

MileStone-1 CS335

Group ID : 9

Ayush Hitesh Soneria (170192)

Deepesh Kumar Lall(170236)

Srinjay Kumar(170722)

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Directory Structure :

* milestone1/src: This contains all the source files of ANTLR4 and most importantly the script file (Script.sh) and astGenerator.py. It also contain an antlr4/ directory for support of python runtime and necessary methods used for tree traversal. We list the most prominent files here:

1. Java8.g4 : This file contains the Lexical Rules and Parsing Grammar in the format as needed by ANTLR.
2. astGenerator.py : This file is used for making an ast and dot file for Graphviz use.
3. antlr4/ : This Directory is for Python3 runtime purpose for antlr files.
4. Script.sh: this is the file used for running Command with few options as -o for mentioning output Directory.
5. error and output directories

* milestone1/testcases: This contains the testcase files of java type.

* milestone1/doc: Contains this report.

Execution Procedure :

- cd into the milestone/src directory
- run the script as follows:
`./Script.sh -input ../testcases/test_ < number >.java -output test_ < number >.dot`
- The input (with -input option) and output (with -output option) files should always be given as an argument. If -v option is given then progress of script will be shown on terminal.
- Error files will be formed in error directory and the output files will be in the output directory. Both these directories will be in the src directory.
- Final AST will be shown in src/output/graph.pdf

Packages Used :

- The latest version of Antlr : ANTLR 4.8.
- Python3 version : Python 3.6.3+
- Graphviz version : 2.38.0

References :

- <https://stackoverflow.com/questions/21534316/is-there-a-simple-example-of-using-antlr4-to-create-an-ast-from-java-source-code>
- <https://docs.oracle.com/javase/specs/jls/se8/html/jls-19.html>
- <https://github.com/antlr/antlr4/blob/master/doc/python-target.md>
- <https://github.com/antlr/codebuff>