CSC148 Summer 2018: Exercise 8

Due: Thursday, August 2nd @ 11PM

In this exercise, you are to implement a function called get_largest_height_difference().

To start, download ex8.py and ex8_pyta.txt and read through the code provided in the `if __name__ == '__main__'` block.

Read through the docstring for get_sorted_order() carefully and implement the method. We have provided the ___init___, and ___str___ methods for convenience.

You may not use sorted() or sort() in this. You must use the properties of the BST itself.

This exercise will require you to have PythonTA installed. If you haven't done so already, go through lab1 and the instructions on the Software page to install and set up PyCharm with PythonTA.

get_sorted_order

This function takes in a BinarySearchTree and returns its items in sorted order **without using sort() or sorted().**

Submission

Exercises are to be submitted through MarkUs in the ex8 folder. Submit only ex8.py.

To log in to MarkUs, use your UTORid as the log-in name. The password is your teaching labs password. If you have not set this up or have forgotten your password, go to the Teaching Lab's Account Management Page and (re)set your password.

Grading Scheme

This exercise will be graded out of 4 marks, broken down as follows:

- 2 marks for being able to run the client code without issue (no assertion errors raised)
- 1 mark for passing PythonTA
- 1 mark for passing hidden test cases (which use your client code in other ways)
    - Details on what the hidden test cases will/won't test are describe below.

All of these marks are 'all-or-nothing' (i.e. you'll either get 0 on that criteria, or full marks).

Hidden Test Cases

Things that the hidden test case might test:

- Any BinaryTree imaginable without any duplicates.