

Lab 6: Graph Search

COSC 3020: Algorithms and Data Structures

Lars Kotthoff
larsko@uwyo.edu

23 October 2019

Instructions

Attempt to finish the tasks below during the lab time. You have until Friday, 25 October 2019, 23:59h to submit the solutions to WyoCourses. You may ask your TA for feedback before submitting, but this feedback will be qualitative only.

You may *not* use external libraries in your code unless explicitly stated.

1 Depth-First Search

Recall the pseudocode for Depth-First Search:

- while unvisited nodes remain
 - mark current vertex v as visited
 - for each edge (v, w)
 - * recursively process w unless marked visited

Implement the algorithm and test it on a few different graphs. You can choose any data structures you like for the implementation.

What is the worst-case big- Θ complexity of your implementation?

Total 10 points.