

This is ungraded examination preparation.

CSCI 4511/6511 - Exam Prep 1

Write your name here: _____

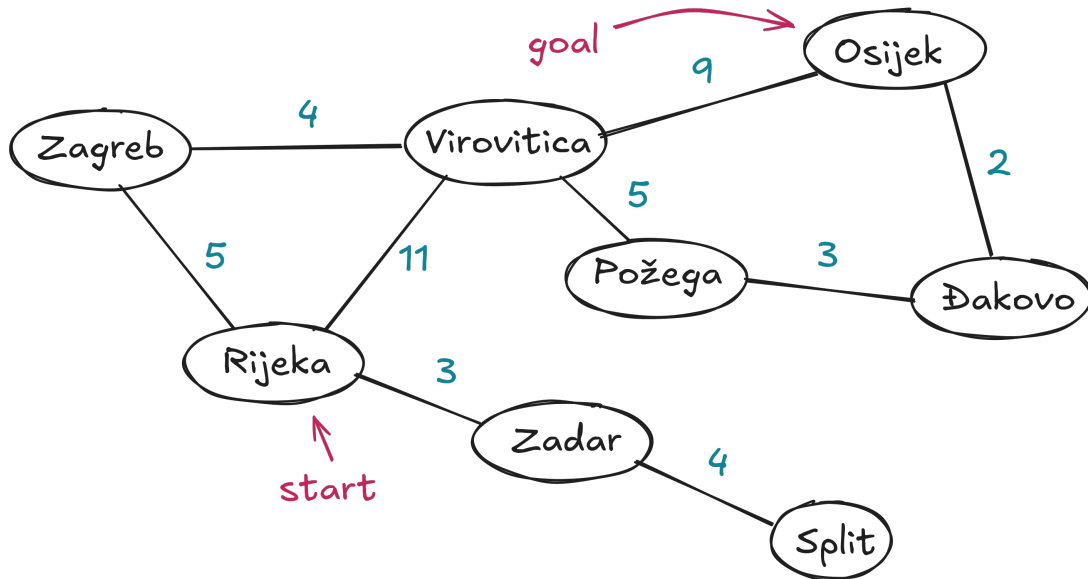
Instructions:

This is exam and prep and is not for credit. You should try to complete it on your own, without references.

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1 Uniform-Cost Search

List the nodes in their order of expansion for UCS used to solve the following problem:



2 Depth-Limited Search

Modify the Depth-First Search algorithm below to terminate in failure if the search tree is exhaustively searched to depth 6 (inclusive of the initial node) without reaching the goal.

Algorithm Depth-First Search

```
1: function DEPTH-FIRST-SEARCH(problem)
2:   node ← NODE(STATE=problem.INITIAL)
3:   frontier ← LIFO stack
4:   frontier.PUSH(node)
5:   while not IS-EMPTY(frontier) do
6:     node ← POP(frontier)
7:     if problem.IS-GOAL(node.STATE) then
8:       return node
9:     else if not IS-CYCLE(node) then
10:      for each child in EXPAND(problem,node) do
11:        frontier.PUSH(child)
12:   return failure
```

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