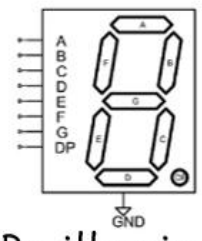
EE 207

PRELAB ASSIGMENT FOR LAB4

Melisa SUBASI

id:22829169256

b)



A seven segment display is a device that consists of seven individual light emitting diodes (LEDs) or LCD segments arranged in a rectangular pattern to form the shape of an 8.

By illuminating different combinations of these segments, it is possible to display a wide range of numerical digits and some alphabetical characters. For example, the number "8" can be displayed by illuminating all seven segments, while the number "1" can be displayed by illuminating only segments B and C.

There are several types of seven segment displays available, including:

1.LED displays: These displays use individual LED segments to create the desired character. They are commonly used in digital clocks, calculators, and other electronic devices.

2.LCD displays: These displays use a liquid crystal layer to control the light passing through each segment. They are commonly used in devices where power consumption is a concern, such as portable devices or battery-powered devices.

3.Multiplexed displays: These displays use a single common cathode or anode for all seven segments, with the segments being activated one at a time in rapid succession. This allows for the display of multiple digits using a single display.

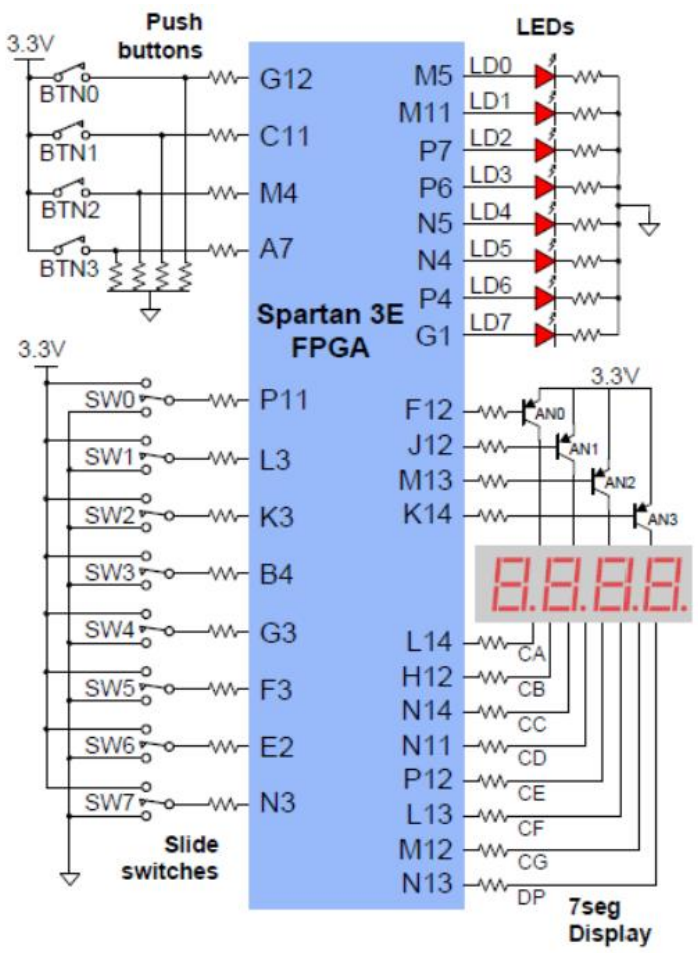
4.Non-multiplexed displays: These displays have a separate cathode or anode for each segment, allowing for the display of multiple digits using multiple displays.

5.Bi-color displays: These displays have two sets of seven segments, one set for each color (usually red and green). This allows for the display of multiple colors or the ability to show two different characters at the same time.

6.Dot matrix displays: These displays use a matrix of dots to create characters and graphics. They are commonly used in displays that require a high resolution or the ability to display more complex graphics.

7.Large character displays: These displays are designed to display large characters and are commonly used in outdoor or industrial applications. They can be either LED or LCD based.

c) I couldn't show on the bassy2 image so I decide to explain through text so here is my solution;



7-Segment Display A:

A (segment A): Connect to Pin B3 (PB3) on the Basys 2 board

B (segment B): Connect to Pin B2 (PB2) on the Basys 2 board

C (segment C): Connect to Pin B1 (PB1) on the Basys 2 board

D (segment D): Connect to Pin B0 (PB0) on the Basys 2 board

E (segment E): Connect to Pin A3 (PA3) on the Basys 2 board

F (segment F): Connect to Pin A2 (PA2) on the Basys 2 board

G (segment G): Connect to Pin A1 (PA1) on the Basys 2 board

DP (decimal point): Connect to Pin A0 (PA0) on the Basys 2 board

Anode: Connect to +3.3V on the Basys 2 board

7-Segment Display B:

A (segment A): Connect to Pin E3 (PE3) on the Basys 2 board

B (segment B): Connect to Pin E2 (PE2) on the Basys 2 board

C (segment C): Connect to Pin E1 (PE1) on the Basys 2 board

D (segment D): Connect to Pin E0 (PE0) on the Basys 2 board

E (segment E): Connect to Pin D3 (PD3) on the Basys 2 board

F (segment F): Connect to Pin D2 (PD2) on the Basys 2 board

G (segment G): Connect to Pin D1 (PD1) on the Basys 2 board

DP (decimal point): Connect to Pin D0 (PD0) on the Basys 2 board

Anode: Connect to +3.3V on the Basys 2 board