

Assignment 03 Feedback

Written Component

W1

(b)

- The result is $\Theta(1)$ since we only need to check the links for the left and right child. It is not necessary to iterate from the root.

(c)

- The result is $\Theta(1)$ since we only need to check the positions $2p + 1$ and $2p + 2$. It is not necessary to iterate from the root.
- Before accessing the left and right child, check if the node is a leaf first. $2p + 1$ and $2p + 2$ may be outside the array.

W3

- There are five different cases for this problem. All of them need to be mentioned.
- Many students missed the case when there is no right child. Also the role of the Node itself (left or right child of its parent) makes difference.
- It is not fine to generate a complete list of element of the tree.

Programming Component

For every python file you submit, “you are required not only to have a correct solution, but also to adhere to the requirements of the assignment question and the style guide, including aspects of the design recipe”. Some of them are given, and the rest need to be completed. Almost all students did not provide a class definition. You won’t lose marks **this time**. However you need to be careful when writing Assignment 04, since there is no interface files for the last two problems.

P1

- The function `nbrs()` must be implemented using the features of `Node`. Other implementations inside the `Graph` class are not allowed.
- The order of elements returned by the function `nbrs()` does not matter. Function `equiv()` handles these cases.

Additional Note for MarkUs

Here are some frequently asked questions about the error messages from MarkUs:

- **AssertionError:** This means your code format is correct, but it does not produce the correct result. If you see this, you need to test your code on your own computer. Notice that the public tests on MarkUs only include some very simple test.
- **'NoneType' object has no attribute ...:** This error occurs when you try to do something to `None`. You may have included such sentence in your code, or accidentally return `None` in some of your functions.
- **'XXX' object has no attribute ...:** If you see this, remember that you cannot access the private attributes of a provided class. (An exception is the `degree()` function of this assignment. This is caused by a mistake I made on MarkUs and Piazza. Also you will not lose marks if you access `'_degree'` this time.)
- **'XXX' object is not callable:** Import modules by `'from XXX import XXX'`.
- **Expected an indented block:** Check your indentation.