

# CS 335 Semester 2019–2020-II: Milestone 1

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## Tools used:

Language: Python 3  
Lexer: Lex (Ply Software Package)  
Parser: Yacc (Ply Software Package)

## Implementation Details:

We used the official Java 8 grammar for the milestone. However, the grammar is not suited for an LALR(1) parser. Thus, we resolved all the issues encountered as described here.

## Optional Features Implemented:

- Support for Interfaces
- Static polymorphism via method overloading
- Dynamic polymorphism via method overriding
- Type casting
- Generics

## Instructions:

### *Installation:*

```
pip install ply==3.11  
pip install graphviz==0.13.2
```

### *Compilation:*

Running the program for the first time compiles the parse table automatically.

### *Execution:*

```
python3 parser.py [-h] -i file_name [-o file_name] [-v verbose]
```

## Documentation:

### Options:

-i infile.java OR --input infile.java : (Required) Input Java file name  
-o outfile OR --output outfile : (Optional) Output file name (without the extension)  
-v boolean OR --verbose boolean : (Optional) Verbose output  
-h OR --help : Prints help message