AlgoExpert Quad Layout C++ 14px Sublime 00:00:00

Our Solution(s) Run Code

Solution 1

```cpp
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#include <vector>
using namespace std;

class AncestralTree {
public:
  char name;
  AncestralTree *ancestor;

  AncestralTree(char name) {
    this->name = name;
    this->ancestor = NULL;
  }

  void addAsAncestor(vector<AncestralTree *> descendants);
};

int getDescendantDepth(AncestralTree *descendant, AncestralTree
AncestralTree *backtrackAncestralTree(AncestralTree *lowerDesce
                                      AncestralTree *higherDesc
                                      int diff);

// O(d) time | O(1) space - where d is the depth (height) of the
AncestralTree *getYoungestCommonAncestor(AncestralTree *topAnce
                                         AncestralTree *descenda
                                         AncestralTree *descenda
  int depthOne = getDescendantDepth(descendantOne, topAncestor);
  int depthTwo = getDescendantDepth(descendantTwo, topAncestor);
  if (depthOne > depthTwo) {
    return backtrackAncestralTree(descendantOne, descendantTwo,
                                  depthOne - depthTwo);
  } else {
    return backtrackAncestralTree(descendantTwo, descendantOne,
                                  depthTwo - depthOne);
  }
}

int getDescendantDepth(AncestralTree *descendant, AncestralTree
  int depth = 0;
  while (descendant != topAncestor) {
    depth++;
    descendant = descendant->ancestor;
  }
  return depth;
}

AncestralTree *backtrackAncestralTree(AncestralTree *lowerDescen
```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

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#include <vector>
using namespace std;

class AncestralTree {
public:
  char name;
  AncestralTree *ancestor;

  AncestralTree(char name) {
    this->name = name;
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  }

  void addAsAncestor(vector<AncestralTree *> descendants);
};

AncestralTree *getYoungestCommonAncestor(AncestralTree *topAnces
                                         AncestralTree *descenda
                                         AncestralTree *descenda
  // Write your code here.
  return NULL;
}

```

Custom Output Submit Code

Run or submit code when you're ready.