PrairieLearn CS 225, Sp25 Assessments Gradebook PE3#4 Che Liu ▼

#### Question 17: Construct Mirror Tree

# **The Problem**

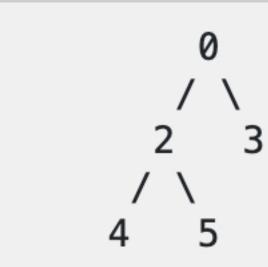
We have provided you a class Tree along with a subclass Node. The methods are declared in Tree.h, and there are implementations of most of them in Tree.cpp.

## Your work:

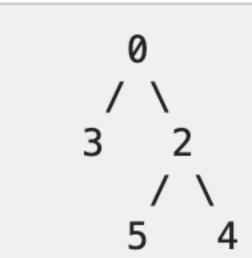
Implement the function Tree& Tree::mirror(const Tree& other) that changes the tree to be a mirror of the other tree along the vertical axis.

Put your code in Tree.cpp.

As an example, if we have the following starting tree:



mirror will produce the following output tree:



You can write this using any technique you want, but we recommend using recursion (feel free to add helper functions if you need).

You can write tests for your code in the entry/main.cpp file. We also provide a print function so you can visually inspect your tree.

### Potentially Useful References

- std::vector reference
- Reference root

While developing this code remember to use all the tools you have seen in the lab and mp, including valgrind.

#### Developing with VSCode workspaces

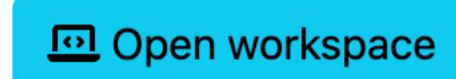
To open a terminal: click the button with three horizontal lines in the top left -> Terminal -> New Terminal.

To build your code: Follow the same method as our labs and mps.

- `mkdir build`
- `cd build`
- `cmake ..`

Once you have done that, you can compile and run your code using `make` and `./main` to compile and execute respectively. **Graded files** 

The only files that will be submitted for grading on this problem are **Tree.cpp** and **Tree.h**.



Save & Grade 36 attempts left

Save

45 points available for this attempt  Practice Exam 3

Assessment overview

Question 17 Status: unanswered Available points: 45, 45 **9** Total points: **—** /45 Auto-graded question

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