State **whether the following algorithms are complete and optimal for this problem** (finding the connection path between given 2 people). **Also, state and evaluate the space complexity using asymptotic notation of the algorithm used for this problem. Fill in the below table and upload it.**

Algorithm	**Complete**	**Optimal**	**Space Complexity**
Breadth first search	**YES**	**YES**	**O(b^(d+1))** **For our case b=100, d=6;** **O(100^7)** **It requires too much space, so it is not applicable for this problem.**
Depth first search without repeated state checking	**NO**	**NO**	**O(b*m)** **Max Depth (m) = 6;** **O(100*6)**
Depth first search with repeated state checking	**YES**	**NO**	**O(b*m)** **Max Depth (m) = 6;** **O(100*6)**
Depth limited search DFS with a depth limit of *L*.	**if L >= d:** **YES** **In our case,** **d = 6**	**NO**	**O(b*L)**
Iterative deepening DFS	**YES**	**YES**	**O(b*d)** **For our case b=100, d=6;** **O(100*6)**