Part 3: Bug/progress report

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2016/3/3

0. Abstract

In this assignment, I will mainly talk about what I have done so far, how has my test system improved from beginning, what bugs I have found, what I will do next, the quality of the SUT, and talk about the code coverage.

1. Library and Bugs I Found

In my assignment I choose a B tree library to test. And I have test many function of it including adding new element to it, deleting element from it, and searching element in it. Unfortunately, I haven't found any mistake so far. And I will continue using TSTL to find if there is something wrong with this code. Actually I think the function of this library is correct, but I haven't test the time of each function to see if they are reasonable for the B tree. And also, I will try to test the maximum capacity of the tree.

2. Explain Progress to Date

At the beginning of using TSTL, it was very hard to understand it. There is not many books or introductions I can read and it is really difficult to start writing it. Besides, I'm not very familiar with Python, reading the code of the library took me a lot of time. Then I began to read the codes posted by instructor, these helped me a lot, because AVL tree is similar with B tree. I also talked with my classmates to help me understand how to use TSTL. We learned together and asked instructor when we have some problems. And by the end of last week, I can write some code to test my library. I have post my code about testing the "insert" function of the library, and I also test some other part such like "pop" function. I will continually test some of the functions in the library and I can use TSTL better then before now.

3. Estimate progress by end of term

I have tested most of the function of my library. And in the future, I think I will begin to test the running time of each function with different size to see if the running times are correct for a B tree. Also, I will test the maximum capacity of the tree.

4. Discuss quality of SUT

The SUT file is generated by TSTL. In my assignment, I think the quality of SUT is very good. I tried many different kinds of arguments and test a lot of functions and didn't find any bugs. So I think this is a very good library tha t finding code seems to be very hard.

5. Talk About Code Coverage

About the test coverage, I got 5% percent at the beginning when I just test th e insert function. Then I added some other functions and the coverage became 13% percent. I just covered a little part of the code. TSTL is a totally new t hing for me and I think I still need some time to familiar with it. I think it i s very helpful for finding bugs once I totally understand it.