LECTURE 33 - SEVEN SEGMENT DISPLAY

Since seven segment can withstand harsh conditions, it is still continued to be used in many places. Here, the contrast is more compared to LCD. Voltage / current displays use seven segment and they are available at different sizes in the market.

Alphanumeric and hexadecimal values can be displayed using seven segment. Generally, 8 LEDs are present along with a decimal point. There are 10 external pins having two grounds to reduce the circuit complexity.

There are two types of seven segment display, namely, common cathode and common anode. In the common cathode, all the cathode of the 8 LEDs are shorted together and taken out as a ground pin. Whereas in the common anode, all the anode of the 8 LEDs are shorted together and taken out as VCC pin.

To make a particular segment ON, write 1 to the corresponding pin in case of common cathode. Whereas, this is opposite in the case of common anode. Since VCC (+5V) is connected, to make a particular segment ON, write 0 to the corresponding pin.

In Proteaus, decimal point is not available.

	P0.7	P0.6	P0.5	P0.4	P0.3	P0.2	P0.1	P0.0	10PINO
	a	b	c	d	e	f	g	dp	
0	1	1	1	1	1	1	0	0	0xFC
1	0	1	1	0	0	0	0	0	0x60
2	1	1	0	1	1	0	1	0	0xDA
3	1	1	1	1	0	0	1	0	0xF2
4	0	1	1	0	0	1	1	0	0x66
5	1	0	1	1	0	1	1	0	0xB6
6	1	0	1	1	1	1	1	0	0xBE
7	1	1	1	0	0	0	0	0	0xE0
8	1	1	1	1	1	1	1	0	0xFE
9	1	1	1	1	0	1	1	0	0xF6