Mochamad Aulia Akbar Praditomo
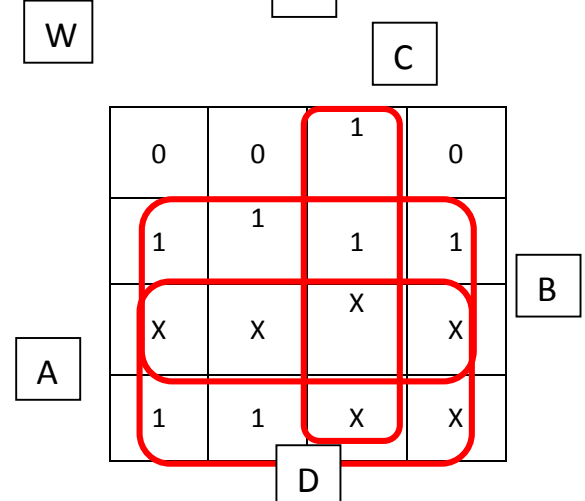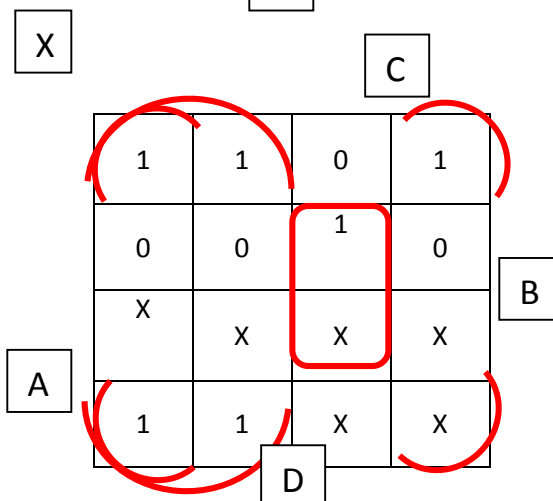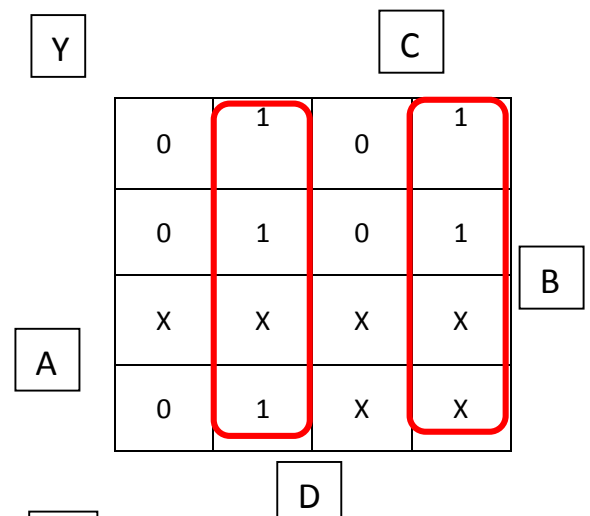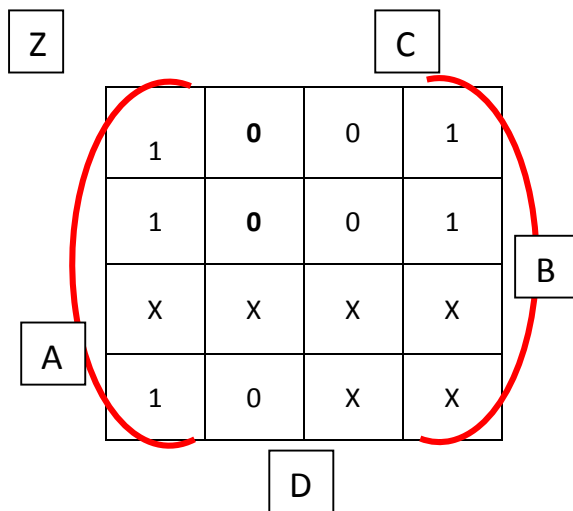1606827145
PSD-C (AMB)

1. Specification
   - <u>BCD to Excess-5 converter</u>
   - Transforms BCD code for the decimal digits to Excess-5 code for the decimal digits
   - BCD code words for digits 0 through 9: 4-bit patterns 0000 to 1001, respectively
   - Excess-5 code words for digits 0 through 9: 4-bit patterns consisting of 5 (binary 0101) added to each BCD code word

