

① $-4 \rightarrow \text{IEEE 754}$

11 | 100000011 | 00....

② $0x42e30000$

0100 0010 1100 1001 0000 0000 0000 0000

$1,1001001 = 1100100,1 = 4 + 32 + 64 = 100.5$

③

$-AA_{16} = 10101010 \rightarrow 01010101 +$
 $\underline{01010110}$

④

00000000000000001010110

$0x00056$

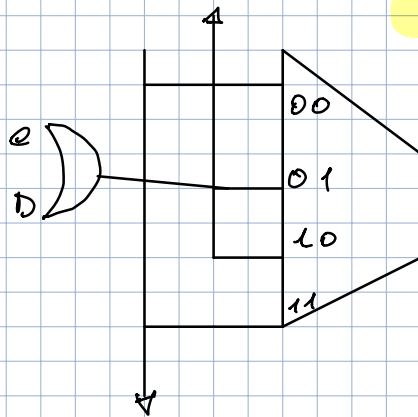
⑤

$8! / 4! = 8 / 2 = 4$

⑥

Picovore lo forma POS

$$Y = (A+B)(\bar{A}+\bar{B})(C+D)$$



C D	+
0 0	0
0 1	1
1 1	1
1 0	1

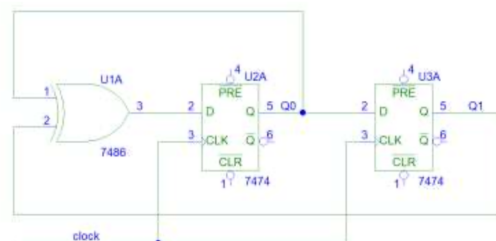
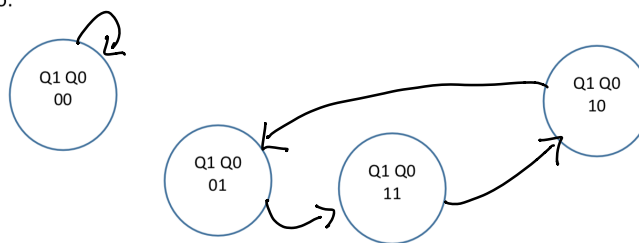
7

AB \ CD	00	01	11	10
00	X	0	0	X
01	0	X	X	0
11	0	X	X	0
10	1	0	0	X

$$F = \bar{B}\bar{D}$$

8

8- Si completi il bubble diagram dell'automa a stati finiti il cui schema è riportato di seguito:



9

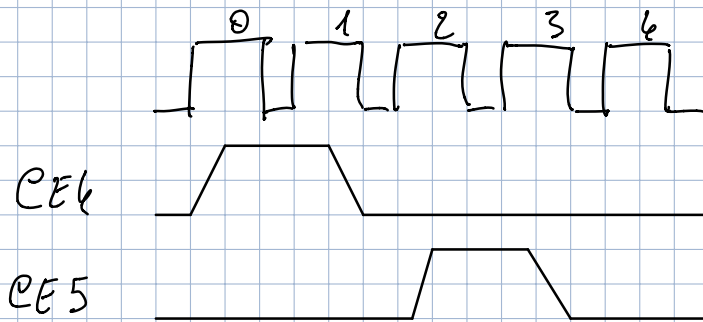
S4

10

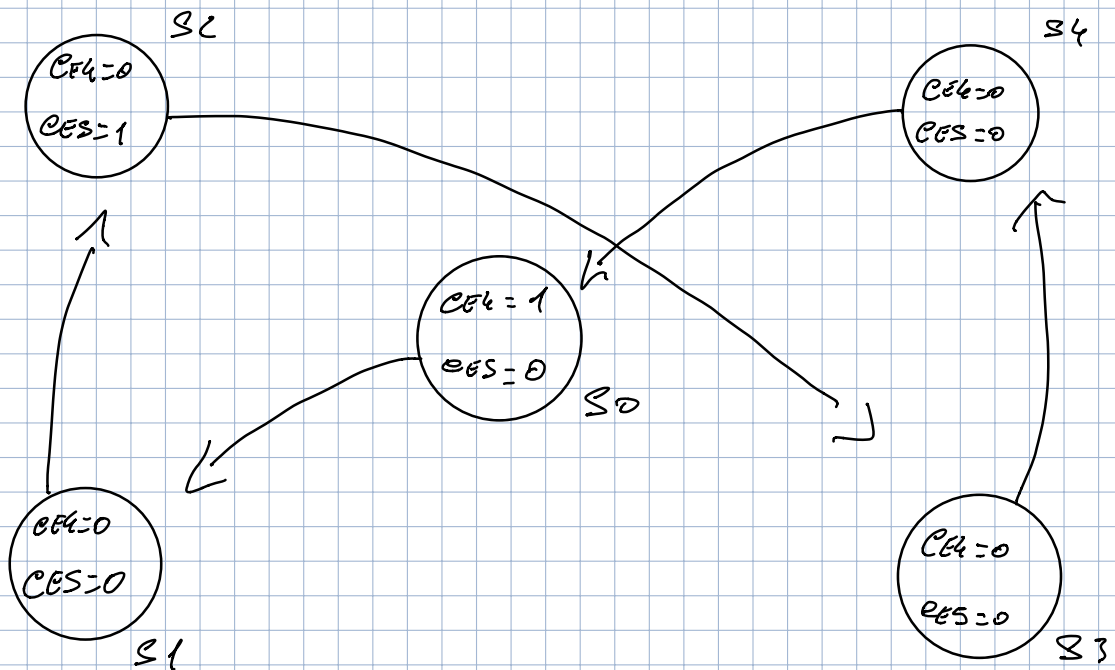
4 stati

Parte 2

1



op \rightarrow R4 @ t_1
op \rightarrow R5 @ t_3



Funzioni prossimo stato

Q_2	Q_1	Q_0	Q_2'	Q_1'	Q_0'
0	0	0	0	0	1
0	0	1	0	1	0
0	1	0	0	1	1
0	1	1	1	0	0
1	0	0	0	0	0
1	0	1	x	x	x
1	1	0	x	x	x
1	1	1	x	x	x

$$Q_2' = \bar{Q}_2 \bar{Q}_1 Q_0$$

$$Q_1' = \bar{Q}_2 \bar{Q}_1 Q_0 + \bar{Q}_2 Q_1 \bar{Q}_0 = \bar{Q}_2$$

$$Q_0' = \bar{Q}_2 \bar{Q}_1 \bar{Q}_0 + \bar{Q}_2 Q_1 \bar{Q}_0 = \bar{Q}_2 \bar{Q}_0$$

Funzioni di uscita

Q_2	Q_1	Q_0	4	5
0	0	0	1	0
0	0	1	0	0
0	1	0	0	1
0	1	1	0	0
1	0	0	0	0
1	0	1	x	x
1	1	0	x	x
1	1	1	x	x

$$CB4 = \bar{Q}_2 \bar{Q}_1 \bar{Q}_0$$

$$CB5 = \bar{Q}_2 Q_1 \bar{Q}_0$$

$$\textcircled{2} \quad T_{\text{ave}} = 20 \text{ ms} \quad T_{\pi} = 80 \text{ ms}$$

$$T_c = \frac{1}{5} T_{\pi} = 16 \text{ ms}$$

$$20 \text{ ms} = h(16 \text{ ms}) + (1-h)(80 \text{ ms})$$

$$h(16 \text{ ms}) + 80 \text{ ms} - h(80 \text{ ms}) = 20 \text{ ms}$$

$$-h(64 \text{ ms}) = -60 \rightarrow h = \frac{60}{64} = 0.93$$