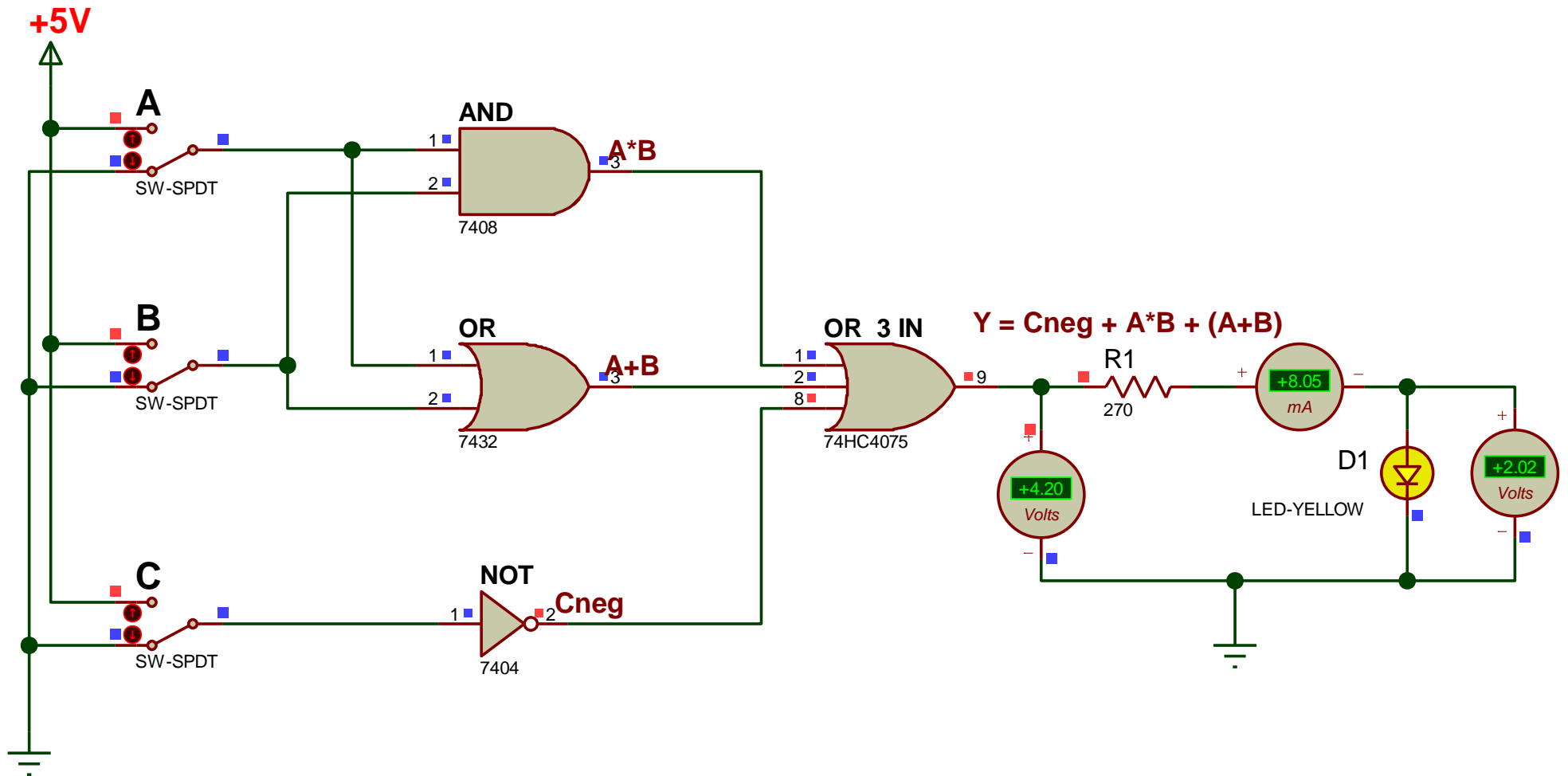


# CIRCUITI LOGICI STUDIATI IN LAB

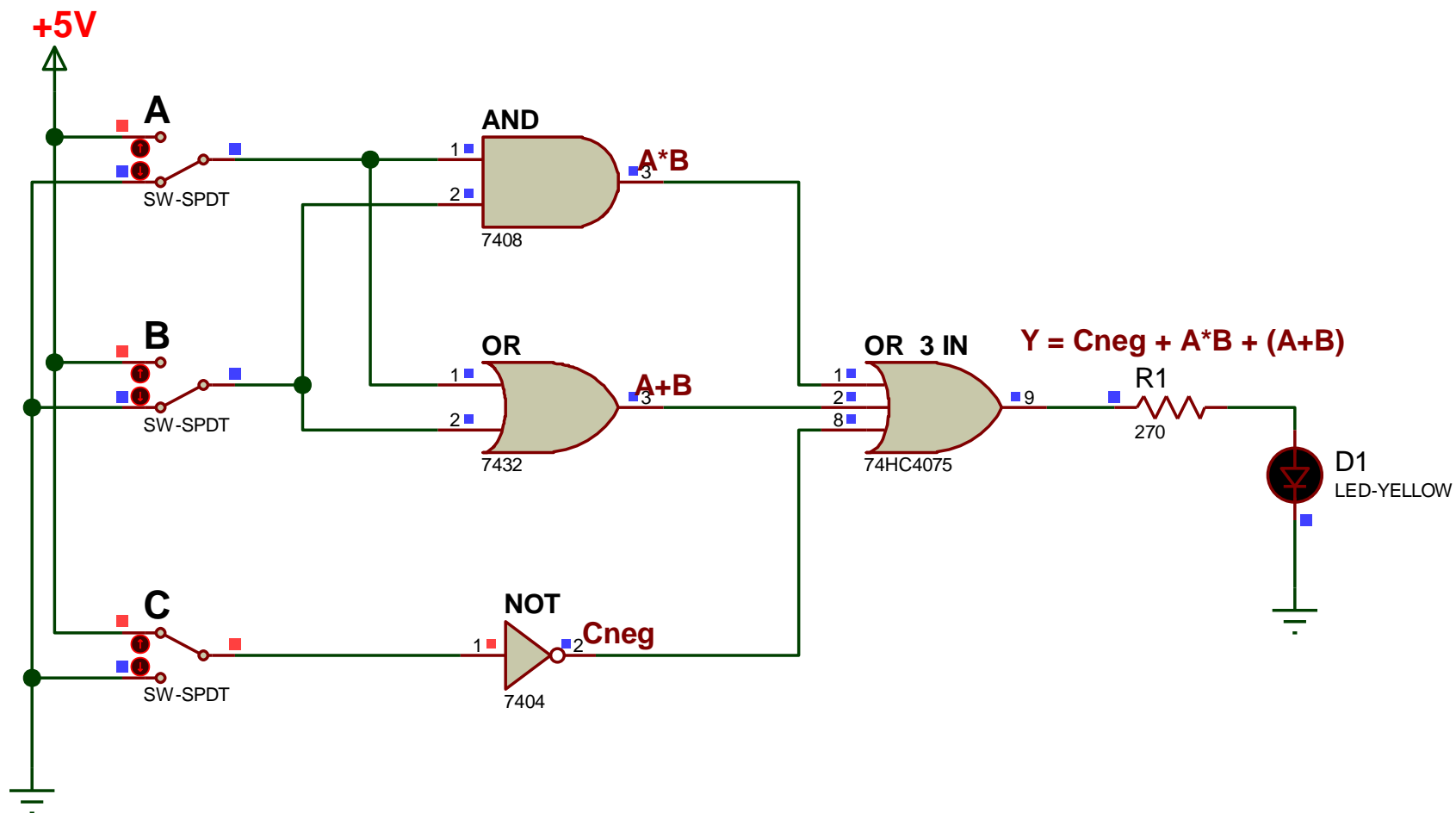
## 1. FUNZIONE LOGICA AOI : $Y = AB + (A+B) + \bar{C}$

STATO DEGLI INGRESSI ABC : 000 >>>  $Y = 1$  >>>  $V_{out} = 4,2 [V]$  >>> LED acceso >>>  $V_{ak} = 2,02 [V]$

