Determining and testing boolean expression from truth table to its simplest form using K-map

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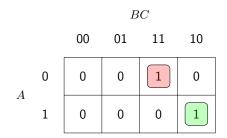
Α	В	С	X
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0 '

Table 2:

1 Introduction

K maps are used to Simplify Boolean Expressions the given Expression to solve F(A,B,C)=(3,6)

2 karnaugh-map



X=ABC'+A'BC=B(A+C)(A'+C')

Jumper wires

Components

3

5 Connections and results

Also make connections to arduino UNO ,led and inputs based on table3.

Arduino UNO	2	3	4	8	gnd
Input	Α	В	С		
led				+	-

Table 3:

Sample input	Α	В	С	LED
1	1	1	0	ON
2	0	1	0	OFF

Table 4:

ComponentvaluequantityResistor220 ohm1ArduinoUNO1LED1Bread board1

5.1 Code Link

 $https://github.com/Darshan 265/ASSIGNMENT-IDE-/\\blob/main/main.cpp$

4 Truth table for given expression

M-M

10

Table 1: