CSIE 2344: Discussion (Unit 4)

1 Minterm and Maxterm Expansion I

Each of three coins has two sides, head and tail. Represent the head or tail status of each coin by a logical variable (A for the first coin, B for the second coin, and C for the third) where the logical variable is 1 for head and 0 for tail. Write a logic function $F(A, B, C)$ which is 1 if and only if exactly one of the coins is head after a toss of the coins. Express F as a minterm expansion and a maxterm expansion.

2 Minterm and Maxterm Expansion II

Given $F(A, B, C) = ABC' + B'$.

- Express F as a minterm expansion. (Use m-notation.)
- Express F as a maxterm expansion. (Use M-notation.)
- Express F' as a minterm expansion. (Use m-notation.)
- Express F' as a maxterm expansion. (Use M-notation.)