CPIT210

Homework1

Due Date: 11/10/2020

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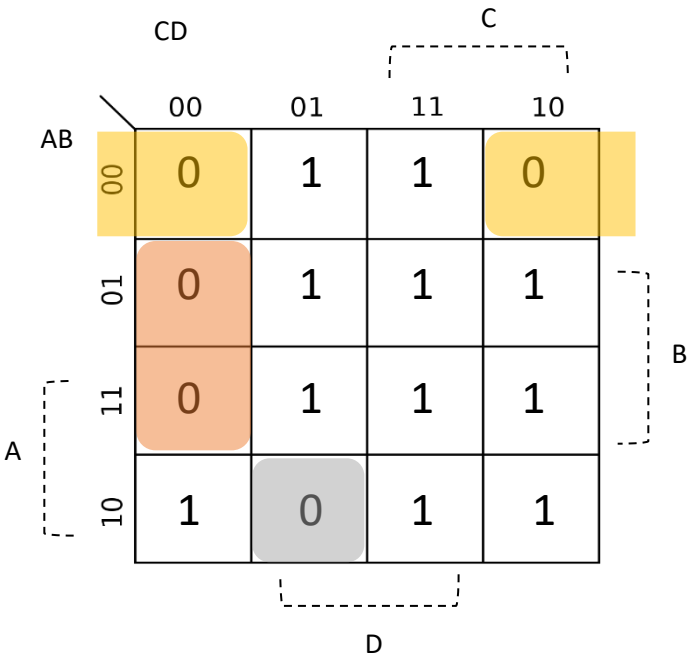
Section: VAR

(A + B + C + D) (A + B + C' + D) (A' + B + C + D') (A + B' + C + D) (A' + B' + C + D)?

- Use a karnaugh map to minimize the following expression in:

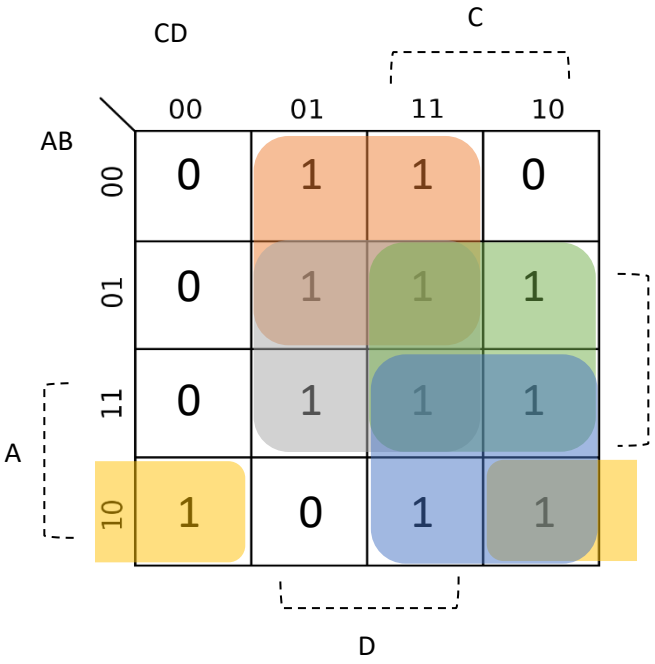
I. Product of Sum expression.



F(A,B,C,D) = A'B'D' + BC'D' + AB'C'D

F(A,B,C,D) = (A+B+D) (B'+C+D) (A'+B+C+D')

