

```

1  LIBRARY IEEE;
2  USE IEEE.STD_LOGIC_1164.ALL;
3
4  ENTITY GEN_SLEFT IS
5      PORT ( DATA1_IN : IN STD_LOGIC_VECTOR(31 DOWNT0 0) :=
        "000000000000000000000000100000000000";
6          RESULT : OUT STD_LOGIC_VECTOR(31 DOWNT0 0) :=
        "00000000000000000000000000000000" ); -- OVERFLOW
7  END GEN_SLEFT;
8
9  ARCHITECTURE BEHAVIORAL OF GEN_SLEFT IS
10
11      SIGNAL HOLDER : STD_LOGIC_VECTOR(32 DOWNT0 0) := "00000000000000000000000000000000";
12
13  BEGIN
14
15      GEN :
16          FOR N IN 0 TO 31 GENERATE
17              OTHER :
18                  ENTITY WORK.SLEFT(BEHAVIOR)
19                      PORT MAP(A => DATA1_IN(N), S => HOLDER(N + 1));
20          END GENERATE GEN;
21      --
22      RESULT(31 DOWNT0 0) <= HOLDER(31 DOWNT0 0);
23  END BEHAVIORAL;

```