1. A message from Bit Project
    a. Bit Project is a student-run educational initiative at UC Davis that is dedicated to promoting STEM education for underprivileged communities.
    b. Bit partners with companies like Microsoft, Postman, Mozilla, and much more to develop innovative STEM education solutions for K-12 students.
    c. They also work closely with LGBT, veteran, and Native American charities to code web apps that bring their communities together.
    d. Regardless of your major or experience level, they have opportunities for everyone in development, teaching kids, marketing, outreach, technical writing and much more. They'd love for you to join them.
    e. To find out more about what they do, please join them at our info session on January 15th at 6:30 PM in the Student Community Center Multi-Purpose Room. Pizza will be served!
    f. Quick summary: free pizza, good cause. January 15, 6:30 PM, SCC MPR.

2. Basic definitions
    a. Computer architecture

    b. Computer organization/microarchitecture

    c. Tasks of a computer (according to Stallings)

    d. Parts of a computer

3. Analog vs. digital
    a. Analog

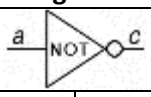
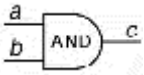
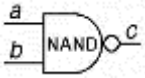
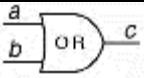
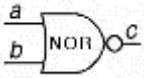
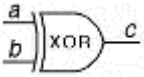
    b. Digital

4. Boolean algebra

    a. Duality principle

    b. Operator precedence

    c. Logic types

Truth Tables for Digital Design Gates								
Operation:		**Negation**		**AND**	**NAND**	**OR**	**NOR**	**XOR**
Gates:								
A	B	~A	~B	A * B	~(A * B)	A + B	~(A + B)	A ⊕ B
0	0							
0	1							
1	0							
1	1							

5. Logical equivalence

Laws of Logical Equivalence		
Name	**OR version**	**AND version**
Commutative	A + B = B + A	A * B = B * A
Associative	(A + B) + C = A + (B + C)	(A * B) * C = A * (B * C)
Distributive	A + (B * C) = (A + B) * (A + C)	A * (B + C) = (A * B) + (A * C)
Idempotent	A + A = A	A * A = A
Identity	A + 0 = A	A * 1 = A
	A + 1 = 1	A * 0 = 0
Complement	A +~A = 1	A * ~A = 0
	~1 = 0	~0 = 1
Double Negative	~(~A) = A	
De Morgan's	~(A + B) = ~A * ~B	~(A * B) = ~A + ~B
Absorption	A + (A * B) = A	A * (A + B) = A

6. Examples
   a. A + ~A * B = A + B. Why?

   b. Prove the OR version of the Absorption Law, A + A * B = A.

c. Simplify the following digital logic circuit using propositional algebra.