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BSCpE-3A

NOR Gate

VHDL Code:

```vhdl
Library IEEE;
use IEEE.std_logic_1164.all;

entity nor_gate is
  Port (
    X: in STD_LOGIC;
    Y: in STD_LOGIC;
    Z: out STD_LOGIC
  );
end nor_gate;

-- Corrected Behavioral model
architecture behav2 of nor_gate is
begin
  process (x, y)
  begin
    Z <= not (x or y); -- NOR logic implemented correctly
  end process;
end behav2;
```