

CS562 Part3
Process of Project
Wei Liu
3/1/2016

Section 1: Introduction and bug report:

Based on professor Alex requirement, I searched my library on github, which includes almost all data structure python codes inside. The website link is :

https://github.com/mirob2005/Python_Data_Structures

In part 2, I tested many models and functions in this python library and tried to find bugs inside. I submitted Single Link List as an example for Part 2 assignment. Until now, I can't find any bugs or mistakes inside. I will keep looking for and tried to think more and I will update this report when I find any bugs later.

Section 2: Explain progress to date.

The process of using TSTL and test python codes are really confused me at the beginning. I am not good at python language so that I can't really understand what is talking about or what the functions are doing in my library. Until one week before Part 2 due data, I can test some easy functions in data structure like Link List. In the Test.tstl file, which was submitted for part 2, I inserted some data in single link list. I compared the new head next value with the old head's value to make sure that the new value has been inserted. The main code is shown below:

```
~<all>.insert(<dat>) => (<all,1>.head.next == pre<(<all,1>.head)>)
```

Also, I tested delete function. I deleted the first element, and compared the next value with new head value, it should equal to the new head after deleted active. Besides these test, I also tested delete all data and delete list functions. Now, I am testing other functions in Hash table and Sorting by other ways. I am trying to use different ways to test so that I can find bugs or mistakes inside.

Section 3: Estimate my progress by end of the term

I have finished the test of Link list, ADTs and trees. In the future, I think I will keep testing other data structures to make the code coverage 100 percent. Also, I am trying to fix that when I try to collect coverage percent, terminal always show that

no data collected. I don't know what is wrong with it and I will talk about this with professor Alex.

Section 4: Discuss quality of SUT

As we know, SUT file is generated by `tstl` file. The quality of SUT is same as the quality of my library. I found my library in Github website and this library is all about data structure in python language. Beside these python code, the author also wrote codes for test these python files. This library is really perfect because every file in this library has been tested by some ways that I don't understand. That's why I can't find any bugs in this library.

Section 5: Talk about code coverage.

I run command `python randomtester.py --timeout 5` to test the code coverage. As shown in terminal, my code coverage is about 51 percent in total. I think this percent is not good enough and I will keep test until the end of the term.