



BITS Pilani

Hyderabad Campus

Department of Electrical Engineering

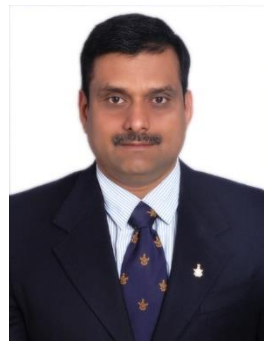


Digital Design : 2020-21

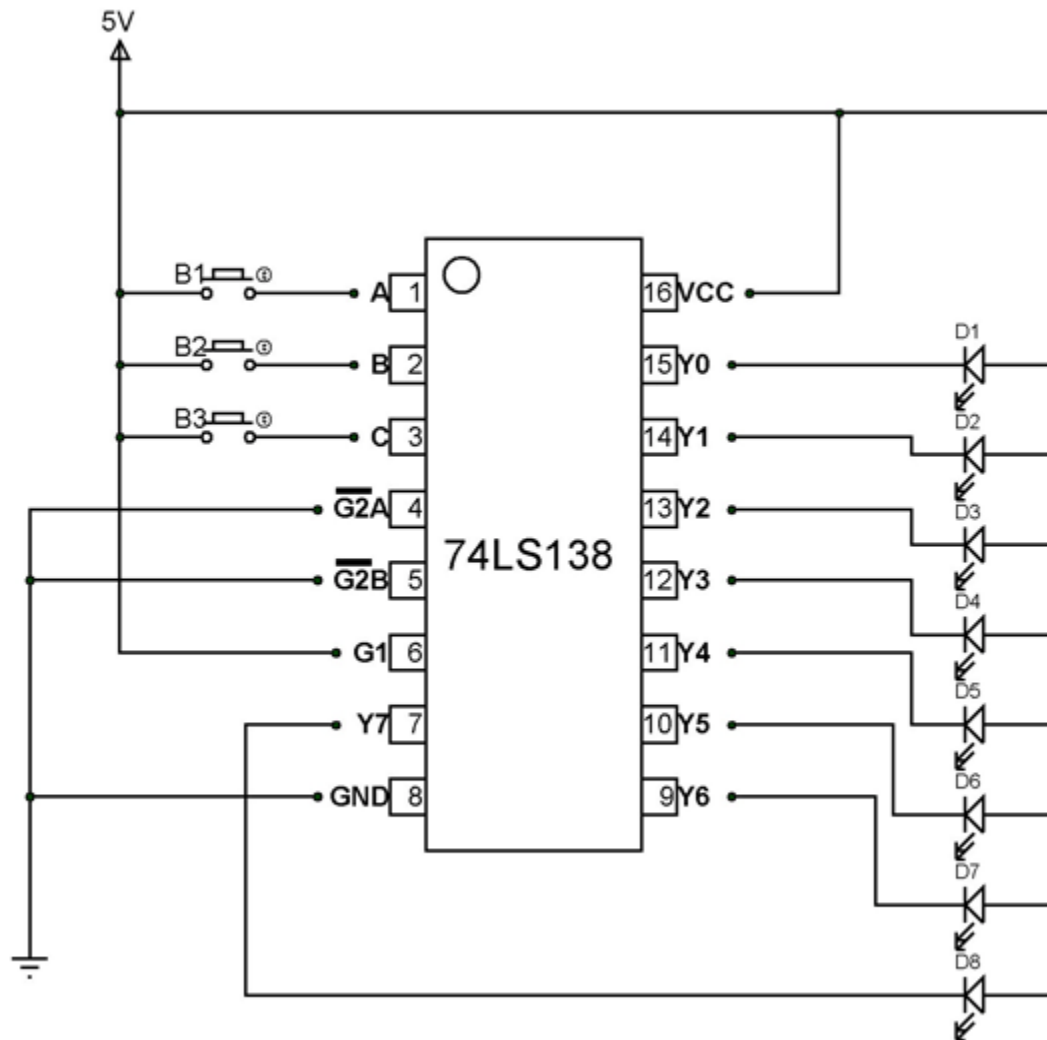
Lab 7

Combinational Circuit Design using Decoders and Multiplexers

By Dr. Sanjay Vidhyadharan



The 74138 Decoder

