



CS 335A

## **Project : Milestone 3**

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## 1 Folder Content:

The submitted folder consists of the `milestone1` directory which includes the following sub-directories and files:

- **milestone3/src** sub-directory that contains all the source files
- **milestone3/tests** sub-directory that contains all the test files
- **milestone3/readme.pdf** which contains this PDF.

## 2 Requirements and Tools Used:

We have the following tools to build an Abstract Syntax tree given a java file input:

- **Flex:** For Lexical Analysis
- **Bison:** For Syntactical Analysis
- To install the above requirements use the following commands:
  - `sudo apt-get update`
  - `sudo apt-get install flex`
  - `sudo apt-get install bison`

## 3 Compilation Instructions:

Follow the given steps to compile and execute the files:

- **Step1:** Open the terminal in the *milestone2* folder and go to the *src* directory. The following Command will get you there:

```
cd src
```

- **Step2:** To compile the files enter the following command:

```
make compile
```

- **Note** The compiled files will create the following extra files in the *src* folder. the **output** file is the executable. The files are:

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

To remove these files to clean the *src* repository enter the following:

```
make clean
```

## 4 Execution Instructions:

### 4.1 Individual file from the Command Line

- One can enter the input file as follows. This will create a corresponding a directory with the name of the java file in the location of the input folder. For example, the following command will create a a directory test\_1 in ../tests/. This will contain all the symbol tables for all functions and all classes and one 3ac file called 3ac.txt.

```
./output --input=../tests/test_1.java
```

- Use the verbose option to list all the shift, reduce and lexer actions. For example:

```
./output --input=../tests/test_1.java --verbose
```

- Enter the following command to view about all the available options:

```
./output --help
```

- If a file which does not have the extension ".java" is entered or a invalid option is entered then an appropriate error will be thrown.