

```
1  library ieee ;
2  use ieee.std_logic_1164.all;
3
4  entity REGx3_OUT is
5      port (clk_REGx3_OUT: in std_logic;
6            dec_F_s: in std_logic_vector(1 downto 0);
7            regBR_in: in std_logic_vector(7 downto 0);
8            regA_out, regB_out, regC_out: out std_logic_vector(7 downto 0));
9  end REGx3_OUT;
10
11 architecture ckt of REGx3_OUT is
12
13     component reg8Bits is
14         port (clk_reg8bits,clr_reg8bits,ld_reg8bits: in std_logic;
15               d_in_reg8bits: in std_logic_vector(7 downto 0);
16               q_out_reg8bits : out std_logic_vector(7 downto 0));
17     end component;
18
19     component decodificador1X3 is
20         port (i_in: in std_logic_vector(1 downto 0);
21               d_out: out std_logic_vector(2 downto 0));
22     end component;
23
24     signal dec_out: std_logic_vector(2 downto 0);
25     signal ld_A, ld_B, ld_C: std_logic;
26     signal a_out, b_out, c_out: std_logic_vector(7 downto 0);
27
28     begin
29         deconder:decodificador1X3 port map(
30             i_in => dec_F_s,
31             d_out => dec_out);
32
33         ld_A <= dec_out(0);
34         ld_B <= dec_out(1);
35         ld_C <= dec_out(2);
36
37         REGISTRADOR A: reg8Bits port map(
38             clk_reg8bits => clk_REGx3_OUT,
39             clr_reg8bits => '0',
40             ld_reg8bits => ld_A,
41             d_in_reg8bits => regBR_in,
42             q_out_reg8bits => a_out);
43
44         REGISTRADOR B: reg8Bits port map(
45             clk_reg8bits => clk_REGx3_OUT,
46             clr_reg8bits => '0',
47             ld_reg8bits => ld_B,
48             d_in_reg8bits => regBR_in,
49             q_out_reg8bits => b_out);
50
51         REGISTRADOR C: reg8Bits port map(
52             clk_reg8bits => clk_REGx3_OUT,
53             clr_reg8bits => '0',
54             ld_reg8bits => ld_C,
55             d_in_reg8bits => regBR_in,
56             q_out_reg8bits => c_out);
57
58         regA_out <= a_out;
59         regB_out <= b_out;
60         regC_out <= c_out;
61     end ckt;
```