

```
1: library STD;
2: library IEEE;
3: use IEEE.std_logic_1164.all;
4:
5: entity Dlatch is
6:   port ( d   : in  std_logic;
7:         clk  : in  std_logic;
8:         q    : out std_logic;
9:         qbar : out std_logic
10:        );
11: end Dlatch;
12:
13: architecture structural of Dlatch is
14:
15:
16:
17: begin
18:
19:   output: process(clk, d)
20:   begin
21:     if clk = '1' then
22:       q <= d;
23:       qbar <= not d;
24:     end if;
25:   end process output;
26:
27: end structural;
```