

Assignment 1 | FPGA Lab

U Venkata Sai Anand Mohan

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1 Question

Reduce the following Boolean Expression to its simplest form using K-Map :

$$F(X, Y, Z, W) = \sum(2, 6, 7, 8, 9, 10, 11, 13, 14, 15)$$

2 Solution

2.1 KMAP Implementation

Given SOP expression can be minimized using a KMap (Figure 1).

2.2 Minimized SOP Expression

$$G = Z.\bar{W} + Y.Z + X\bar{Y} + X.W$$

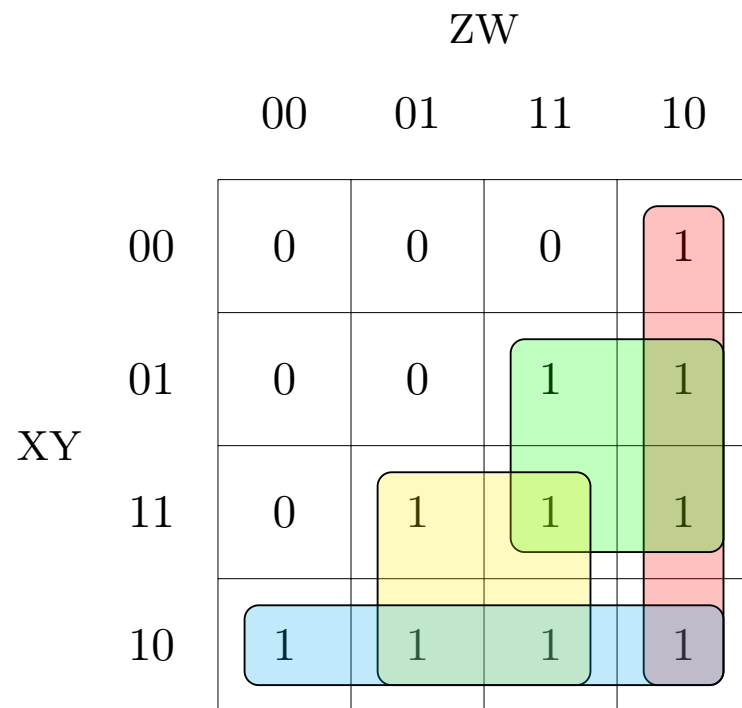


Figure 1: SOP for F