

Part 3: Bug/progress report (20%)  
CS 562  
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02.26.16

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

In this assignment, the name of the Python library I use TSTL to test is Xpinyin. It was developed by Eric Lo, and he is come from China. This library is design for translate Chinese word to Chinese pinyin. It is an interesting idea to design such a library, and it would be very useful for some Chinese teaching program. As we know that Chinese is hard to learn, so design such a library is even harder. It need to consider a lot of different situations. So in my debug part, I try from three different parts to find bugs and they are unusual Chinese word, multiple pronunciation and long complex sentence. In order to find bug as much as possible, I would like to design some different test data for it. Then I find some bug as I expect in the proposal. The first kind bug is the unusual Chinese word. I try to find some hard Chinese word on the dictionary and set them in the input. The library could successfully recognize the input, but the problem is the output part. The pronunciation for these word is not correct. For example, my input is “麤 cu1, 嫫 xu1”, the output is not correct. The second kind of bug is the multiple pronunciation. In this part, I set some multiple pronunciation Chinese word in the input. As we know that some Chinese words under different situation would have different pronunciation. The output is not as good as I expect. The library only provides one pronunciation for the multiple pronunciation word. So it can not discover the multiple words and provide the correct pronunciation for them. For example, my input is “背包 后背 萝卜 占卜”, the output only provide one pronunciation for each multiple pronunciation word. In the third part, the complex long sentence, it contains both bug from the above situations.

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

January 14 is the first day I start this assignment.

January 16 is the date that I find this library and try to find some way to install it on my laptop.

January 21, I finish the proposal of this assignment.

January 29, I first time find the multiple pronunciation bug from this library, and it meet the expect of my proposal.

February 10, I find a lot of unusual Chinese word form the old Chinese book, and set them in the input. Then I find for some of these unusual Chinese word, the library could not provide the correct pronunciation for them.

February 14, I try some other different test methods, such as I put some long Chinese article in the input and the library could successfully recognize them and provide the answer.

February 19, I mix some other kind of language word such as Japanese and English word in the input and find this library could successfully ignore the other language and discover the Chinese word then provides the output.

Estimate your progress by end of term

Now in my project, I only find three kinds of bugs. I try to relate my Chinese language knowledge and set some more situation to debug this library. Maybe in the end of this term I could find more bugs.

Discuss quality of the SUT

In my opinion, this library is good enough to solve some basic problem in our life. But it still has some parts to improve. Such like the multiple pronunciation. As we know this part is not easy to solve, it needs a better algorithm to support it.

Talk about code coverage, if possible

So far, the code coverage is 61.31%.