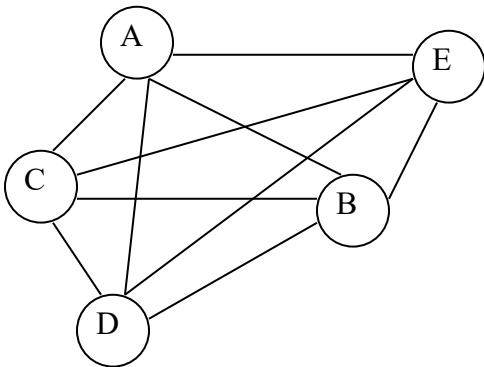


CIS 324 Exercise

1. Please draw the game tree for the game of nim instance $(8, 3, 1)$. 8 is the total number of pebbles, 3 is the maximum number of pebbles the first player can take, 1 stands for the first player's turn. If one player takes k pebbles, the other player can take anywhere from 1 to $2k$ pebbles (inclusive). The player who has the chance to take the last pebble wins.

2. Please solve the following traveling salesman's problem by drawing the search tree and finding the solution path. Suppose the salesman starts from city A and returns to city A.



Distances between Cities

	A	B	C	D	E
A	0	9	7	3	6
B		0	8	2	4
C			0	1	5
D				0	6
E					0