$I_{ak} = 8,05 [mA]$



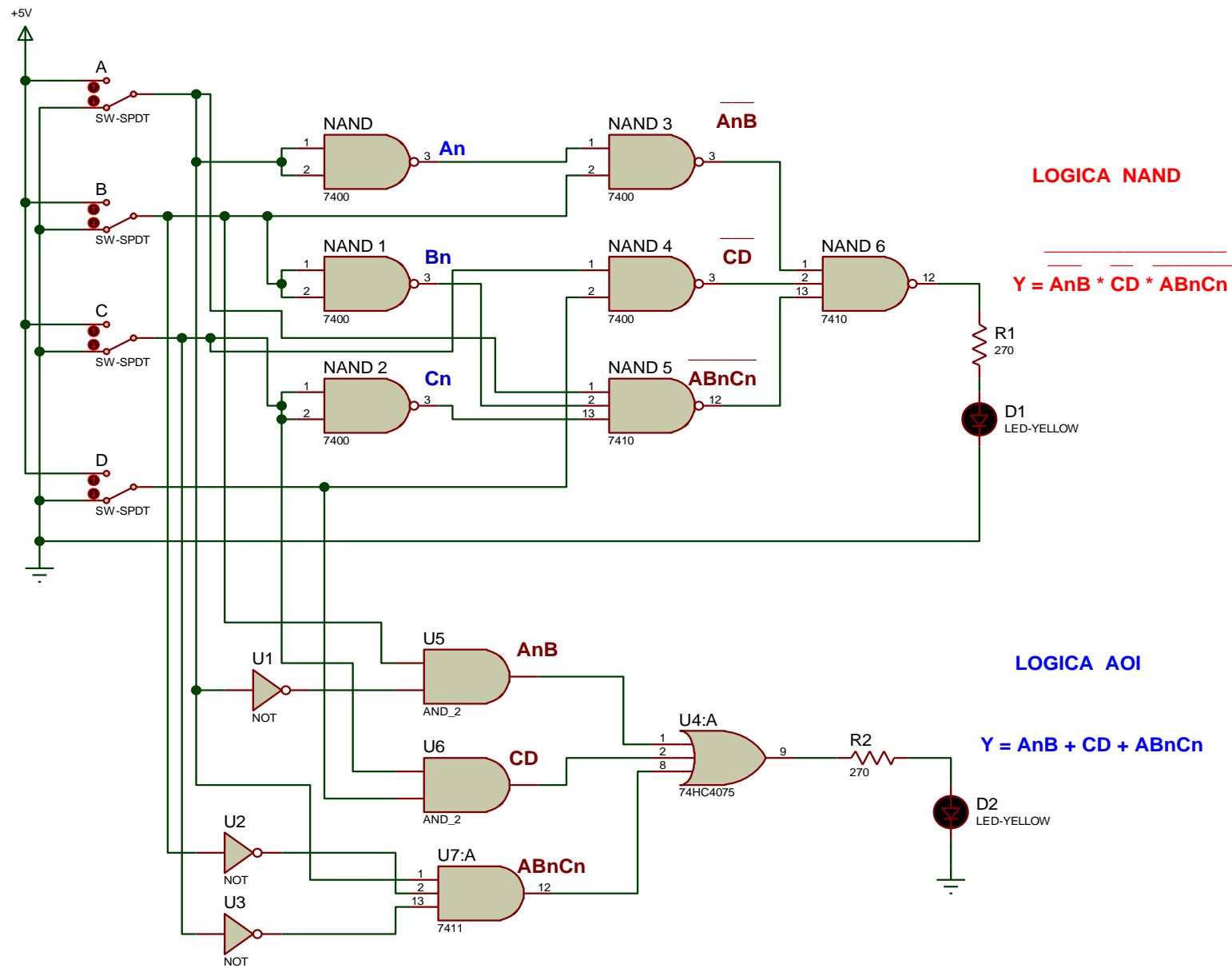
STATO INGRESSI ABC : 001



## TAVOLA DI VERITA'

A	B	C	$Y = AB + (A+B) + \bar{C}$
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

