

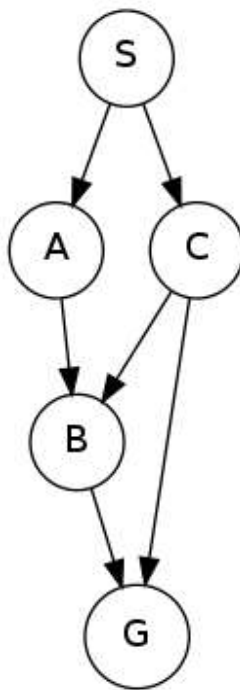
## hw1\_search\_q2\_depth\_first\_graph\_search

### Question 2: Depth-First Graph Search

0.0/6.0 points (graded)

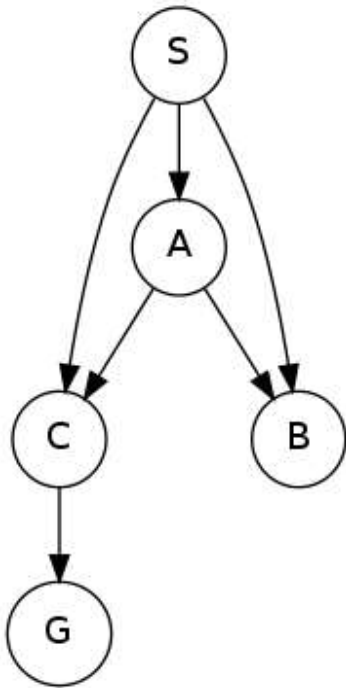
Consider a depth-first graph search on the graph below, where S is the start and G is the goal state. Assume that ties are broken alphabetically (so a partial plan S->X->A would be expanded before S->X->B and S->A->Z would be expanded before S->B->A). You may find it helpful to execute the search on scratch paper.

Please enter the final path returned by depth-first graph search in the box below. Your answer should be a string with S as your first character and G as your last character. Don't include arrows or spaces in your submission. For example, if you believe the path is S->X->G, please enter SXG in the box.



SABG

Answer: SABG



This problem creates randomly generated graphs. The solution here is for the above graph, which may be different from the graph in your homework.

Step 1: Expand S

Fringe: S-A, S-B, S-C

Closed Set: S

Step 2: Expand S-A

Fringe: S-A-B, S-A-C, S-B, S-C

Closed Set: S, A

Step 3: Expand S-A-B

Fringe: S-A-C, S-B, S-C

Closed Set: S, A, B

Step 4: Expand S-A-C

Fringe: S-A-C-G, S-B, S-C

Closed Set: S, A, B, C

Step 5: Expand S-A-C-G, finding the goal

Submit

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 Answers are displayed within the problem