



```
1  library ieee;
2  use ieee.std_logic_1164.all;
3  use ieee.numeric_std.all;
4
5  entity DataRegister is
6      Port(
7          CLK: in std_logic;
8          D: in std_logic_vector(7 downto 0);
9          Q: out std_logic_vector(7 downto 0)
10     );
11 end entity;
12
13 architecture behavior of DataRegister is
14
15 begin
16
17     Process(CLK)
18     begin
19         if(CLK'event and CLK='1') then
20             Q <= D;
21         end if;
22
23     end Process;
24
25 end architecture;
26
```