2. Formulation
   - BCD variables = ABCD
   - Excess-5 variables = WXYZ
   - Don't cares = 1010-1111

BCD	Excess-5
0000	0101
0001	0110
0010	0111
0011	1000
0100	1001
0101	1010
0110	1011
0111	1100
1000	1101
1001	1110

3. Optimization

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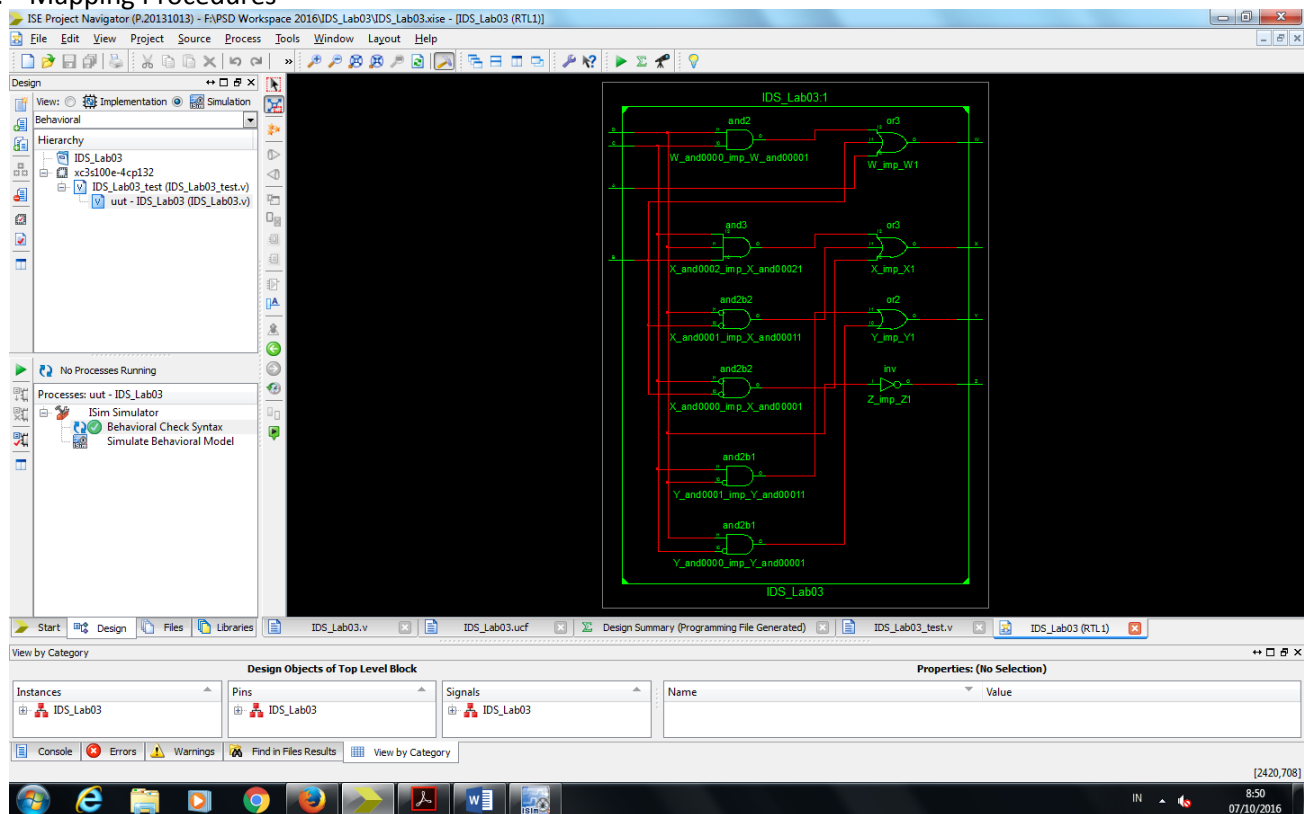Maka dari K-Maps tadi bisa didapatkan assignment untuk W, X, Y, Z

W   = A + B + CD

X   = B'C' + B'D' + BDC

Y   = DC' + D'C

Z   = D'

4. Mapping Procedures

5. Verification