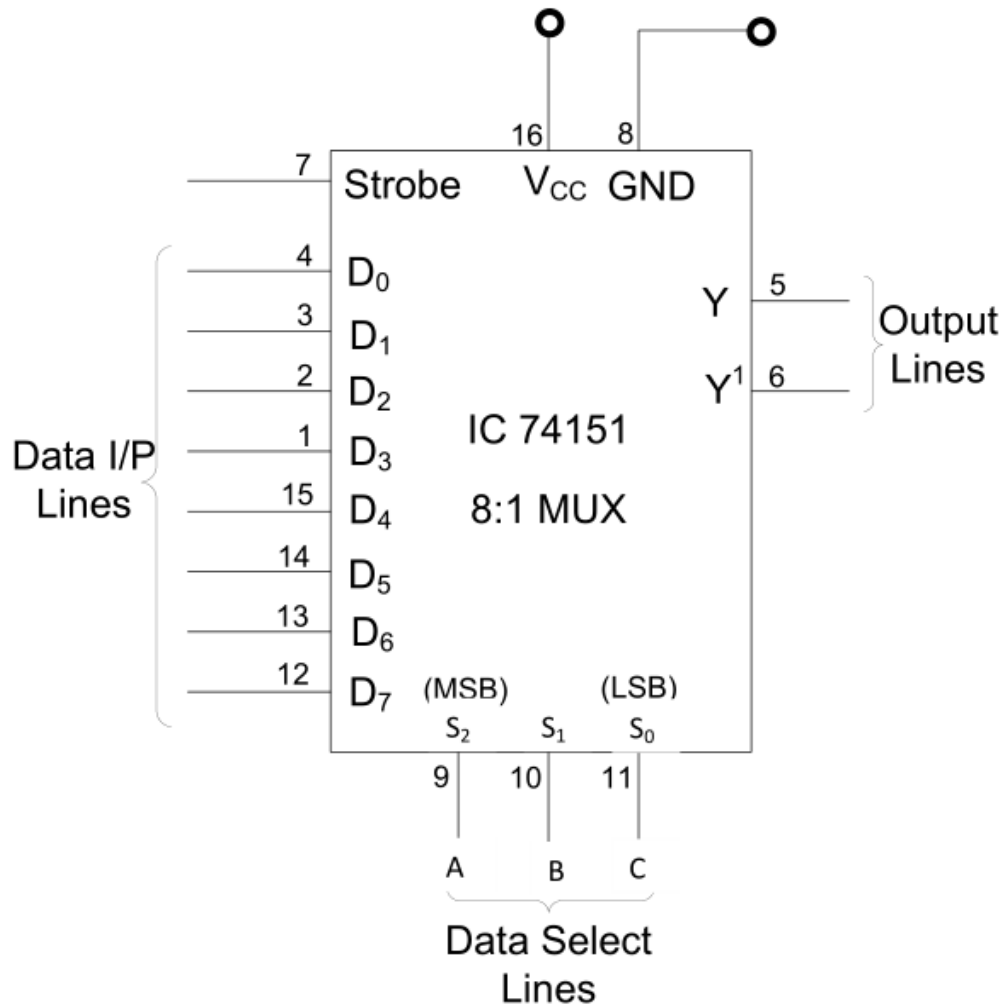


The 74138 Decoder

Problem 1: (a) Implement a Full Adder
(b) Implement a Majority Circuit

Note: Use single 74138 for both circuits

The 74151 Mux



The 74151 Mux

Problem 2: Implement a Full Adder using 74151 Mux

Note: Use separate 74151 Mux for Sum and Carry

Demonstration