Assignment 7

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1 Boolean Expression

The Boolean expression of $f = A(\overline{B})(\overline{C})(\overline{D}) + (\overline{A})B(\overline{C})(\overline{D}) + AB(\overline{C})(\overline{D}) + ABC(\overline{D})$

2 Kmap Expression

$f = AB(\overline{D}) + B(\overline{C})(\overline{D}) + A(\overline{C})(\overline{D})$

Now, we have to make this expression in product form So, we will use the property $\overline{\overline{X}} = X$
f= AB$(\overline{D}) + B(\overline{C})(\overline{D}) + A(\overline{C})(\overline{D})$

$\overline{\overline{f}} = \overline{\overline{AB(\overline{D}) + B(\overline{C})(\overline{D}) + A(\overline{C})(\overline{D})}}$

$\overline{\overline{f}} = \overline{(\overline{AB(\overline{D})}).(\overline{B(\overline{C})(\overline{D})}).(\overline{A(\overline{C})(\overline{D})})}.....byUsing(\overline{X+Y+Z} = (\overline{X})(\overline{Y})(\overline{D}))$

2.1 COMBINATIONAL CIRCUIT