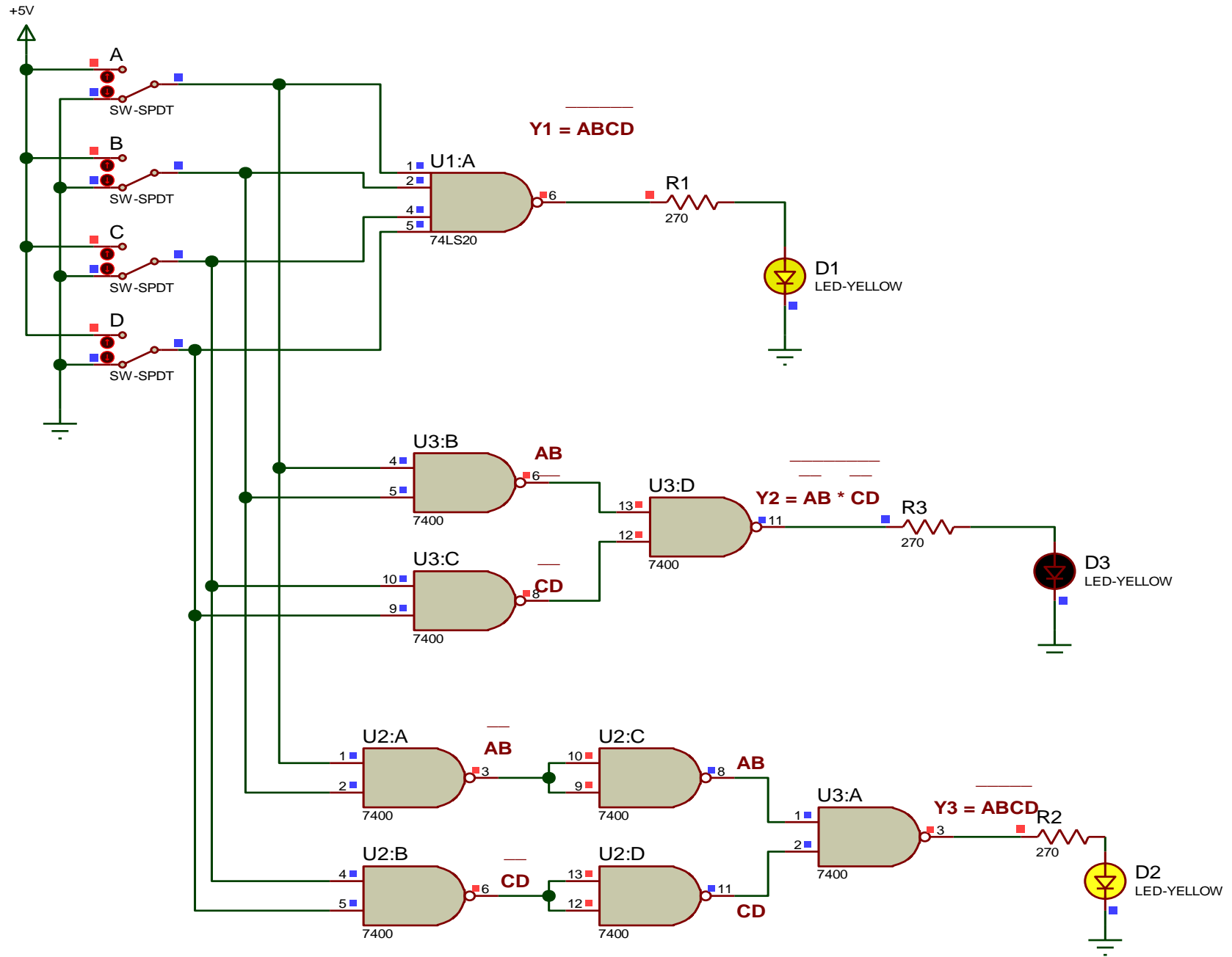
## 2. Funzione in Logica AOI e in Logica NAND

