

CS335A-Project

Milestone1

We have used python version 3.8.18 grammar to implement the python parser

1. Folder content:

milestone1 directory contains the following folders and files:

- (a) milestone1/src folder contains all the required source files. Let the files be "lexer.l", "parser.y" and "astnode.hpp". The bash script file "compile.sh" should be in this folder.
- (b) milestone1/tests folder contains the testcase files
- (c) milestone1/dotoutput folder contains the .dot files of the output for the testcases
- (d) milestone1/ast folder contains .png files of the images of the abstract syntax trees of the testcase files
- (e) milestone1/doc.pdf which contains the instructions

2. Compilation instructions:

To install flex, Bison, Dot and Graphviz use the following commands in linux:

```
sudo apt-get update
sudo apt-get install flex
sudo apt-get install bison
sudo apt-get install graphviz
```

To compile and execute the files, open the milestone1 directory in terminal and execute the following instruction.

To compile:

- Execute the following command to give execute permission to bash script file. (The bash script is in "compile.sh" file which is used to compile the program.)

```
$ chmod +x src/compile.sh
```

- Execute the following command to compile the source files.

```
$/src/compile.sh
```

The following files will be created after compilation in src folder:

```
parser.tab.h  
parser.tab.c  
parser.tab.output  
lex.yy.c  
parser
```

To execute:

```
$./src/parser tests/testcase.py > dotoutput/output.dot
```

- To execute various test cases, change "testcase.py" to the respective ".py" test case file and change the name "output.dot" to desired ".dot" file.

To generate .png files:

```
$ dot -Tpng dotoutput/output.dot -o ast/output.png
```

- To output various ".png" files of test cases, change "testcase.py" to the respective ".py" test case file and change the name "output.png" to desired ".png" file.