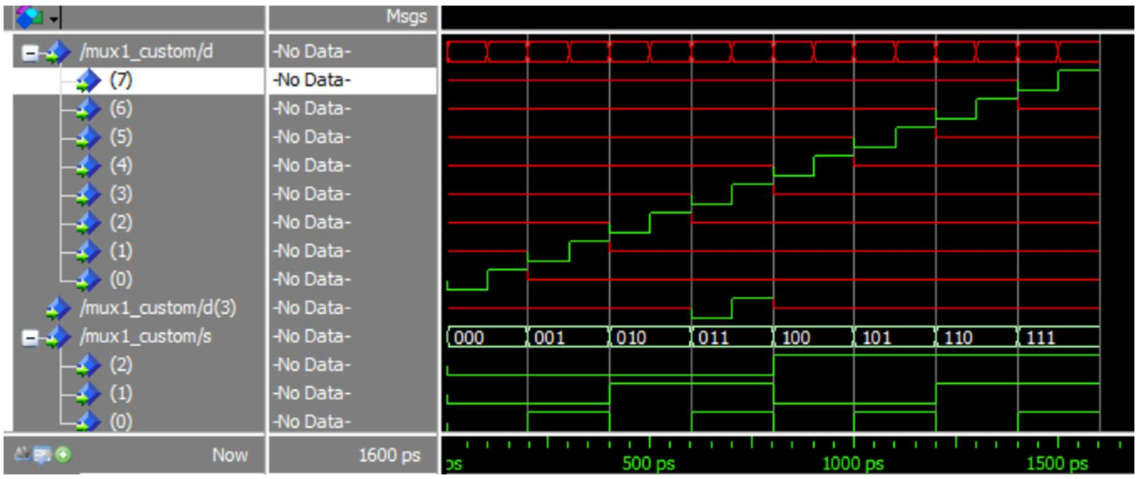
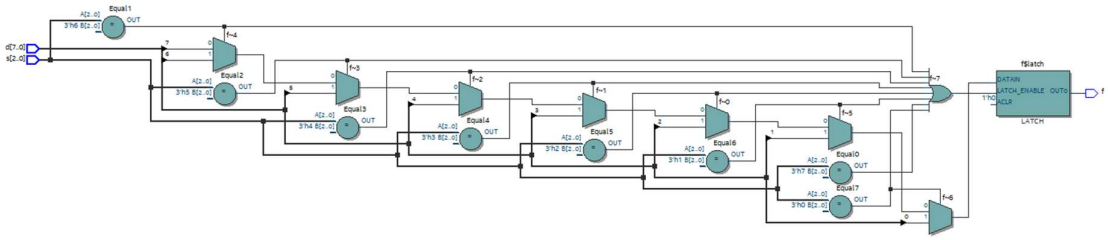
Mark Nelson A. Bentulan
BSCpE-3A

MULTIPLEXER

```
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   entity multiplexer is
6       Port ( d : in  STD_LOGIC_VECTOR (7 downto 0);
7              s : in  STD_LOGIC_VECTOR (2 downto 0);
8              f : out  STD_LOGIC);
9   end multiplexer;
10  architecture Behavioral of multiplexer is
11  begin
12  f<= d(0) when s="000" else
13  d(1) when s="001" else
14  d(2) when s="010" else
15  d(3) when s="011" else
16  d(4) when s="100" else
17  d(5) when s="101" else
18  d(6) when s="110" else
19  d(7) when s="111";
20  end Behavioral;
```




d[7..0]
s[2..0]
Equal1
A[2..0]
3'h6
B[2..0]
OUT
f~4
Equal2
3'h5
f~3
Equal3
3'h4
f~2
Equal4
3'h3
f~1
Equal5
3'h2
f~0
Equal6
3'h1
f~5
Equal0
3'h7
Equal7
3'h0
f~6
f~7
1'h0
fflatch
DATAIN
LATCH_ENABLE
OUTPUT
ACLR
LATCH
f