CSIE 2344: Discussion (Unit 2)

1 Proof of Equivalence

Prove the equivalence:

- $X(X' + Y) = XY$.
- $X + XY = X$.
- $XY + XY' = X$.
- $(A + B)(A + B') = A$.

2 Logic Simplification I

Use only the DeMorgan's laws and the involution law to find the complement of the following function: $F(A, B, C, D) = [A + (BCD)'][(AD)' + B(C' + A)]$.

3 Logic Simplification II

Realize the following function $(V + W + X)(V + X + Y)(V + Z)$ by two OR gates and two AND gates.