```
1
     library ieee ;
     use ieee.std logic 1164.all;
 3
 4
     entity Comparador 4Bits is
 5
      port (eA, eB: in std logic vector(3 downto 0);
 6
              gt, lt, eq: in std logic;
 7
              AeqB, AltB, AgtB: out std logic);
     end Comparador_4Bits;
 8
 9
10
     architecture ckt of Comparador 4Bits is
11
12
      component Comparador is
13
        port (in gt, in eq, in lt,a,b: in std logic;
14
                out eq, out lt, out gt: out std logic);
15
        end component;
16
17
       signal saida gt,saida lt,saida eq:std logic vector(3 downto 0);
18
       begin
19
       Comp1:Comparador port map(
20
             in gt => gt,
21
             in lt \Rightarrow lt,
22
             in_eq => eq
23
             a => eA(3),
24
             b => eB(3),
25
             out_eq => saida_eq(3),
26
             out gt => saida gt(3),
27
              out lt => saida lt(3));
28
       Comp2:Comparador port map(
29
30
              in_gt => saida_gt(3),
31
              in_lt => saida_lt(3),
32
             in_eq => saida_eq(3),
33
             a => eA(2),
34
             b => eB(2),
35
              out eq => saida eq(2),
36
              out gt => saida gt(2),
37
              out_lt => saida_lt(2));
38
39
       Comp3:Comparador port map(
40
             in_gt => saida_gt(2),
41
              in lt => saida_lt(2),
42
             in eq => saida eq(2),
43
             a => eA(1),
44
             b \Rightarrow eB(1),
45
              out eq => saida eq(1),
46
              out_gt => saida_gt(1),
47
              out_lt => saida_lt(1));
48
49
       Comp4:Comparador port map(
50
             in gt => saida_gt(1),
51
              in_lt => saida_lt(1),
52
              in_eq => saida_eq(1),
53
             a => eA(0),
54
             b => eB(0),
55
             out eq => saida eq(0),
56
              out gt => saida gt(0),
57
              out lt \Rightarrow saida lt(0));
58
59
       AeqB \le saida_eq(0);
60
       AltB \leq saida lt(0);
61
       AgtB <= saida_gt(0);</pre>
62
     end ckt;
63
64
65
```