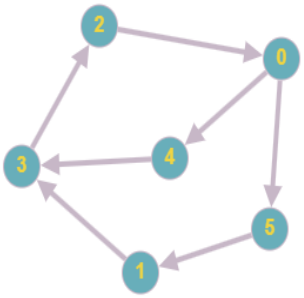
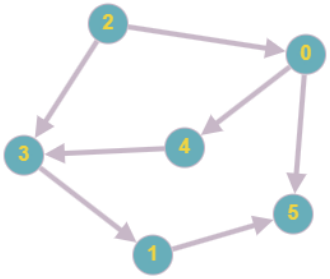
CSE220: Data Structures (Lab)
Fall 2024
Lab Quiz - 07
Duration: 25 Minutes

A

Name:	ID:	Section:

Question 1 [15 Points]

You need to write a function called **reverseEdge().** That takes a **`directed graph`** represented as an adjacency matrix in its parameter. Your task is to reverse all the outgoing connections from the ***odd*** vertices in the graph and return the matrix.

Sample Given Adjacency Matrix		**Sample Output Adjacency Matrix**	
	**0, 0, 0, 0, 1, 1,** **0, 0, 0, 1, 0, 0,** **1, 0, 0, 0, 0, 0,** **0, 0, 1, 0, 0, 0,** **0, 0, 0, 1, 0, 0,** **0, 1, 0, 0, 0, 0,**		**0, 0, 0, 0, 1, 1,** **0, 0, 0, 0, 0, 1,** **1, 0, 0, 1, 0, 0,** **0, 1, 0, 0, 0, 0,** **0, 0, 0, 1, 0, 0,** **0, 0, 0, 0, 0, 0,**
Sample Function Call			
`reverseEdge( graph )`			

Explanation: Each row in the adjacency matrix represents a Vertex, and the columns represent other Vertices where the outgoing connection is made. For example, in the sample input, the 1th row (0 0 0 1 0 0) means there is an outgoing edge from Vertex 1 to Vertex 3. After reversing the connection the outgoing edge would be going from Vertex 3 to Vertex 1. This is seen in the Row 3 (0 1 0 0 0 0) of the sample output. Moreover, the 3th row (0 0 1 0 0 0) means there is an outgoing edge from Vertex 3 to Vertex 2. After reversing the connection the outgoing edge would be going from Vertex 2 to Vertex 3. This is seen in the Row 2 (1 0 0 1 0 0) of the sample output. This reversing is only applicable for the ***odd*** vertices like 1,3,5.