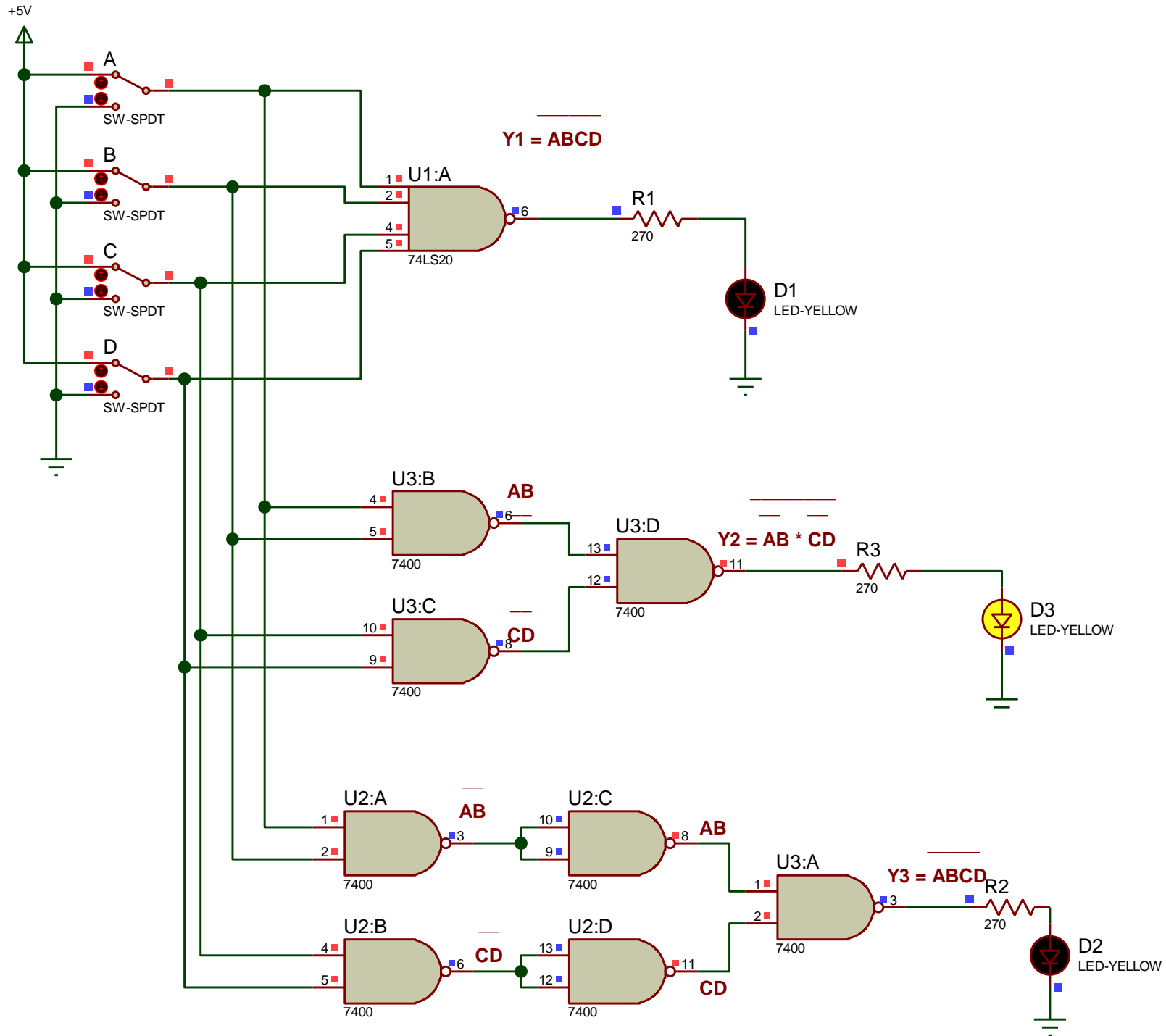


## TAVOLA DI VERITA'

A	B	C	D	Y
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	1
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	0
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

