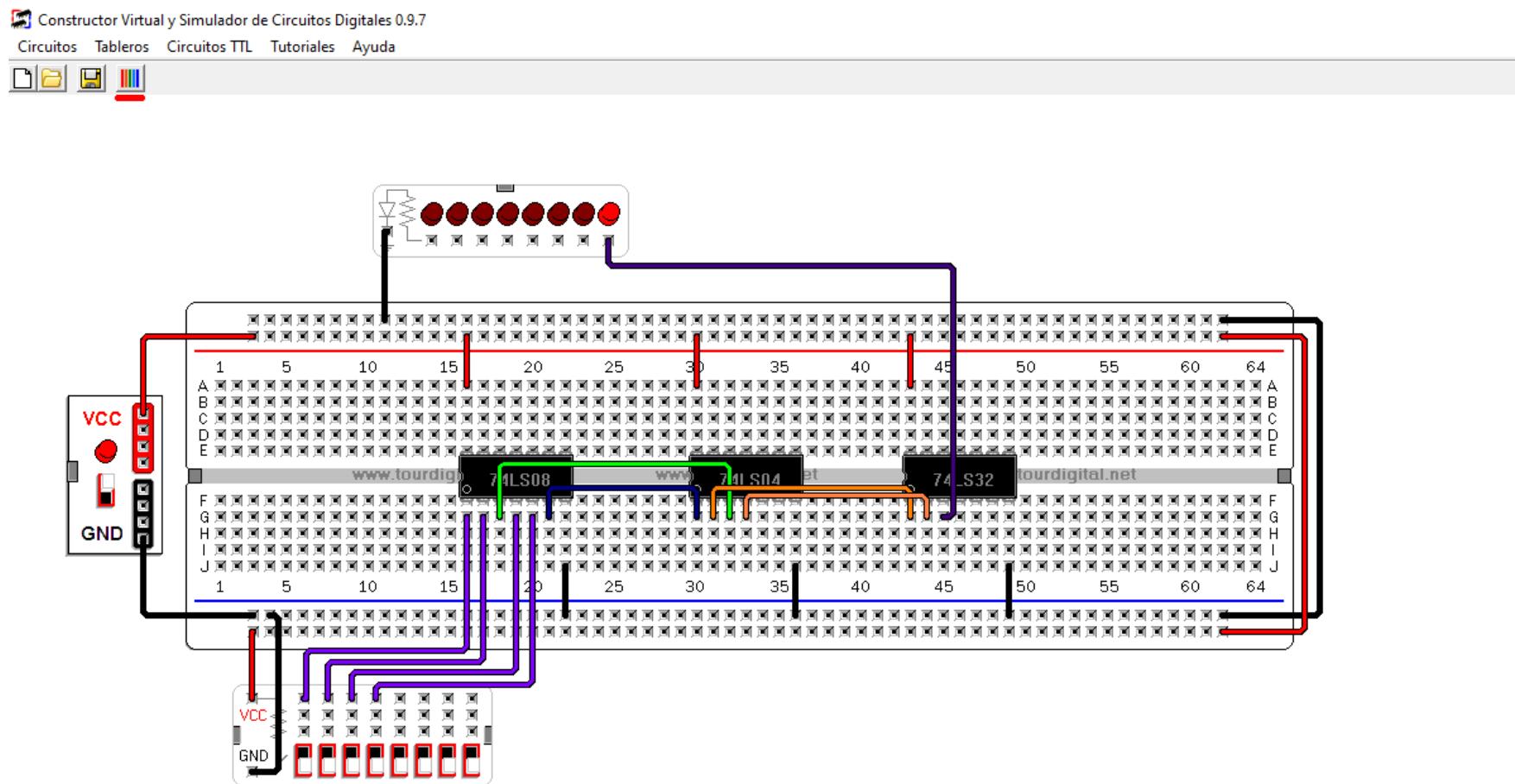


Tarea #992 Ejercicios de clase

Jose Angel Mendez Cotino

Primer protoboard



1 P rotaboard #1

$A \oplus B + C \bar{D}$

A	B	C	D	$A \oplus B$	$\bar{A}B$	$C\bar{D}$	$\bar{C}D$	$\bar{A}\bar{D} + \bar{C}\bar{D}$
0	0	0	0	0	1	0	1	1
0	0	0	1	1	1	0	1	1
0	0	1	0	1	1	0	1	1
0	0	1	1	1	1	1	0	1
0	1	0	0	1	1	0	1	1
0	1	0	1	1	1	0	1	1
0	1	1	0	1	0	1	0	1
0	1	1	1	0	1	1	0	1
1	0	0	0	0	1	0	1	1
