**Title:** CS1026 Lab 3

**Date:** 10/02/2017

**Aim:** To design a circuit to implement F(W,X,Y,Z) = ∑m (1,4,5,11,12,14,15) and ∑md (2,3,7,9).

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| Logic Diagram: | Karnaugh Map: |
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**Analysis:**

* I began by designing the Karnaugh map above
* Then, I grouped the 1’s together in groups of 2n using the don’t cares also
* From this I extracted a Boolean solution to the function using the variables W,X,Y,Z
* Following this I then built a circuit to implement this solution using Logisim
* I then tested it with using the variable inputs W,X,Y,Z to see if it was giving the desired output for each of the stated minterms

**Boolean Algebra:**

**F = (W’Z) + (YZ) + (XY’Z’) + (WXY)**