

2-bit COMPARATOR

```
1  library IEEE;
2  use IEEE.STD_LOGIC_1164.ALL;
3  use IEEE.STD_LOGIC_ARITH.ALL;
4  use IEEE.STD_LOGIC_UNSIGNED.ALL;
5  entity comp is
6  Port ( a,b : in  STD_LOGIC_VECTOR (1 downto 0);
7        y : out  STD_LOGIC_VECTOR (2 downto 0));
8  end comp;
9  architecture Behavioral of comp is
10 begin
11  y<= "100" when a>b else
12  "001" when a<b else
13  "010" when a=b;
14  end Behavioral;
```

