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CS220 Computer Architecture

Unit 4: Digital Project

A	B	C	D	E	F	D LED	E LED	F LED
0	0	0	0	0	0	OFF	OFF	OFF
0	0	1	1	0	0	ON	OFF	OFF
0	1	0	1	0	0	ON	OFF	OFF
0	1	1	1	1	0	ON	ON	OFF
1	0	0	1	0	0	ON	OFF	OFF
1	0	1	1	1	0	ON	ON	OFF
1	1	0	1	1	0	ON	ON	OFF
1	1	1	1	1	1	ON	ON	ON

Sum of Products

$$D = C + B + A$$

$$E = B C + A C + A B$$

$$F = ABC$$

Product of Sums

$$D = A + B + C$$

$$E = (A+B) (A+C) (B+C)$$

$$F = ABC$$

