Problem 1

2. Devise an algorithm for the following problem. Then give the asymptotic running time of your algorithm, including an explanation of how you arrived at this running time.

Algorithm: IsReachableFrom(G, u, v)
Input: A directed graph G, vertices u, v in G
Output: TRUE if there is a directed path from u to v in G, false otherwise.

→ Identify Columns which are completely null and delete corresponding rows.

A B C G D E F
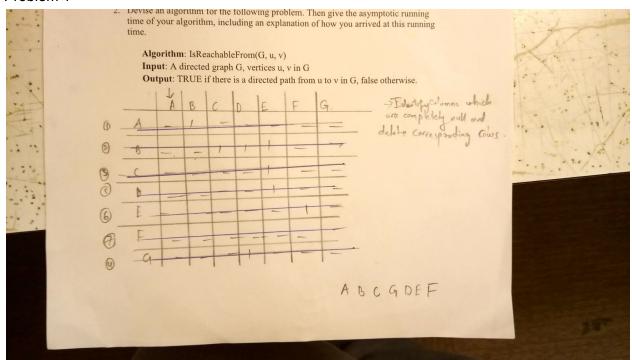
Problem 2
 I would apply Dijstra's Algorithm(No need to reinvent the wheel) for determining the shortest path. If the path is there then I would finally return true else i would return false.
//Algorithm already given to us in the lecture notes