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-- Company:
-- Engineer:
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-- Create Date: 02/08/2024 03:57:22 PM
-- Design Name:
-- Module Name: TobBox_TB - Behavioral
-- Project Name:
-- Target Devices:
-- Tool Versions:
-- Description:
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-- Dependencies:
--
-- Revision:
-- Revision 0.01 - File Created
-- Additional Comments:
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----------------------------------------------------------------------------------


library IEEE;
use IEEE.STD_LOGIC_1164.ALL;
use std.env.finish;
-- Uncomment the following library declaration if using
-- arithmetic functions with Signed or Unsigned values
--use IEEE.NUMERIC_STD.ALL;

-- Uncomment the following library declaration if instantiating
-- any Xilinx leaf cells in this code.
--library UNISIM;
--use UNISIM.VComponents.all;

entity TobBox_TB is
--  Port ( );
```

```
end TobBox_TB;

architecture Behavioral of TobBox_TB is
  signal a1,a2,a3,a4,b1,b2,b3,b4:  std_logic_vector(5 downto 0);
  signal s11,s12,s13,s14,s21,s22,s23,s24,s31,s32,s33,s34:
std_logic_vector(4 downto 0);
  signal sel11,sel12,sel13, sel14,sel15, sel16, sel17, sel18,
  sel21,sel22,sel23, sel24,sel25, sel26, sel27, sel28:
std_logic_vector(1 downto 0);
  signal y1,y2,y3,y4:  std_logic_vector(5 downto 0);
begin
box: entity work.Top_Box(behavioral)
port map(a1 =>a1,a2 =>a2,a3 =>a3,a4 =>a4,b1 =>b2,b2 =>b2,b3 =>b3,b4
=>b2,
s11=>s11,s12=>s12,s13 =>s13,s14 =>s14,s21 =>s21,s22 =>s22,s23
=>s23,
s24 =>s24,s31 =>s31,s32 =>s32,s33  =>s33,s34 =>s34,
sel11 => sel11,sel12 => sel12,sel13 => sel13, sel14 => sel14,sel15
=> sel15, sel16 => sel16,
sel17 => sel17, sel18 => sel18,sel21 => sel21,sel22 => sel22,sel23
=> sel23, sel24 => sel24,
sel25 => sel25, sel26 => sel26, sel27 => sel27, sel28 => sel28,y1
=> y1,y2 => y2,y3 => y3,y4 => y4);
ts:process
begin

--testcase1
a1<="101000";b1<= "011100";
a2<="110100";b2<= "101001";
a3<="010110";b3<= "011010";
a4<="010110";b4<= "011010";

s11<="10100";s12<= "00111";s13<="00010";s14<= "00100";
sel11<="00";sel12<="01";sel13<="00";sel14<="01";
sel15<="10";sel16<="11";sel17<="10";sel18<="11";

s21<="00001";s22<= "01111";s23<="00000";s24<= "01111";
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sel21<="00";sel22<="01";sel23<="00";sel24<="10";
sel25<="00";sel26<="10";sel27<="00";sel28<="10";

s31<="01111";s32<= "01001";s33<="01111";s34<= "01111";
wait for 100ns;

--testcase2
a1<="101000";b1<= "011100";
a2<="110100";b2<= "000100";
a3<="010110";b3<= "000010";
a4<="000110";b4<= "001010";

s11<="00000";s12<= "10011";s13<="10010";s14<= "01000";
sel11<="00";sel12<="01";sel13<="00";sel14<="01";
sel15<="01";sel16<="11";sel17<="10";sel18<="11";

s21<="01111";s22<= "10101";s23<="01111";s24<= "01110";
sel21<="00";sel22<="01";sel23<="00";sel24<="01";
sel25<="01";sel26<="11";sel27<="00";sel28<="01";

s31<="01111";s32<= "01111";s33<="00001";s34<= "01111";
wait for 100ns;
finish;
end process;
end Behavioral;
```