1	0	0	1	0	1	0	1	1
1	0	1	0	0	1	0	1	1
1	0	1	1	0	1	1	0	1
1	1	0	0	1	0	0	1	1
1	1	0	1	1	0	0	1	1
1	1	1	0	1	0	0	1	1
1	1	1	1	0	1	0	0	0

Logic diagram:

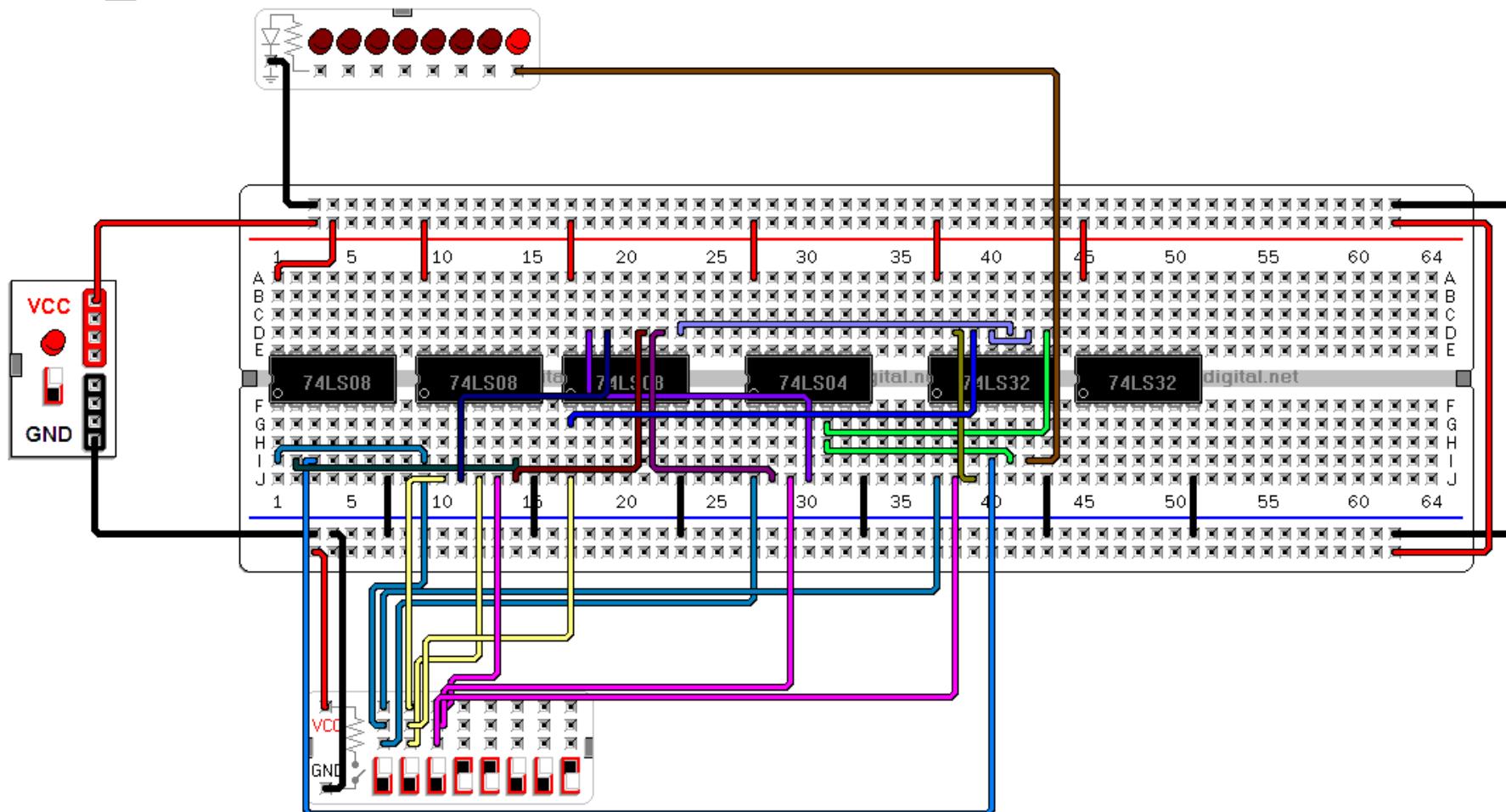
```

graph LR
    A((A)) --> AND1[AND]
    B((B)) --> AND1
    AND1 --> NOT1[NOT]
    NOT1 --> OR1[OR]
    C((C)) --> AND2[AND]
    D((D)) --> AND2
    AND2 --> NOT2[NOT]
    NOT2 --> OR1
    OR1 --> S((S))
    
```

Segundo protoboard

Nuevo circuito

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2. protoboard
#2

$$(A \bar{B} \bar{C} + (\bar{C} \bar{B})A + A \bar{C} \bar{B} + \bar{B} \bar{C} + A)$$

A	B	C	\bar{A}	\bar{B}	\bar{C}	$\bar{AB} - C$	$(\bar{C} \bar{B})A$	$\bar{A} \bar{C} \bar{B}$	$\bar{B} \bar{C}$	A
0	0	0	1	1	1	1	1	1	1	1

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

2. protoboard
#2

$$CBA$$

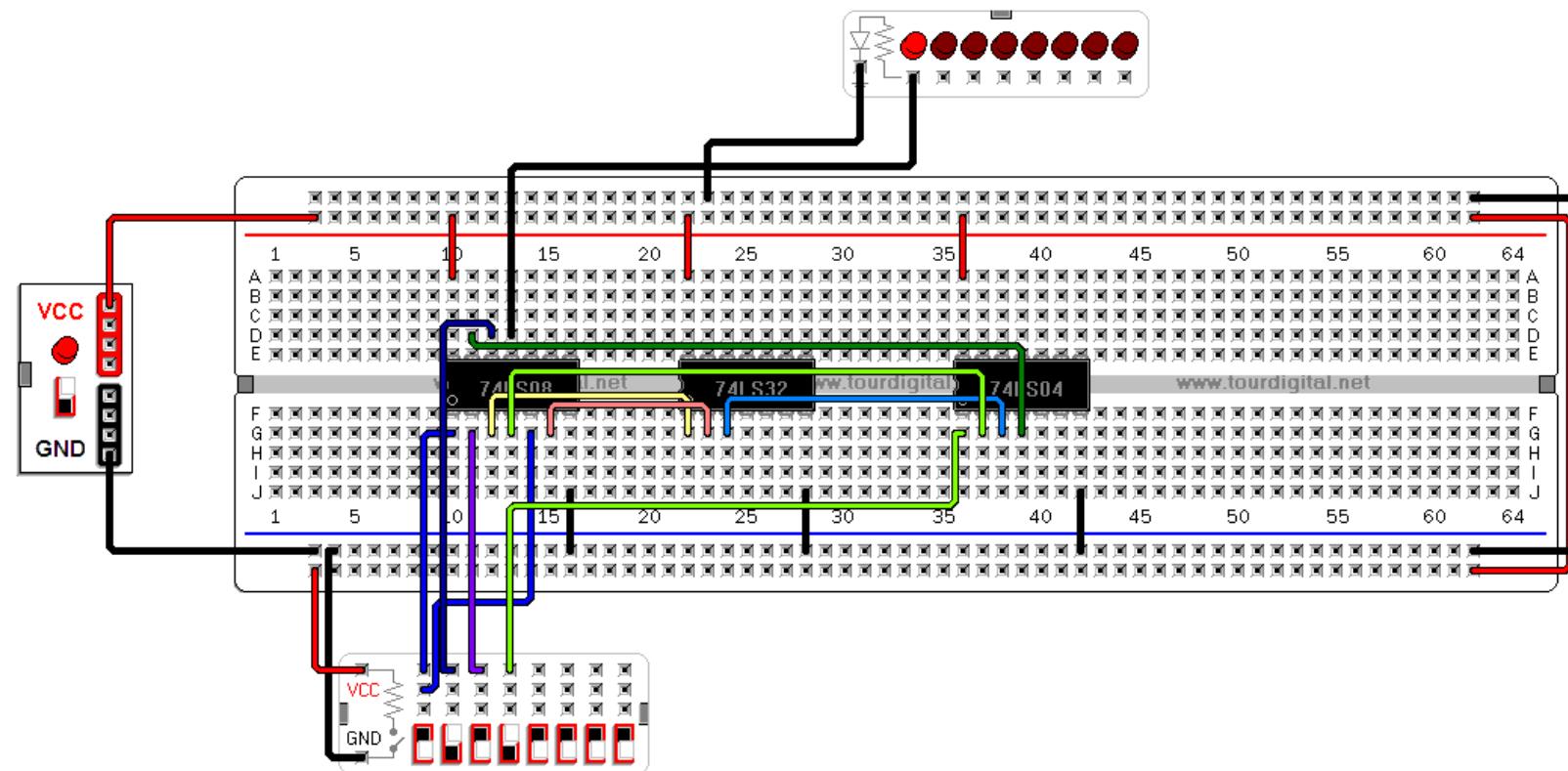
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çççç

Tercer protoboard

Nuevo circuito

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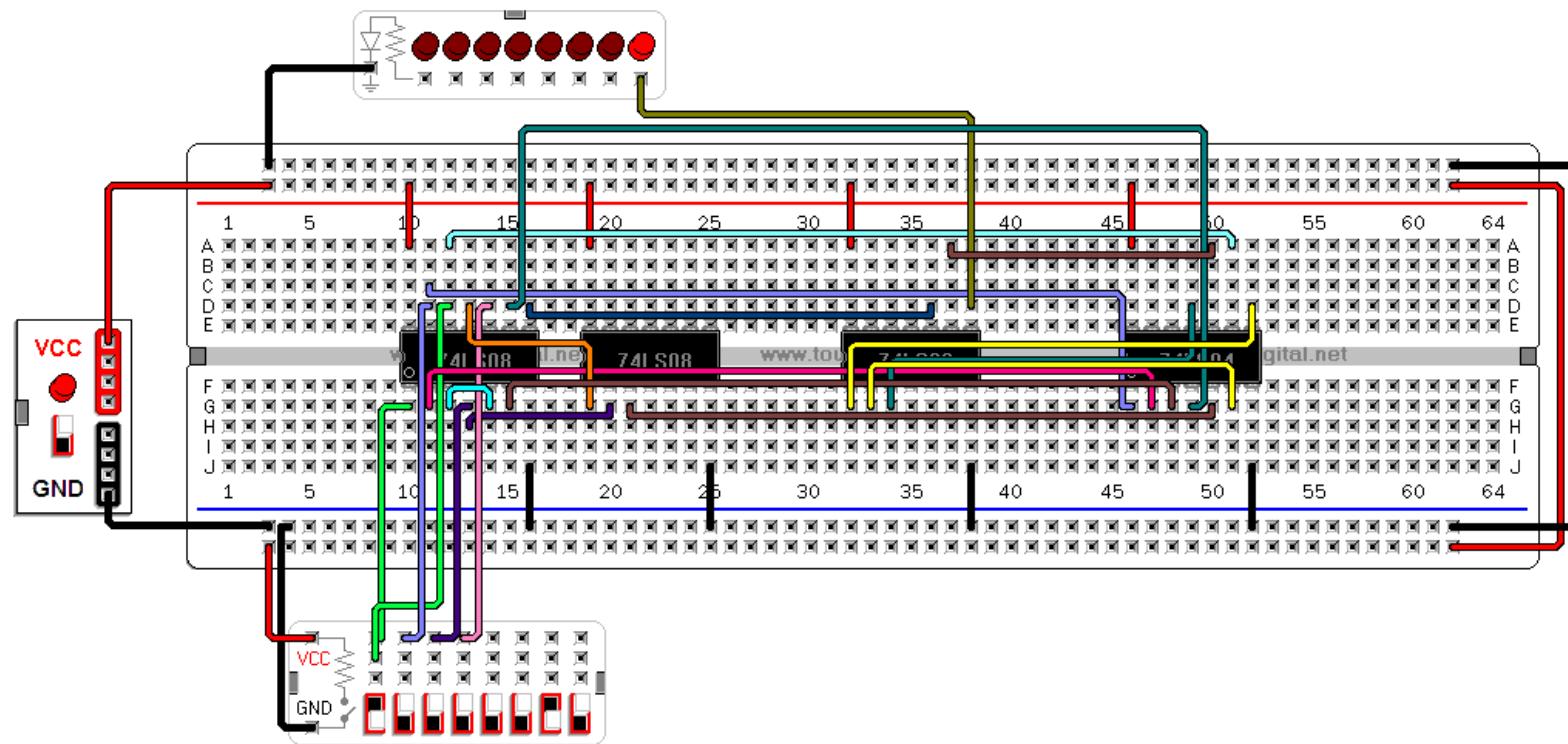
3. Protoboard
#3 $(\overline{A}C + \overline{D}A)B$

A	B	C	D	AC	~D	~D*A	AC*~D	~A*C+~D*A
0	0	0	0	0	1	0	0	1

Cuarto protoboard

 Constructor Virtual y Simulador de Circuitos Digitales 0.9.7

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Up Protoboard
#4

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

A	B	C	D	\bar{B}	$A \bar{B} C$	$\bar{A} \bar{B} C$	$\bar{A} \bar{B} \bar{C} D$
0	0	0	0	1	0	1	0
0	0	0	1	1	0	1	0
0	0	1	0	1	0	1	0
0	0	1	1	1	0	1	1
0	1	0	0	0	0	1	0
0	1	0	1	0	0	1	0
0	1	1	0	0	0	1	1
0	1	1	1	0	0	1	1
1	0	0	0	1	0	1	0
1	0	0	1	1	0	1	0
1	0	1	0	1	0	0	0
1	0	1	1	1	0	0	0
1	1	0	0	0	0	1	0
1	1	0	1	0	0	1	1
1	1	1	0	0	0	1	0
1	1	1	1	0	0	1	1

$$ABC \quad \bar{A} \bar{B} \bar{C} \quad \bar{A} \bar{B} C + \bar{A} \quad \bar{A} (\bar{B} C + \bar{D}) \quad \bar{A} \bar{B} (\bar{C} + \bar{D})$$

0	1	1	0	0
0	1	1	0	1
0	1	1	1	0
0	1	1	1	1
0	1	1	1	0
0	1	1	0	1
0	1	1	0	0
0	1	1	1	0
0	1	1	1	1
0	1	1	1	0
0	1	1	0	1
0	1	1	0	0
0	1	1	1	1
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	1
1	1	1	0	0
1	1	1	1	1

