Project 2 part 2 written part

Monday, April 6, 2020 7:26 PM

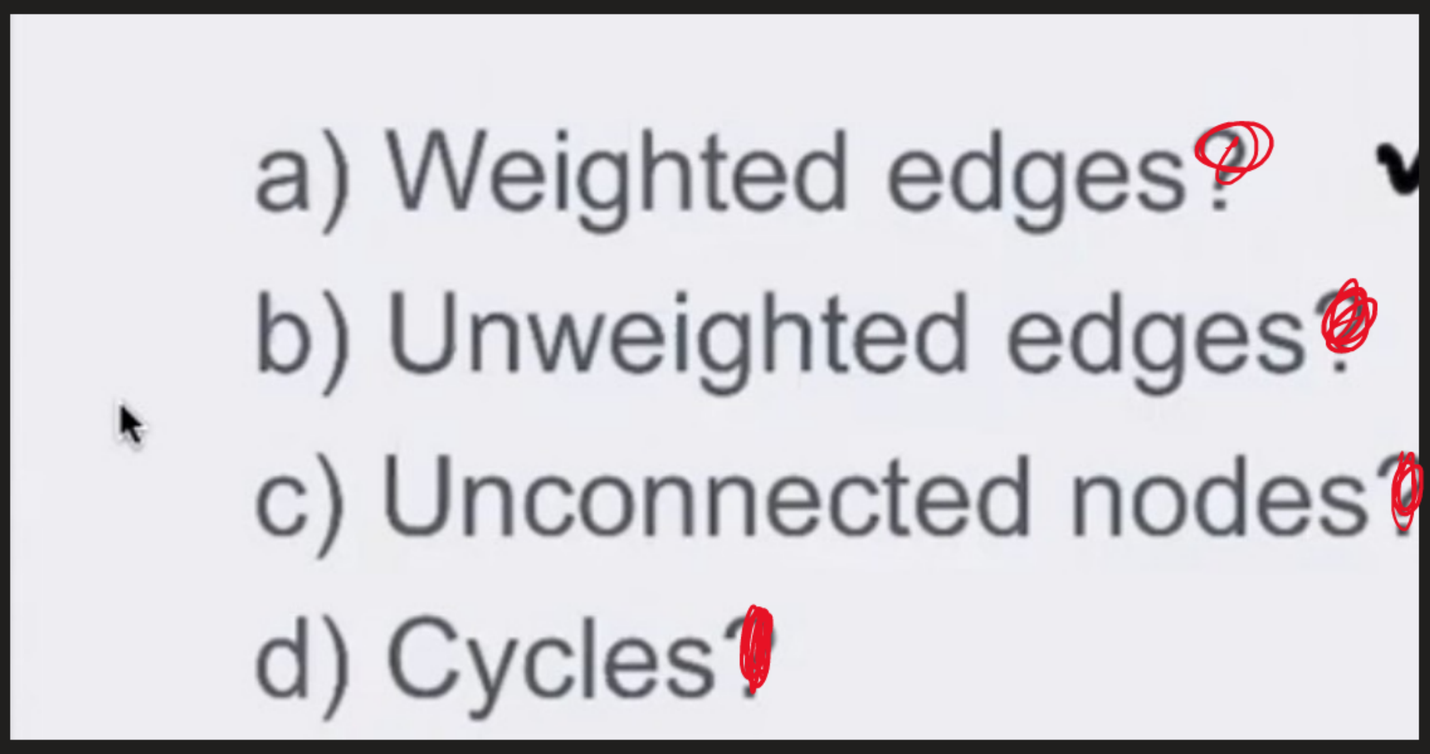
(1 point) Describe in words the properties of a DAG. Describe in words what will change about the edges and nodes in your new graph as compared to your previous graph

Dag

1) directed
2) no cycles
3) Acyclic

can be used in Topological sort

a) (1 point) What properties of the graph make it possible for you to use Dijkstra's on this graph



these are the case

(3 points) You want to find the optimal path from the start node (0,0) to the end node (n,n) using the A* algorithm. What is an admissible and consistent heuristic that you can use to help you solve the maze using A*? Justify why it's both admissible and consistent.

For the Grid Graph a star implementation I used the manhatten distance as the huristic

It is ad misible because because it will not over estimate distance

It is consisbnt because

$(x_1 - x_2)^2 + (y_1 - y_2)^2$ —▷

it is still close to actual distance