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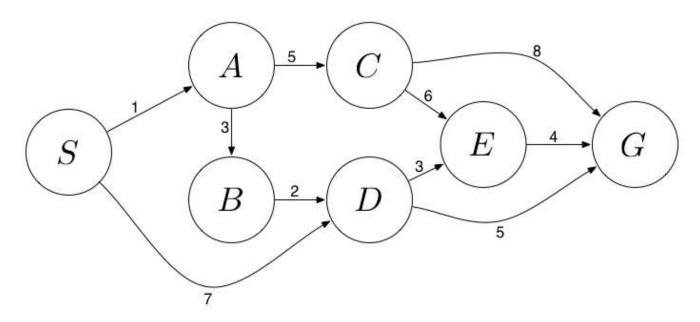


Course > Week 10 > Practic... > Q1: Se...

Q1: Search

Problem 1: Search

Part 1



Answer the following questions about the search problem shown above.

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).

Part 1.1

1/1 point (ungraded)

What path would breadth-first graph search return for this search problem?

- \bigcirc $S \rightarrow A \rightarrow B \rightarrow D \rightarrow G$
- \circ $S \rightarrow A \rightarrow B \rightarrow D \rightarrow E \rightarrow G$
- \circ $S \rightarrow A \rightarrow C \rightarrow G$
- \circ $S \rightarrow A \rightarrow C \rightarrow E \rightarrow G$
- \bullet $S \rightarrow D \rightarrow G \checkmark$
- \bigcirc $S \rightarrow D \rightarrow E \rightarrow G$

Submit

✓ Correct (1/1 point)

Part 1.2

1/1 point (ungraded)

What path would uniform cost graph search return for this search problem?

- \bullet $S \rightarrow A \rightarrow B \rightarrow D \rightarrow G \checkmark$
- \bigcirc $S \rightarrow A \rightarrow B \rightarrow D \rightarrow E \rightarrow G$
- \circ $S \rightarrow A \rightarrow C \rightarrow G$
- lacksquare S
 ightarrow A
 ightarrow C
 ightarrow E
 ightarrow G
- \bigcirc $S \rightarrow D \rightarrow G$

$$lacksquare S
ightarrow D
ightarrow E
ightarrow G$$

Submit

✓ Correct (1/1 point)

Part 1.3

2/2 points (ungraded)

What path would depth-first graph search return for this search problem?

$$\bigcirc \ S \to A \to B \to D \to G$$

$$ullet$$
 $S o A o B o D o E o G$

$$lacksquare S
ightarrow A
ightarrow C
ightarrow G$$

$$lacksquare S
ightarrow A
ightarrow C
ightarrow E
ightarrow G$$

$$lacksquare S
ightarrow D
ightarrow G$$

$$lacksquare S
ightarrow D
ightarrow E
ightarrow G$$

Submit

✓ Correct (2/2 points)

Part 1.4

2/2 points (ungraded)

What path would A* graph search, using a consistent heuristic, return for this search problem?

- \bullet $S \rightarrow A \rightarrow B \rightarrow D \rightarrow G \checkmark$
- \bigcirc $S \rightarrow A \rightarrow B \rightarrow D \rightarrow E \rightarrow G$
- \circ S o A o C o G
- \bigcirc $S \rightarrow A \rightarrow C \rightarrow E \rightarrow G$
- \circ $S \rightarrow D \rightarrow G$
- \bigcirc $S \rightarrow D \rightarrow E \rightarrow G$

Submit

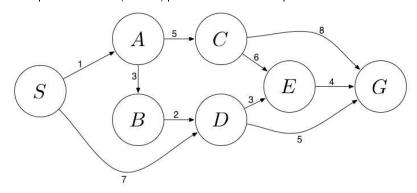
✓ Correct (2/2 points)

Part 2

Consider the heuristic for this problem show in the table below. The search graph is repeated for your convenience.

Q1: Search | Practice Final II (solution) | CS188.1x Courseware | edX

State s	$h\left(s ight)$
S	9
$m{A}$	9
В	6
C	7
D	1
$oldsymbol{E}$	4
\boldsymbol{G}	0



Part 2.1

1/1 point (ungraded) Is h admissible?

Yes

No

Submit

✓ Correct (1/1 point)

Part 2.2

1/1 point (ungraded) Is h consistent?

Yes

No

Submit

✓ Correct (1/1 point)

Part 2.3

2/2 points (ungraded)

Which of the following paths would greedy graph search return for the above search problem using the heuristic h?

$$igcup S
ightarrow A
ightarrow B
ightarrow D
ightarrow E
ightarrow G$$

$$\circ$$
 $S o A o C o G$

$$ullet$$
 $S o D o G ullet$

$$lacksquare S
ightarrow D
ightarrow E
ightarrow G$$

Submit

✓ Correct (2/2 points)

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