

Implement a 4-bit ALU and represent it.  
source code:

```

library IEEE;
use IEEE.STD_LOGIC_1164.ALL;
use IEEE.NUMERICAL_STD;

entity alu is
    Port (inp-a : in signed (3 downto 0);
          inp-b : in signed (3 downto 0);
          sel : in STD_LOGIC_VECTOR (2 downto 0);
          out-all: out signed (3 downto 0));
end alu;

architecture Behavioral of alu is
begin
    process (inp-a, inp-b, sel)
    begin
        case sel is
            when "000" =>
                out-all <= inp-a + inp-b;
            when "001" =>
                out-all <= inp-a - inp-b;
            when "010" =>
                out-all <= inp-a - 1;
            when "011" =>
                out-all <= inp-a + 1;
            when "100" =>
                out-all <= inp-a and inp-b;
            when "101" =>
                out-all <= inp-a or inp-b;
            when "111" =>
                out-all <= inp-a xor inp-b;
        end case;
    end process;
end Behavioral

```