CS335 Milestone1

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1 Tools and Utilities Used

The environment should have flex and bison installed.
The system should also have g++ compiler installed.
in Linux, it can be installed from the command:

```
$sudo apt install flex
```

in Linux, it can be installed from the command:

```
$sudo apt install bison
```

The Graphviz tool has been used to visualise the AST tree.
Graphviz tool can be installed with:

```
$sudo apt-get update
$sudo apt-get install graphviz
```

2 Compilation and Execution

First, go to the src directory.
Enter "make" on the command line to make the executable
We have created a bash script "run.sh" to give the AST graph of input file as a .pdf file
To execute,
Enter the command "cd /pathtofolder"
Then the command "./run.sh [options] <inputfile> <outputfile>"
Options:
`-h,--help` display help
`-v,--verbose` enable verbose
`-i,--input` <inputfile> enter the input python file <inputfile>
`-o,--output` <outputfile> enter the output AST pdf as <outputfile>

Compile Instructions
The following command line options have been implemented 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 : verbose provides the debugging info in case of any errors in the code.
• -h : The help option which lists the execution instructions.

3 Compiler Details

We have implemented the basic features of the Python 3.8 Grammar. On input of a Python file to the program, our parser gives an Abstract Syntax Tree corresponding to the program.

3.1 Private Test Cases

We have included 5 private test cases as:
`test1.py`
`test2.py`
`test3.py`
`test4.py`
`test5.py`