

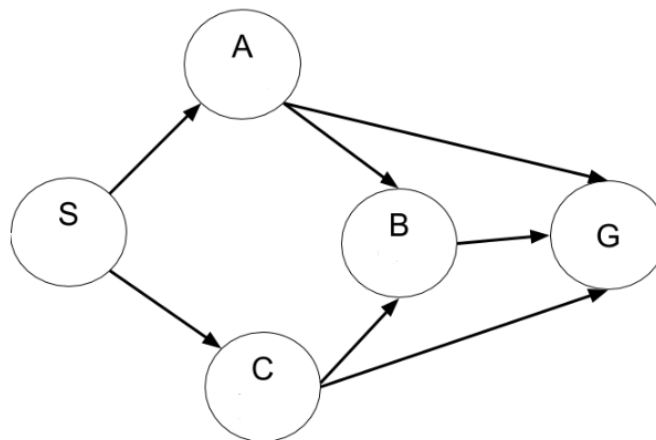
CS430/530 Homework 2 -35 pts

Due: February, 21 (Upload soft copy on Canvas as a .docx or .pdf format)

Note: Label the homework numbers and attach all python code under appendix in your word/pdf format homework.

1. Convert the below state space graph to search tree: assume S= Start node, G= goal node, and node C as your leftmost node. You can either use any graphics tool to draw the search tree or do it by hand and attach the image.

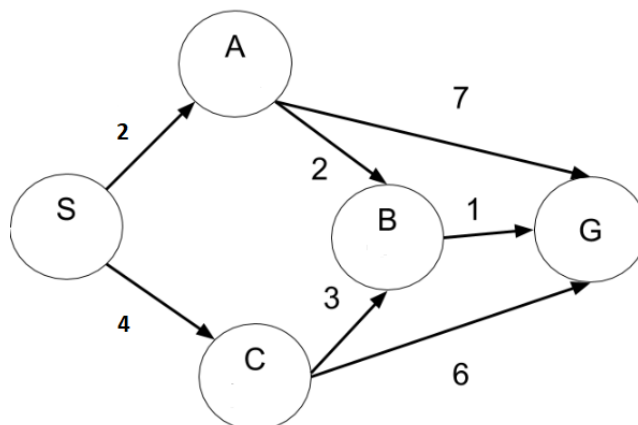
(5pts)



- 2.a. Highlight the path navigated and output the corresponding nodes in your search tree with respect to a. Depth First Search, and b. Breadth First Search. (10pts:5pts/search program output)

- 2.b. Write a python program to output the corresponding nodes in your search tree with respect to a. Depth First Search, and b. Breadth First Search. List your output nodes from the program/algorithm here. (10pts: 5pts/search program output)

- 3.a. Convert the below weighted state space graph to search tree. Highlight the path navigated and output the corresponding nodes in your search tree with respect to Uniform Cost Search (Dijkstra's) algorithm. (5 pts)



- 3.b Write a python program to output the corresponding nodes in your search tree with respect Uniform Cost Search (Dijkstra's) algorithm. List your output nodes from the program/ algorithm here. (5 pts)

Appendix – Code goes here