Final Project Report

Mini Compiler

Hui Hao

[hhao@my.harrisburgu.edu](mailto:hhao@my.harrisburgu.edu)

Harrisburg University

aAbstract

I used a python to write a simple compiler. It can handle, numerical inputs, basic operations. Logical statements (If then, While) Comments, print texts and numbers. The compiler has the following steps. First, given the input code of any format, it will first check/recognize the syntax and tokenize the input. Second, it will parse the tokens and use given grammar to make sure they are in an order and no grammatical errors that is allowed in our language. Last the Emitter will compile the final C code. And save it as ‘input\_filename.c’

Keywords: compiler, parser, python, C

Final Project Report

# Parser Overview

The parser is the component that will make sure the code follows the correct syntax. It does this by looking at the tokens, one at a time, and deciding if the ordering is legal as defined by our language.

# Grammar Overview

The parser is the component that will make sure the code follows the correct syntax. It does this by looking at the tokens, one at a time, and deciding if the ordering is legal as defined by our language.

# Emitter Overview

The parser is the component that will make sure the code follows the correct syntax. It does this by looking at the tokens, one at a time, and deciding if the ordering is legal as defined by our language.

References

Henley, Austin Z. (2020). <http://web.eecs.utk.edu/~azh/blog/teenytinycompiler1.html>.

Andrade, Marcelo (2021). <https://blog.usejournal.com/writing-your-own-programming-language-and-compiler-with-python-a468970ae6df>.