```
1  LIBRARY ieee;
2  USE ieee.std_logic_1164.ALL;
3  USE ieee.numeric_std.ALL;
4
5  ENTITY ComBus_test IS
6  END ComBus_test;
7
8  ARCHITECTURE behavior OF ComBus_test IS
9
10     -- Component Declaration for the Unit Under Test (UUT)
11
12     COMPONENT ComBus
13     PORT(
14          Sel : IN  std_logic_vector(2 downto 0);
15          RW : IN  std_logic;
16          ALU : INOUT  std_logic_vector(7 downto 0);
17          AX : INOUT  std_logic_vector(7 downto 0);
18          BX : INOUT  std_logic_vector(7 downto 0);
19          CX : INOUT  std_logic_vector(7 downto 0);
20          DX : INOUT  std_logic_vector(7 downto 0);
21          RAM : INOUT  std_logic_vector(7 downto 0);
22          BUS_DATA : INOUT  std_logic_vector(7 downto 0)
23         );
24     END COMPONENT;
25
26
27    --Inputs
28    signal Sel : std_logic_vector(2 downto 0) := (others => '0');
29    signal RW : std_logic := '0';
30
31     --BiDirs
32    signal AX : std_logic_vector(7 downto 0);
33    signal BX : std_logic_vector(7 downto 0);
34    signal CX : std_logic_vector(7 downto 0);
35    signal DX : std_logic_vector(7 downto 0);
36    signal RAM : std_logic_vector(7 downto 0);
37    signal BUS_DATA : std_logic_vector(7 downto 0);
38
39     --Outputs
40    signal ALU : std_logic_vector(7 downto 0);
41    -- No clocks detected in port list. Replace <clock> below with
42    -- appropriate port name
43
```

```
44 BEGIN
45
46     -- Instantiate the Unit Under Test (UUT)
47    uut: ComBus PORT MAP (
48           Sel => Sel,
49           RW => RW,
50           ALU => ALU,
51           AX => AX,
52           BX => BX,
53           CX => CX,
54           DX => DX,
55           RAM => RAM,
56           BUS_DATA => BUS_DATA
57         );
58
59
60    -- Stimulus process
61    stim_proc: process
62    begin
63       AX <= "00000000";
64       BX <= "00000001";
65       CX <= "00000010";
66       DX <= "00000011";
67
68       RW <= '1';
69
70       Sel <= "001";
71       wait for 10 ns;
72
73       Sel <= "010";
74       wait for 10 ns;
75
76       Sel <= "011";
77       wait for 10 ns;
78
79       Sel <= "100";
80       wait for 10 ns;
81
82       wait;
83    end process;
84
85 END;
```