

```
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
6  entity MDMux is
7  port ( ReadIn: in std_logic;
8        BusMuxOut: in std_logic_vector (31 downto 0);
9        Mdatain: in std_logic_vector (31 downto 0);
10       MDMuxOut: out std_logic_vector (31 downto 0)
11       );
12  end MDMux;
13
14
15  architecture behavior of MDMux is
16  begin
17  process (ReadIn,BusMuxOut,Mdatain)
18  begin
19      if (ReadIn= '1') then
20          MDMuxOut <= Mdatain;
21      else
22          MDMuxOut <= BusMuxOut;
23      end if;
24  end process;
25  END behavior;
```