```
1   ----------------------------------------------------------------------------
2   -- Entity:        hextosevemseg
3   -- Written By:    Kevin Brenneman Richard Lucas
4   -- Date Created:  8/27/15
5   -- Description:   converts hexadecimal to seven segment display
6   --
7   -- Revision History (date, initials, description): 9/3/15, KB RL, Initial Build
8   --
9   -- Dependencies:
10  --    none
11  ----------------------------------------------------------------------------
12  library IEEE;
13  use IEEE.STD_LOGIC_1164.ALL;
14
15  -- Uncomment the following library declaration if using
16  -- arithmetic functions with Signed or Unsigned values
17  --use IEEE.NUMERIC_STD.ALL;
18
19  -- Uncomment the following library declaration if instantiating
20  -- any Xilinx primitives in this code.
21  --library UNISIM;
22  --use UNISIM.VComponents.all;
23
24  entity hextosevenseg is
25     Port ( Hex      : in  STD_LOGIC_VECTOR(3 downto 0);
26            Segment  : out STD_LOGIC_VECTOR(0   to   6));
27
28  end hextosevenseg;
29
30  architecture Behavioral of hextosevenseg is
31
32  begin
33
34  Segment <=  "0000001" when (Hex = "0000") else -- 0
35              "1001111" when (Hex = "0001") else -- 1
36              "0010010" when (Hex = "0010") else -- 2
37              "0000110" when (Hex = "0011") else -- 3
38              "1001100" when (Hex = "0100") else -- 4
39              "0100100" when (Hex = "0101") else -- 5
40              "0100000" when (Hex = "0110") else -- 6
41              "0001111" when (Hex = "0111") else -- 7
42              "0000000" when (Hex = "1000") else -- 8
43              "0000100" when (Hex = "1001") else -- 9
44              "0001000" when (Hex = "1010") else -- A
45              "1100000" when (Hex = "1011") else -- B
46              "0110001" when (Hex = "1100") else -- C
47              "1000010" when (Hex = "1101") else -- D
48              "0110000" when (Hex = "1110") else -- E
49              "0111000" when (Hex = "1111") else  -- F
50              "0000001";
51
52  end Behavioral;
53
54
```