

```
1  library IEEE;
2  use IEEE.std_logic_1164.all;
3  use IEEE.numeric_std.all;
4
5  entity vacation_mode_mux is
6      port (
7          pb_button      : in std_logic; -- pb(3) button (vacation mode)
8          desired_temp    : in std_logic_vector(3 downto 0); -- input of desired
temperature (B)
9          fixed_setting   : out std_logic_vector(3 downto 0) -- output which will be
either the desired temp or the fixed setting
10         );
11 end entity vacation_mode_mux;
12
13 architecture logic_mux of vacation_mode_mux is
14
15 begin
16
17 with pb_button select -- pb(3) is the selector
18 fixed_setting <= desired_temp when '1', -- when the pb is not pressed, the output should be
the desired temp from switches
19                 "0100" when '0', -- Default vacation temp when the pb is pressed
20                 "0000" when others; -- output for any other case
21
22 end logic_mux;
```