EE5811 : FPGA Lab Assignment-01

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Download the codes from

https://github.com/Anuradha−Uggi/FPGA−LAB−2022/blob/main/A1/A1.c

1 PROBLEM STATEMENT

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

$$F(X, Y, Z, W) = \sum(0, 1, 2, 3, 5, 6, 7, 10, 14, 15) \quad (1)$$

2 SOLUTION

From the K-Map shown in Figure 0 the above expression can be simplified as,

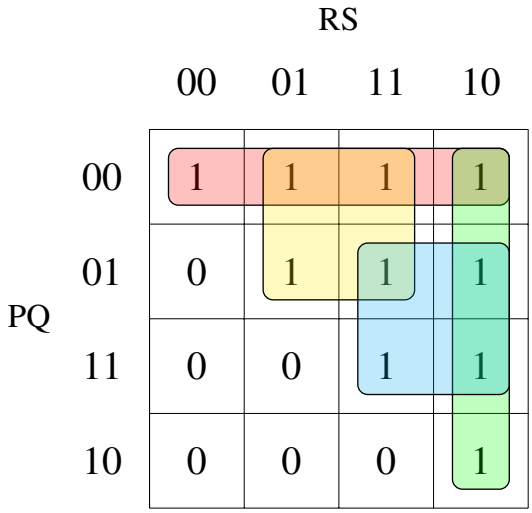

Fig. 0: K-Map

$$F(P, Q, R, S) = \sum(0, 1, 2, 3, 5, 6, 7, 10, 14, 15) \quad (2)$$

$$= \bar{P}\bar{Q} + R\bar{S} + \bar{P}S + QR \quad (3)$$