

Lab 3 Prelab

ECE 272

Digital logic design

In digital logic design there are tools and methods used to make simplifying logic much easier. A Karnaugh Map is a way to turn any truth table into simplified logic. Textbook section 2.7 Example 2.10 shows the logic for an active high 7-Segment decoder. The decoder designed in section 3 of the lab is an active low decoder to match our hardware.

In an active high system, the LED is lit when the logic level is high.

In an active low system, the LED is lit when the logic level is low.

1. Expand figure 2.48 from the textbook to take all Hexadecimal characters 0-F.
2. Remake Table 2.6 from the textbook to reflect the figure created in question 1 using active low hardware. This means draw the truth table for hexadecimal version.