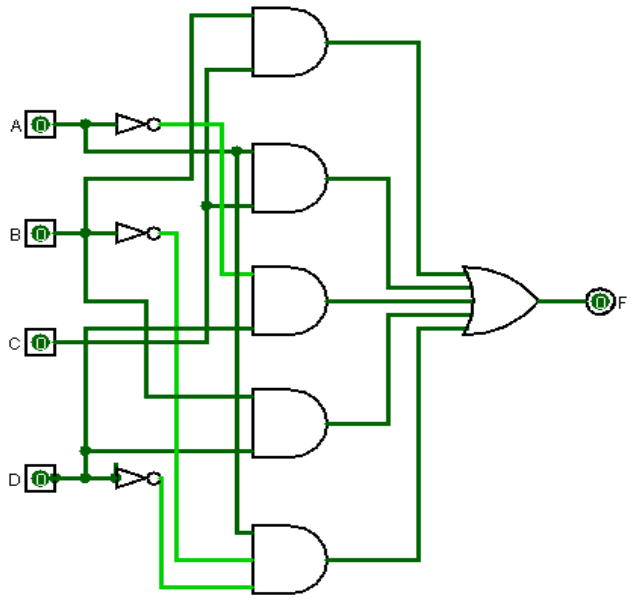
II. Sum of product expression



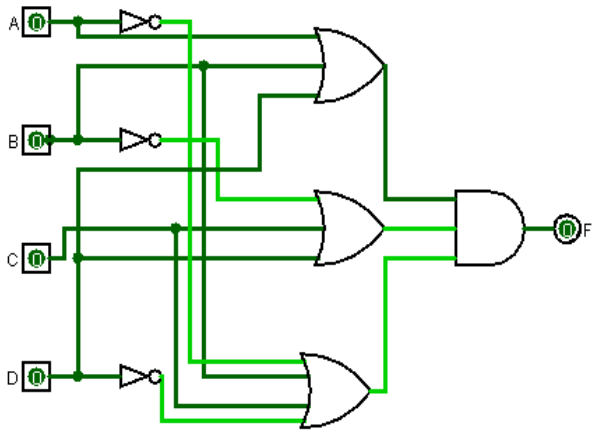
F(A,B,C,D)= BC + AC + A'D + BD + AB'D'

III. Draw the S.O.P and P.O.S After the minimization **using the simulator using basic gates (AND, OR and NOT)**

SOP

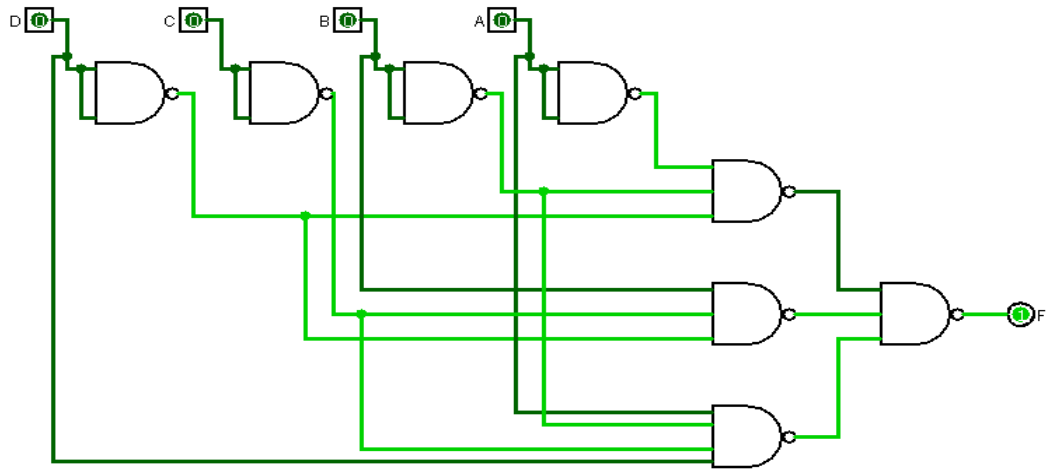


POS



I. implement the expression using NAND only (by the simulator)

F(A,B,C,D) = (A'B'D')' (BC'D')' (AB'C'D)'



II. implement the expression using NOR only (by the simulator)

F(A,B,C,D)= (B'+C')' + (A'+C')' + (A+D')' + (B'+D')' + (A'+B+D)'