

Technika Cyfrowa - laboratorium

Temat: Układy sekwencyjne

Imię i nazwisko: Fabian Sucholas

Grupa laboratoryjna: 1

Data ćwiczenia: 23.05.2025 / 30.05.2025

Data oddania: 30.05.2025

Zadanie 1.

Kartka:

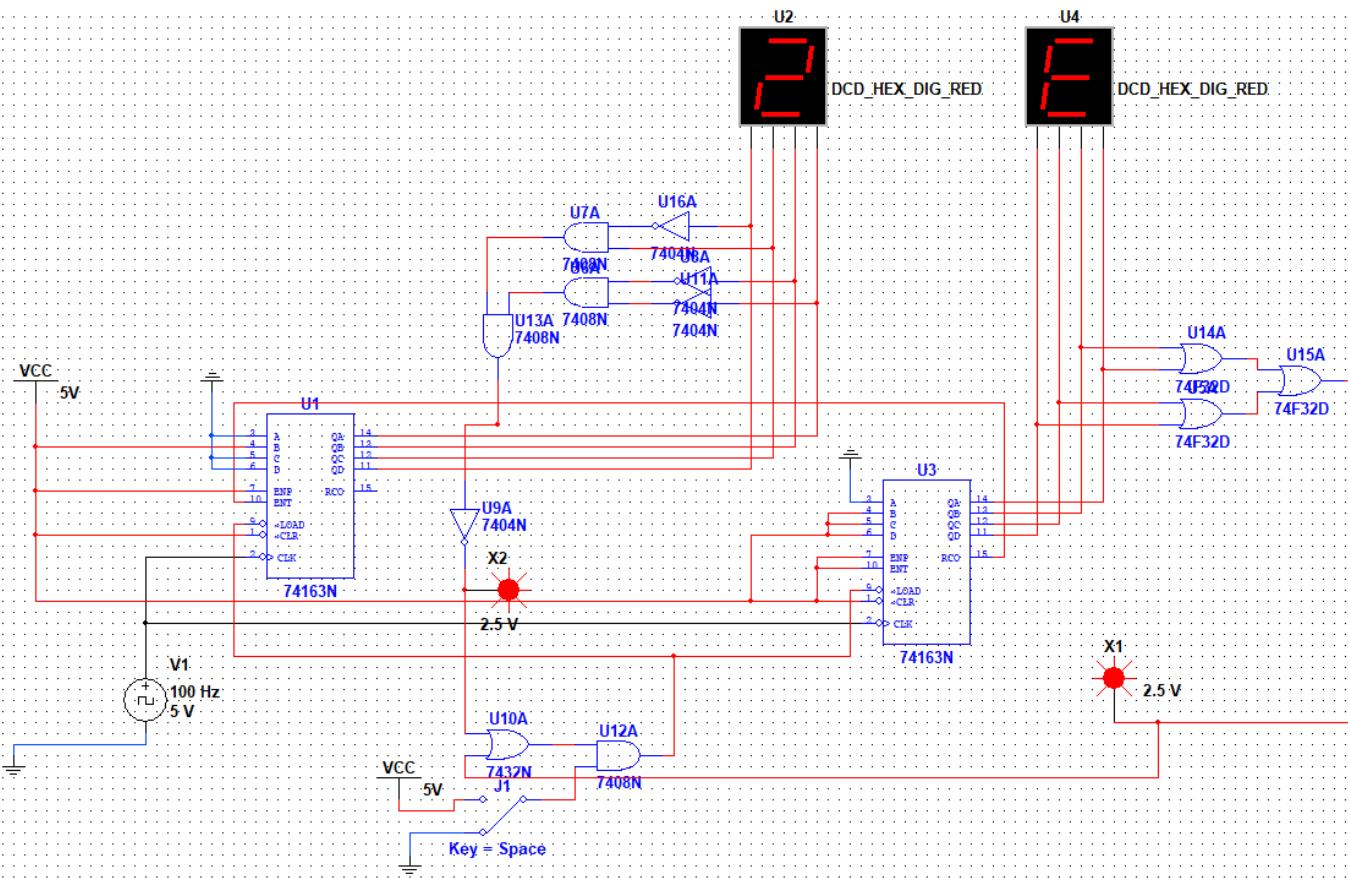
Sucholas $\Rightarrow S \Rightarrow 2e_{(16)}$

$$2e_{(16)} = 46_{(10)}$$

$$(16 + 18)_{(10)} = 64_{(10)}$$

$$64_{(10)} = 40_{(16)}$$

MultiSim:



Zadanie 2.

