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-- Company:  
-- Engineer:  
--  
-- Create Date: 02/01/2024 02:16:51 PM  
-- Design Name:  
-- Module Name: compunit_tb - Behavioral  
-- Project Name:  
-- Target Devices:  
-- Tool Versions:  
-- Description:  
--  
-- 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 compunit_tb is
```

```
generic( dw: integer:=4);  
end compunit_tb;
```

architecture Behavioral of compunit_tb is

```
signal a ,b: std_logic_vector ( dw-1 downto 0);  
signal s: std_logic_vector(dw downto 0);  
signal o: std_logic_vector (dw-1 downto 0);
```

```
begin  
test: entity work.compunit(Behavioral)  
port map(a => a,b => b,s => s, o=>o);
```

```
ts: process
```

```
begin
```

```
a<= "1110";b<= "1101";  
s<= "00000";wait for 300ps;  
s<= "00001";wait for 300ps;  
s<= "00010";wait for 300ps;  
s<= "00011";wait for 300ps;  
s<= "00100";wait for 300ps;  
s<= "00101";wait for 300ps;  
s<= "00110";wait for 300ps;  
s<= "00111";wait for 300ps;  
s<= "01000";wait for 300ps;  
s<= "01001";wait for 300ps;  
s<= "01010";wait for 300ps;  
s<= "01011";wait for 300ps;  
s<= "01100";wait for 300ps;  
s<= "01101";wait for 300ps;  
s<= "01110";wait for 300ps;  
s<= "01111";wait for 300ps;  
s<= "10000";wait for 300ps;  
s<= "10001";wait for 300ps;  
s<= "10010";wait for 300ps;  
s<= "10011";wait for 300ps;  
s<= "10100";wait for 300ps;
```

```
s<= "10101";wait for 300ps;
```

```
a<= "1110";b<= "1011";
```

```
s<= "00000";wait for 300ps;
```

```
s<= "00001";wait for 300ps;
```

```
s<= "00010";wait for 300ps;
```

```
s<= "00011";wait for 300ps;
```

```
s<= "00100";wait for 300ps;
```

```
s<= "00101";wait for 300ps;
```

```
s<= "00110";wait for 300ps;
```

```
s<= "00111";wait for 300ps;
```

```
s<= "01000";wait for 300ps;
```

```
s<= "01001";wait for 300ps;
```

```
s<= "01010";wait for 300ps;
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s<= "01011";wait for 300ps;
```

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s<= "01100";wait for 300ps;
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s<= "01101";wait for 300ps;
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s<= "01110";wait for 300ps;
```

```
s<= "01111";wait for 300ps;
```

```
s<= "10000";wait for 300ps;
```

```
s<= "10001";wait for 300ps;
```

```
s<= "10010";wait for 300ps;
```

```
s<= "10011";wait for 300ps;
```

```
s<= "10100";wait for 300ps;
```

```
s<= "10101";wait for 300ps;
```

```
finish;
```

```
end process;
```

```
end Behavioral;
```