```
1
2   --------------------------Error Block (Detects Overflow,Underflow,Infinity or NaN)---------------------
3
4   library IEEE;
5   use IEEE.STD_LOGIC_1164.ALL;
6   use IEEE.NUMERIC_STD.ALL;
7
8   entity Error is
9       Port ( Mr : in  UNSIGNED (3 downto 0);
10             Er : in  UNSIGNED (2 downto 0);
11             E : out  STD_LOGIC);
12  end Error;
13
14  architecture Behavioral of Error is
15
16  begin
17  process(Mr,Er)
18  variable Temperr : STD_LOGIC;
19     begin
20        if (Er = "000" and Mr /= "0000") or (Er = "111" and Mr = "0000") or (Er = "111" and Mr /= "0000") then
21           Temperr := '1';
22        else
23           Temperr := '0';
24        end if;
25        E <= Temperr;
26  end process;
27  end Behavioral;
28
29
```