Kartka:

Zadanie 2

$3 \rightarrow 2 \rightarrow 3 \rightarrow 1 \rightarrow 2$

$Q_A Q_B Q_C$	$Q_A' Q_B' Q_C'$	$y_A y_B y_C$	$K_A K_B K_C$
0 0 1	1 1 0	1 1 -	- - 1
0 1 0	1 1 1	1 - 1	- 0 -
0 1 1	0 1 0	0 - -	- 0 1
1 1 0	0 1 1	- - 1	1 0 -
1 1 1	0 0 1	- - -	1 1 0

Pomijajcie nie znaczące

$Q_A Q_B Q_C$	$Q_A' Q_B' Q_C'$	$y_A y_B y_C$	$K_A K_B K_C$
0 0 0	1 1 1	0 0 0	1 1 1
0 0 1	1 1 0	0 1 0	1 1 0
0 1 0	1 1 1	1 0 0	0 1 0
0 1 1	0 1 0	1 1 0	0 1 1
1 1 0	0 1 1	0 1 1	1 0 0
1 1 1	0 0 1	0 0 1	1 1 0

$y_A = \overline{Q_B} + \overline{Q_C}$

$y_B = 1$

$y_C = 1$

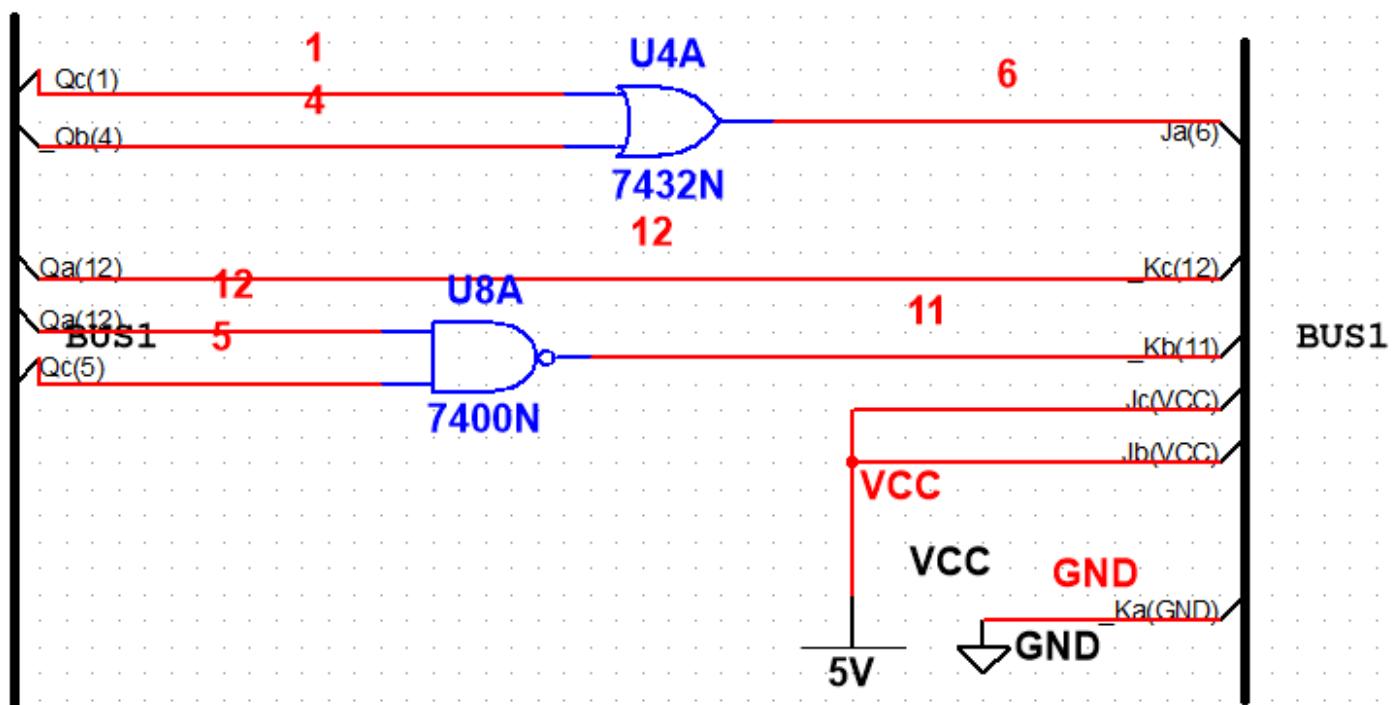
$Q_A Q_B Q_C$	$Q_A' Q_B' Q_C'$	$y_A y_B y_C$	$K_A K_B K_C$
0 0 0	1 1 1	0 0 0	1 1 1
0 0 1	1 1 0	0 1 0	1 1 0
0 1 0	1 1 1	1 0 0	0 1 0
0 1 1	0 1 0	1 1 0	0 1 1
1 1 0	0 1 1	0 1 1	1 0 0
1 1 1	0 0 1	0 0 1	1 1 0

$K_A \Rightarrow \overline{K_A} = 0$

$K_B \Rightarrow \overline{K_B} = \overline{Q_A} \overline{Q_C}$

$K_C \Rightarrow \overline{K_C} = Q_A$

MultiSim:



Zadanie 3.

Kartka:

Nr	$Q_1 Q_2 Q_3 Q_4$	$Q_1 \oplus Q_4$	$Q_1 \oplus Q_2$	$Q_3 Q_4$
1	1 0 0 0	1	1	0
2	1 1 0 0	1	0	0
3	1 1 1 0	1	0	1
4	1 1 1 1	0	0	0
5	0 1 1 1	1	1	0
6	1 0 1 1	0	1	0
7	0 1 0 1	1	1	1
8	1 0 1 0	1	1	1
9	1 1 0 1	0	0	1
10	0 1 1 0	0	1	1
11	0 0 1 1	1	0	0
12	1 0 0 1	0	1	1
13	0 1 0 0	0	1	0
14	0 0 1 0	0	0	1
15	0 0 0 1	1	0	1

MultiSim:

