

# Córdova Pichardo Francisco Uziel

## Practica 4

```
1 library ieee;
2 use ieee.std_logic_1164.all;
3
4 entity PDetector is port
5 (
6     E, clk, clr : in std_logic;
7     display : out std_logic_vector(6 downto 0)
8 );
9 end PDetector;
10
11 architecture ADetector of PDetector is
12 signal S : std_logic;
13 signal q : std_logic_vector (1 downto 0);
14 begin
15     process(clk, clr)
16     begin
17         if(clr = '1') then
18             q <= "00";
19             S <= '0';
20         elsif (rising_edge(clk)) then
21             q(0) <= ((not(q(1)))and(not(q(0)))and(E))or((q(1))and(not(q(0)))and(not(E)));
22             q(1) <= ((not(q(1)))and(q(0))and(E))or((q(1))and(not(q(0)))));
23         end if;
24     end process;
25     S <= q(1)and(q(0))and(E);
26     display <= "1001111" when (S='1') else
27                 "0000001";
28 end ADetector;
```

C22V10

clk =  1	24  * not used
e =  2	23 = (q_0)
clr =  3	22 = display(4)
not used *  4	21 = display(2)
not used *  5	20 = display(0)
not used *  6	19  * not used
not used *  7	18 = display(6)
not used *  8	17 = display(1)
not used *  9	16 = display(3)
not used * 10	15 = display(5)
not used * 11	14 = (q_1)
not used * 12	13  * not used









