# Assignment 7

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## 1 Boolean Expression

The Boolean expression of $f = A\overline{BCD} + \overline{A}B\overline{CD} + AB\overline{CD} + ABC\overline{D}$

## 2 Kmap Expression

$f = AB\overline{D} + B\overline{CD} + A\overline{CD}$

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

$\overline{\overline{f}} = \overline{\overline{AB\overline{D} + B\overline{CD} + A\overline{CD}}}$

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

## 2.1 COMBINATIONAL CIRCUIT