Part Three: Process Report

Class: cs562

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1: Describe some bugs you found (in the System Under Test or your tester).

The bug I found is:

"ERROR: (<type 'exceptions.TypeError'>, TypeError('super() takes at least 1 argument (0 given)',), <traceback object at 0x1014e7908>)"

The original code is:

"super().__setattr__(name, value)"

As the error message says, I can't use "super()" function like this. The "super()" function need 2 arguments. The name of the child class which is calling super()(Tree is this case) is the first argument to the method, and a reference to the object calling super() is the second argument.

The corrected code is:

"super(Tree, self).__setattr__(name, value)"

2: Explain progress to date -- how has your test system improved from the start?

Start of this term - Jan 22:

Find the proper python library to test, finished the project proposal.

Jan 23 – Jan 28

Install the TSTL, try the examples in the tstl folder.

Jan 29 – Feb 4

Under standing the grammar of TSTL, try to write simple tstl test program.

Feb 5 – Feb 15

Start to write tstl file to test my python library. In this process, I found a bug of the python library and correct it. I write the frame of the test file and test one function of the python library.

The function I tested is addChild().

Feb 16 – Feb 19

Test the function addChildren()

Feb 20 – Feb 23

Test the function getParent()

Feb 24 – Feb 26

Test the function getChild() and get Children()

Feb 27 – Mar 1

Test the function getRoot() and getNode()

Mar 2 – Mar 3

Write the process report.

3: Estimate your progress by end of term.ß

For now, I've tested almost half functions of this python library. The rest functions are: delNode(),delChild(),isRoot(),isBranch and nestedTree(). The next due date is Mar 14, I think I can finish the rest of the functions before Mar 10. And finished the final report before Mar 14. If I finished it earlier, I think I will recheck the method I have done, and try to figure out how good the testing way it is. I will make sure the method can actually determine the correctness of the functions. If I still have the time, the further work is adding some new functions to this python library. And try to test it.

4: Discuss quality of the SUT:

The quality of this python library is not bad. For now, I found one bug there. This bug is not a big deal. It just misuse the super() function. This python library is basic an implementation of the tree data structure. It is simple but still very useful. Most of the functions are very well tested. But I think this implementation of tree data structure is not very completed. It lack some functions like inorder(), preorder(), leftmost_child(), rightmost_child(), height(). If I finished this project at an earlier time, I think

I will add some new function to this library and make it complete.

5: Talk about code coverage, if possible

I use the command line python /tstl-folder/randomtester.py –timeout 5 to test the code coverage. The code coverage is about 34% in total, I think I still need to test more.