### 3. Verifica della NON VALIDITA' PROPRIETA' ASSOCIATIVA per la Funzione NAND ( e NOR )

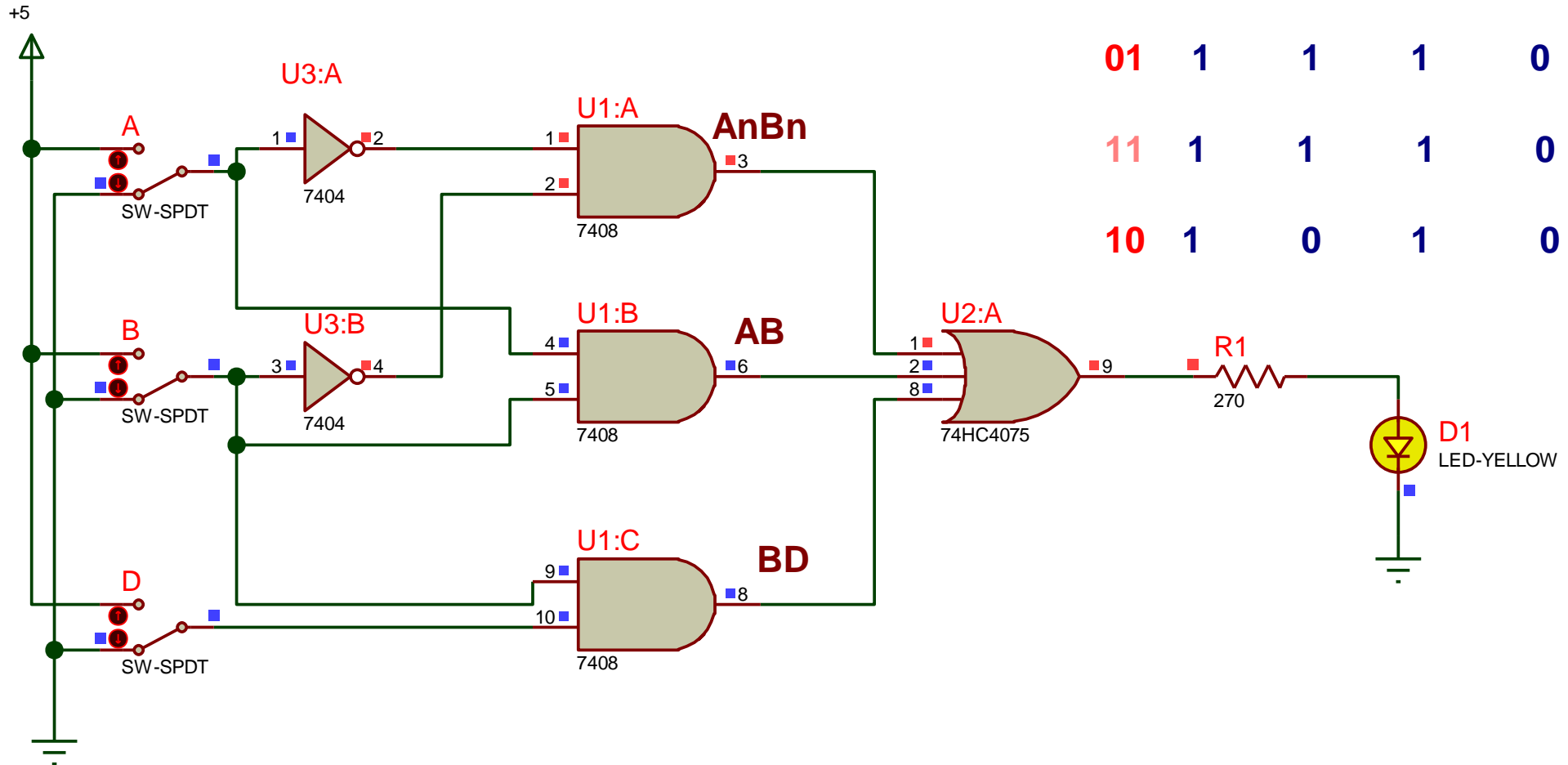




## 4. SEMPLIFICAZIONE CON MAPPE KARNAUGH

SIMULAZIONE con ABCD = 0000

$$Y = \bar{A}\bar{B} + BD + AB$$





**SIMULAZIONE con ABCD = 1000**

$$Y = \overline{A}B + BD + AB$$

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

