

CS 335 Semester 2022–2023-II: Project Milestone

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README file:

The environment should have flex and bison installed.

If its Linux then it can be installed from the command "sudo apt install flex".

If its Linux then it can be installed from the command "sudo apt install bison".

The system should also have g++ installed.

The Grpahviz tool has been used to visualise the dot file generated on running the parser file.

Compilation and Execution

Go to the required directory by command "cd src"

Enter "make" on the command line to build the src folder

We have created a wrapper code to make the myASTgenerator

To execute,

Enter the command "cd /path/to/root"

Then the command "./myASTgenerator -i <inputfile> -o <outputfile.dot>"

To get the postscript file, write the command dot -Tps <output.dot> -o <output.ps> which can be further visualised using graphviz. Note: You are required to change each and every file in rwx mode, i.e. do chmod 777 to each and every file in case of access denial.

Compile Instructions

The following command line oprtions have been impelemnted by us

- -i : The input flag where the input file must be fed.
- -o : The output flag where the output file must be fed.
- -v : the verbose option which provides the debugging info in case of any errors in the code.
- -h : The help option which lists the execution instructions.

Assumptions

We have implemented the basic features of the Java-17 Grammar. On input of a java file to the program, our parser gives a parse tree corresponding to the program.

Additional Features

The following additional features have been implemented by besides the Basic features asked from us in the project :

- Support for Strings, including a few operations like concatenation, support for printing with `println()`
- Support for Interfaces
- Type casting
- import statements like `import java.util.*`
- Do-while and switch constructs
- Support for modifiers like `protected` and `default` in the class and object declaration