

ASSIGNMENT NO.6

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1 The Boolean Expression For "e"

$$e = A.\overline{B}.\overline{C}.\overline{D} + A.B.\overline{C}.\overline{D} + \overline{A}.\overline{B}.C.\overline{D} + A.\overline{B}.C.\overline{D} + A.B.C.\overline{D} + A.\overline{B}.\overline{C}.D$$

2 K-map Expression (simplified)

after simplifying the above boolean expression using k-maps it looks like this

$$e = \overline{A}.B + A.\overline{D} + \overline{B}.C$$

2.1 The Combinational Circuit Using only NAND GATES

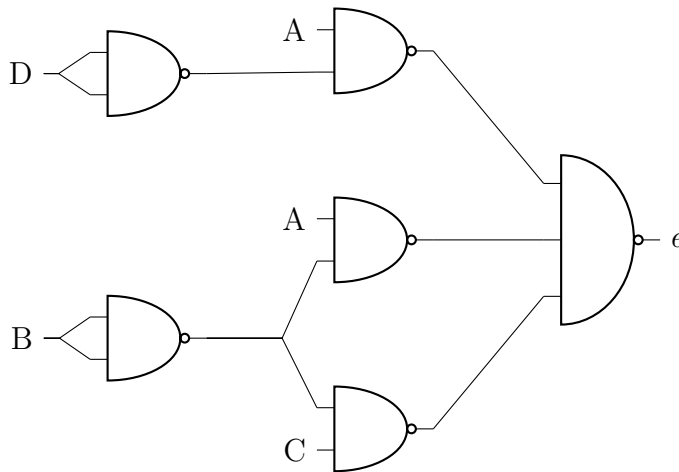


Figure 1: Circuit diagram using only nand gates