

```

LIBRARY ieee;
USE ieee.std_logic_1164.ALL;

ENTITY shifter_tb IS
END shifter_tb;

ARCHITECTURE behavior OF shifter_tb IS

    -- Component Declaration for the Unit Under Test (UUT)

    COMPONENT shifter
    PORT(
        B : IN  std_logic_vector(15 downto 0);
        H : OUT std_logic_vector(15 downto 0);
        S : IN  std_logic_vector(1 downto 0);
        In_r : IN  std_logic;
        In_l : IN  std_logic
        --      Out_r : OUT  std_logic;
        --      Out_l : OUT  std_logic
    );
    END COMPONENT;

    --Inputs
    signal B : std_logic_vector(15 downto 0) := (others => '0');
    signal S : std_logic_vector(1 downto 0) := (others => '0');
    signal In_r : std_logic := '0';
    signal In_l : std_logic := '0';

    --Outputs
    signal H : std_logic_vector(15 downto 0);
    --      signal Out_r : std_logic;
    --      signal Out_l : std_logic;

BEGIN

    -- Instantiate the Unit Under Test (UUT)
    uut: shifter PORT MAP (
        B => B,
        H => H,
        S => S,
        In_r => In_r,
        In_l => In_l
        --      Out_r => Out_r,
        --      Out_l => Out_l
    );

    -- Stimulus process
    stim_proc: process
    begin
        -- hold reset state for 100 ns.
        wait for 100 ns;

        B <= "1001100110011001";
        S <= "00";
        In_l <= '0';
        In_r <= '0';

        wait for 20 ns;
        S <= "01";

        wait for 20 ns;
        S <= "10";

        wait;
    end process;

END;

```