UNIVERSITY OF HOUSTON

FINAL-EXAM REVIEW

COSC 3320
Algorithms and Data Structures

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0 Previous Concepts

Concepts seen previously can be found in the mid-term review, located here.

1 Greedy Algorithms

A **Greedy Algorithm** will make the *locally optimal* choice at each step. A greedy algorithm is not always optimal, but in many cases is optimal or sufficiently close to the optimal solution to justify its use.

2 Heaps

3 Graphs

3.1 Representing a Graph

3.2 Depth-First Search

3.3 Breadth-First Search

4 Graph Algorithms

4.1 Minimum Spanning Tree

4.1.1 Kruskal's Algorithm

4.1.2 Prim's Algorithm

4.1.3 Boruvka's algorithm

4.2 Shortest Paths

4.2.1 Dijkstra's Algorithm

4.2.2 A* Search

4.2.3 Bellman-Ford Algorithm

4.2.4 Floyd–Warshall Algorithm