

ASSIGNMENT-1

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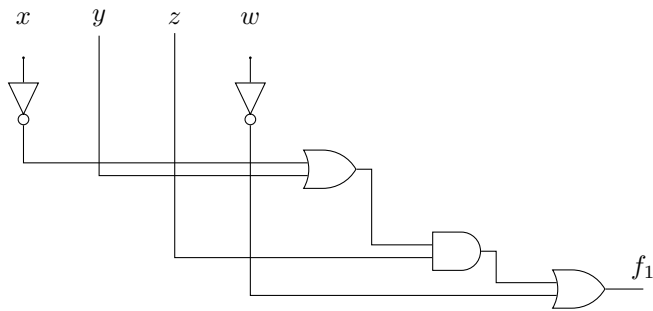
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PROBLEM STATEMENT:

Draw the Logic Circuit for the following Boolean

Expression : $f(x,y,z,w) = (x'+y).z + w'$

Logic circuit:



AIM:

To Draw the Logic Circuit and implement using vaman board for the following Boolean Expression :

$F(x,y,z,w) = (x'+y).z + w'$

Components:

S.No	Component	Number
1	Vamanboard	1
2	Bread Board	1
3	Jumer Wires(M-F)	10
4	Seven segment display	1

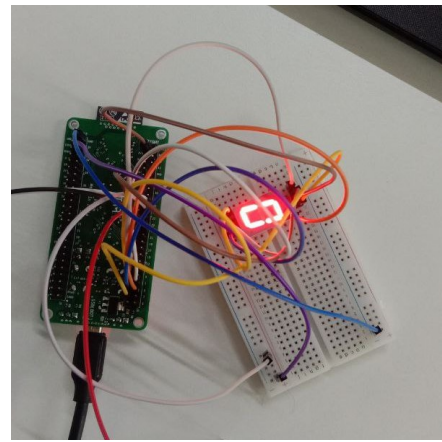
Procedure:

1. Connect the seven segment display to the vaman board.
2. Compile the source code in termux using make command.
3. bin files will be generated in the output folder
4. Transfer the generated bin files to the laptop using scp command
5. connect the vaman board to the laptop and flash the code in to the vaman board.
6. The out put will be displayed in seven segment display either 1 or 0 corresponds to the out given boolean expression.

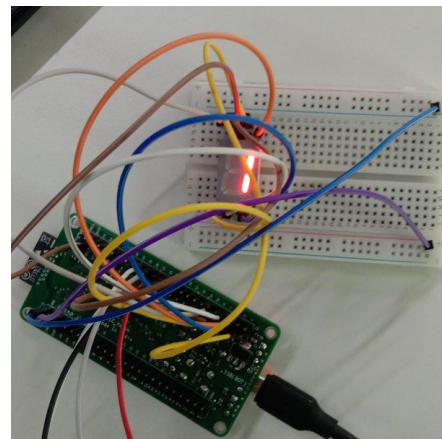
OUTPUTS:

Truthtable:

x	y	z	w	f
0	0	0	0	1
0	0	0	1	0
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
0	1	0	1	0
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	0
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	0
1	1	1	0	1
1	1	1	1	1



The output is displayed as 0 in seven segment display corresponds to the given inputs.



The output is displayed as 1 in seven segment display corresponds to the given inputs.

Conclusion:

Hence I have drawn the logic circuit for the given logic expression and I have implemented the circuit in arduino and verified the outputs.