## **Code Challenge**



Conduct "FizzBuzz" on a tree while traversing through it. Change the values of each of the nodes dependent on the current node's value

## **Specifications**

- Read all of these instructions carefully. Name things exactly as described.
- Do all your work in a public repository called <u>data-structures-and-algorithms</u>, with a well-formatted, detailed top-level README.md.
- Create a new branch in your repo called **fizzbuzz\_tree** |.
- Your top-level readme should contain a "Table of Contents" navigation to all of your challenges and implementations so far. (Don't forget to update it!)
- This assignment should be completed within the <u>challenges</u> subdirectory of the repository.
- On your branch, create...
  - C#: a new .NET Core console project named \_\_FizzBuzzTree ]. Within your \_\_Program.cs ] create a new static method outside of \_\_Main() ] following the naming conventions below. Call your newly created method in \_\_Main() | once complete.
  - JavaScript: a folder named fizzBuzzTree which contains a file called fizz-buzz-tree.js
  - Python: a folder named <u>fizz\_buzz\_tree</u> which contains a file called <u>fizz\_buzz\_tree.py</u>
  - Java: a folder named FizzBuzzTree which contains a file called FizzBuzzTree.java
- Include any language-specific configuration files required for this challenge to become an individual component, module, library, etc.
  - NOTE: You can find an example of this configuration for your course in your class lecture repository.

## **Feature Tasks**

- Write a function called **FizzBuzzTree** which takes a tree as an argument.
- Without utilizing any of the built-in methods available to your language, determine weather or not the value of each node is divisible by 3, 5 or both, and change the value of each of the nodes:
  - If the value is divisible by 3, replace the value with "Fizz"
  - If the value is divisible by 5, replace the value with "Buzz"

- If the value is divisible by 3 and 5, replace the value with "FizzBuzz"
- Return the tree with its new values.
- For explicitly-typed languages: Ensure your node values are of type **Object**, to hold either strings or integers.

## Requirements

Ensure your complete solution follows the standard requirements.

- 1. Write unit tests
- 2. Follow the template for a well-formatted README
- 3. Submit the assignment following these instructions

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