

ME 421: Microprocessors and Automatic Control Lab

Programming fundes: PIM



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Digital Input/output

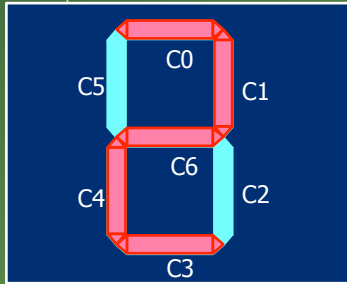
- “Port Integration Module” in the terminology of XEP 100. See Chapter 2 of the datasheet
- Plenty of ports available for programming: A,B,C,D,E,K,T,L, ...
- Functionality of each of the ports is given in datasheet (you may glance through) in Ch 2.
- Read through Functional Description section 2.4 first.
- Identify registers to be used and then go back to detailed description of registers to know how to use them.

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7 segment display



BCD to 7 segment control
signal decoder

A B C D

A	B	C	D	C ₀	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	Display
0	0	0	0	1	1	1	1	1	1	1	0
0	0	0	1	1	1	1	0	1	1	1	1
0	0	1	0	1	1	0	1	1	1	0	2
0	0	1	1	1	1	0	1	1	1	1	3
0	1	0	0	1	0	1	1	1	1	1	4
0	1	0	1	1	0	1	1	1	1	1	5
0	1	1	0	1	1	1	0	1	1	1	6
0	1	1	1	1	1	1	1	1	1	1	7
1	0	0	0	1	1	1	1	0	1	1	8
1	0	0	1	1	1	1	1	1	1	1	9
1	0	1	0	1	1	1	1	1	1	1	
1	0	1	1	1	1	1	1	1	1	1	
1	1	0	0	1	1	1	1	1	1	1	
1	1	0	1	1	1	1	1	1	1	1	
1	1	1	0	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	



Thank You

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