Assignment7

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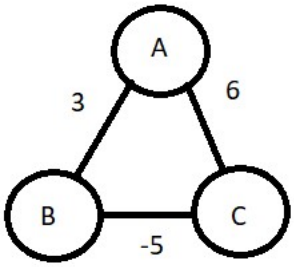
1

BFS: A B D F G C E

DFS: A B F C D E G

2 O ((mn)^2)

3 Dijkstra's algorithm fails when a graph has negative edges because it follows a greedy approach. Specifically, because once a node has been visited it cannot be reconsidered. In the case of negative edges it may create a scenario where the intially optimal path is not the over all optimal path. Here Dijkstra's would say the shortest path from A to B is 5 however with the negative edge it would be 1.



4

BFS: A,B,C,D,E,G,F,H,I,J

DFS:A,B,C,D,G,I,J,H,F,E