Homework 2

November 5, 2018

• deMicheli94 6.1, 6.6, 6.7, 6.8
• deMicheli94 2.4, 2.5

• Apply the Quine-McCluskey algorithm to the following sum of minterms:
  \( \sum(m_0, m_1, m_2, m_4, m_7, m_{10}, m_{13}, m_{14}, m_{15}) \). Show the Prime Implicant Table evolution and the final cover.

• Apply the Quine-McCluskey algorithm together with branch-and-bound (you can choose your branch pivot arbitrarily) to the following sum of minterms: \( \sum(m_0, m_1, m_3, m_4, m_6, m_7, m_9, m_{13}, m_{15}) \). Show the branching variable you picked, branch recursion, if any, the bound you employed and the covers produced by each branch outcome and the final cover(s).

• The product of maxterms defined by \( \sum(M_0, M_1, M_2, M_5, M_6, M_7) \) constitutes a cyclic core. Resolve the cyclic core by applying Petrick’s method to it. Show the corresponding logic expressions and the final cover in product-of-implicates form.