

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 package main
4
5 type AncestralTree struct {
6     Name      string
7     Ancestor *AncestralTree
8 }
9
10 // O(d) time | O(1) space - where d is the depth (height) of the ancestral tree
11 func GetYoungestCommonAncestor(topAncestor, descendantOne, descendantTwo *AncestralTree) *AncestralTree {
12     depthOne := getDescendantDepth(descendantOne, topAncestor)
13     depthTwo := getDescendantDepth(descendantTwo, topAncestor)
14     if depthOne > depthTwo {
15         return backtrackAncestralTree(descendantOne, descendantTwo, depthOne-depthTwo)
16     }
17     return backtrackAncestralTree(descendantTwo, descendantOne, depthTwo-depthOne)
18 }
19
20 func getDescendantDepth(descendant, topAncestor *AncestralTree) int {
21     depth := 0
22     for descendant != topAncestor {
23         depth++
24         descendant = descendant.Ancestor
25     }
26     return depth
27 }
28
29 func backtrackAncestralTree(lowerDescendant, higherDescendant *AncestralTree, diff int) *AncestralTree {
30     for diff > 0 {
31         lowerDescendant = lowerDescendant.Ancestor
32         diff--
33     }
34     for lowerDescendant != higherDescendant {
35         lowerDescendant = lowerDescendant.Ancestor
36         higherDescendant = higherDescendant.Ancestor
37     }
38     return lowerDescendant
39 }
40
```

Solution 1

Solution 2

Solution 3

```
1 package main
2
3 type AncestralTree struct {
4     Name      string
5     Ancestor *AncestralTree
6 }
7
8 func GetYoungestCommonAncestor(top, descendantOne, descendantTwo *AncestralTree) *AncestralTree {
9     // Write your code here.
10    return nil
11 }
12
```

Custom Output

Raw Output

Submit Code

Run or submit code when you're ready.