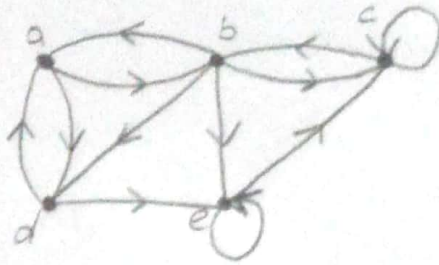


## Problem 1



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	a	b	c	d	e
a	0	1	0	1	0
b	1	0	1	0	0
c	0	1	1	0	1
d	1	1	0	0	0
e	0	1	0	1	1

$$G = \begin{pmatrix} 0 & 1 & 0 & 1 & 0 \\ 1 & 0 & 1 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 \\ 1 & 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 & 1 \end{pmatrix}$$

$$\delta(a) = 2$$

$$\delta(b) = 4$$

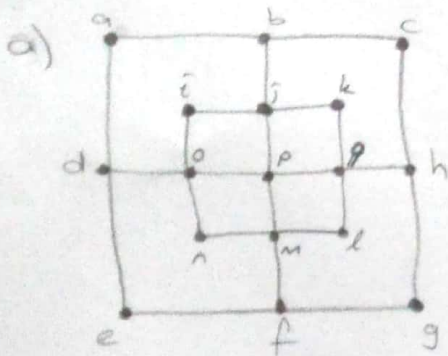
$$\delta(c) = 2$$

$$\delta(d) = 2$$

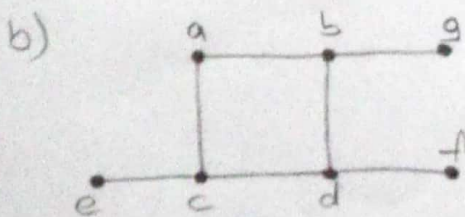
$$\delta(e) = 2$$

- If there is a connection between column vertex and row vertex, Assign 1 to connection. According to the arrow directions.

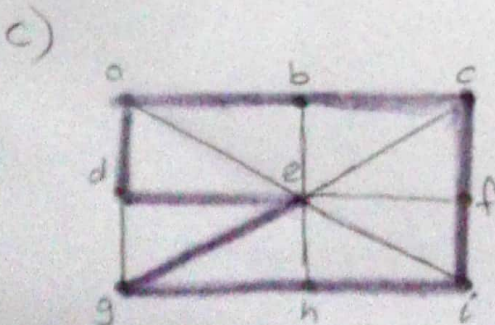
## Problem 2

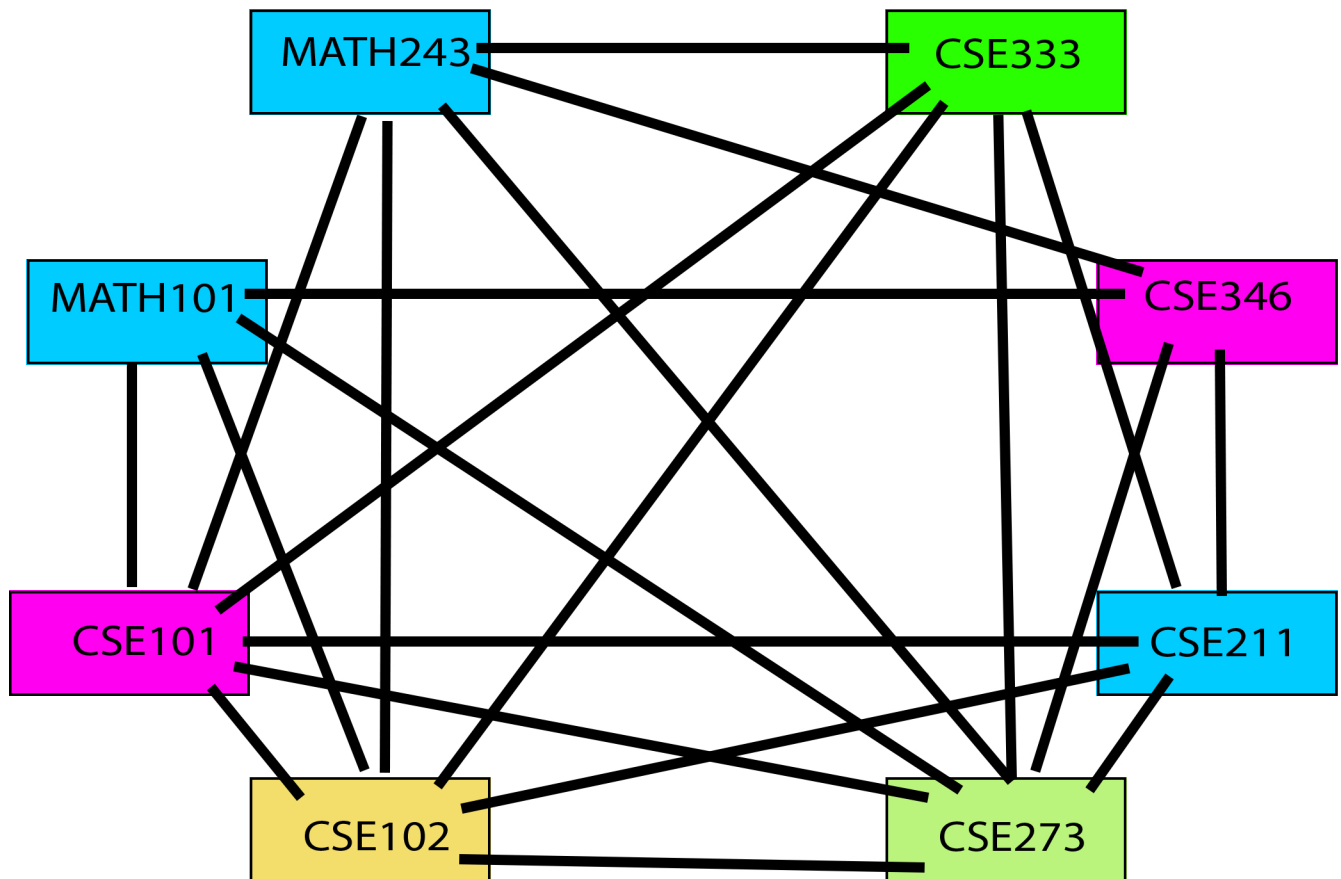


- There is no Hamilton circuit because When you go to inner or outer square You cannot go to back because you have to over two times a vertex.



- There is no Hamilton circuit because of (g, f, e) these vertex are dead end.  
Ex:  $b \rightarrow g$  after you do have to  $g \rightarrow b$   
b over 2 times





CSE 273 depends on all other lessons, so that we need to assigned it special color for it.

Except CSE102, CSE346 assigned a color depending on it, Math 101, Math 243 and CSE211 all of these lessons are independet from each one of onether.

CSE233 depends on all other lessons so that we need to assign it to special color