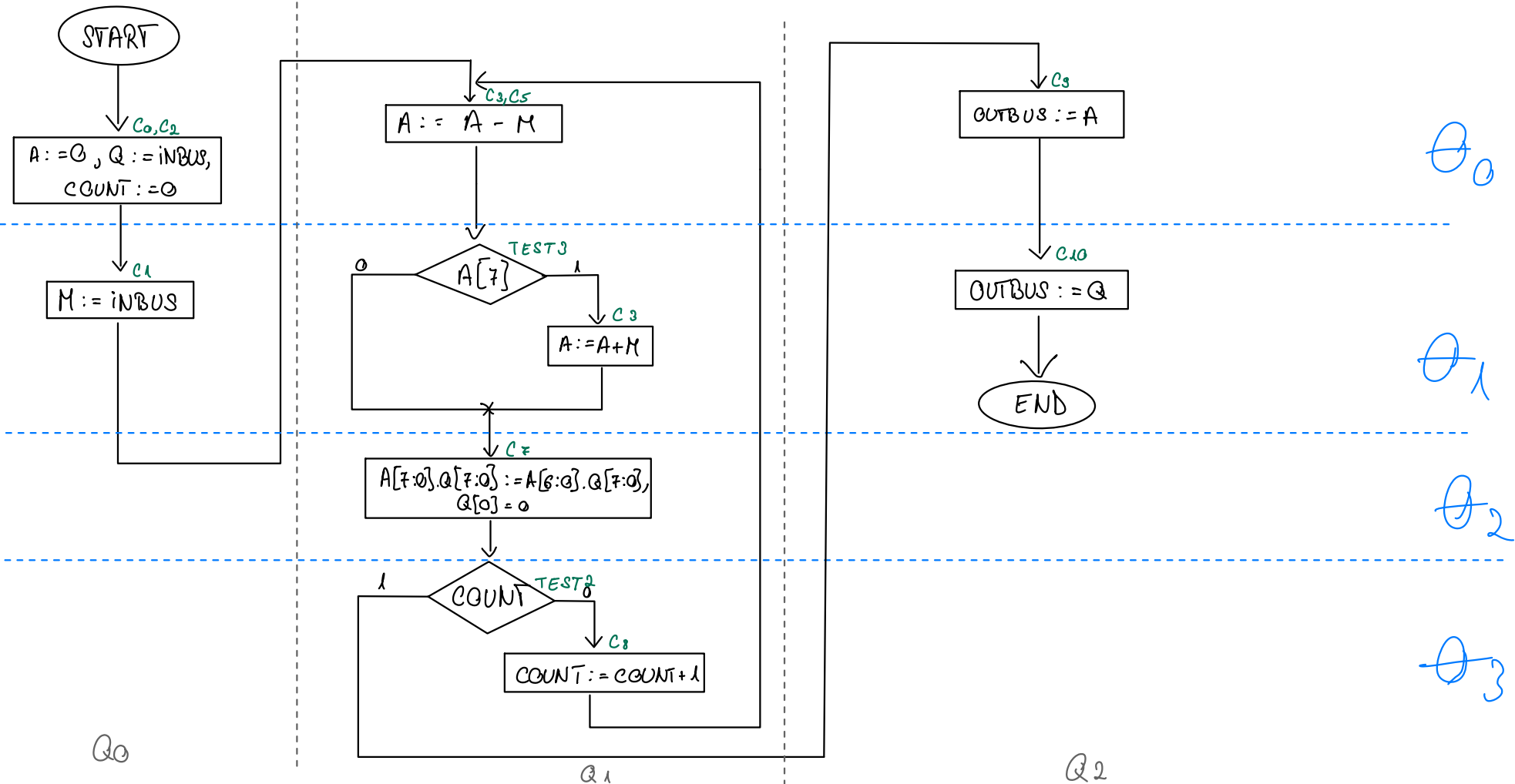
## SUBTRACTION

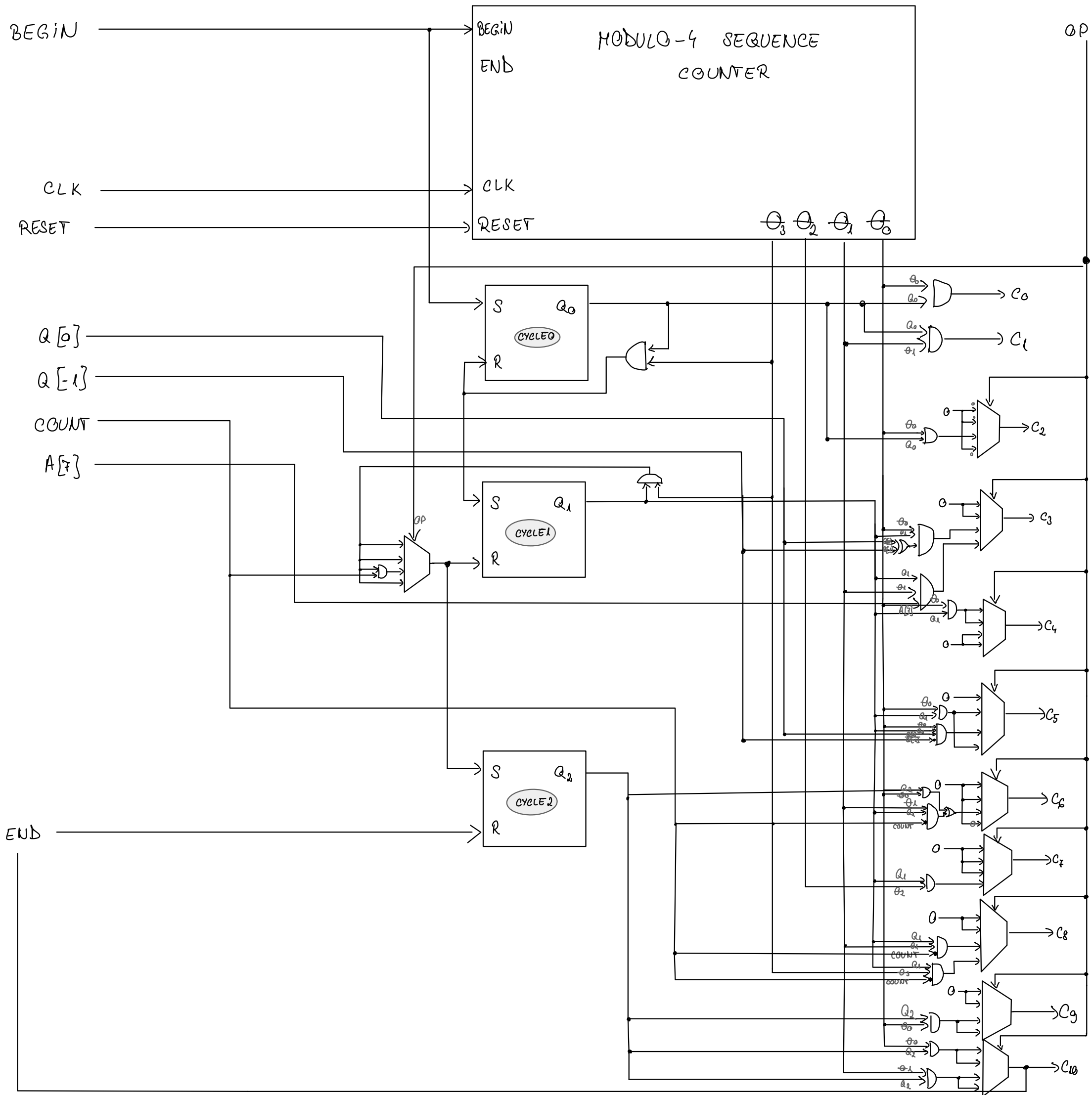


# MULTIPLICATION $\rightarrow$ Booth Radix-2



# DIVISION $\rightarrow$ Restoring Division





OP	CODE
ADD	00
SUB	01
MUL	10
DIV	11

