SHORT PROGRAMMING QUESTIONS

Please submit by pushing to a new github repository and sending the link

DEPTH FIRST TREE TRAVERSAL

Discuss an algorithm to traverse a tree, depth first.

CHARACTERS IN STRINGS

Implement a function with signature find_chars(string1, string2) that takes two strings and returns a string that contains only the characters found in string1 and string two in the order that they are found in string1. Implement a version of order N*N and one of order N.

ARRAY COMPACTION

Write a function that takes as input a sorted array and modifies the array to compact it, removing duplicates.

Notes: The input array might be very large.

For example:

- input array = [1, 3, 7, 7, 8, 9, 9, 9, 10]

- transformed array = [1, 3, 7, 8, 9, 10]

ROTATING AN ARRAY

Write a function that takes an array of integers and returns that array rotated by N positions.

For example, if N=2, given the input array [1, 2, 3, 4, 5, 6] the function should return [5, 6, 1, 2, 3, 4]

LEAST COMMON MULTIPLE

The least common multiple of a set of integers is the smallest positive integer that is a multiple of all of the integers in the set.

Write a function that takes an array of integers and efficiently calculates and returns the LCM.

ANGULAR JS

Please create an angularjs app that uses [angular-pouchdb.](#) It should contain some automated tests for the angular-pouchdb **put** function (not the underlying pouchdb one). That's all. Recommend Karma and Jasmine for tests. No need to add tests optional arguments, just basic **put**.