

How to invoke the program

1. Extract the zip file.
 - a. P3/
 - i. ast.java
 - ii. b.cup
 - iii. b.grammar
 - iv. b.jlex
 - v. ErrMsg.java
 - vi. Makefile
 - vii. P3.java
 - viii. test.b
 - ix. deps/
 1. JLex/
 - a. *.class files
 2. java_cup/
 - a. (files)
 - b. Nishimura.Yohei.Nishimura.Yohei.P3.pdf
2. Execute the following
 - a. make
3. Expected outputs are below:

```
java -cp ./deps:. java_cup.Main < b.cup
```

----- CUP v0.11b \${cupversion} (SVN rev) Parser Generation Summary -----

0 errors and 0 warnings

43 terminals, 22 non-terminals, and 69 productions declared,
producing 144 unique parse states.

0 terminals declared but not used.

0 non-terminals declared but not used.

0 productions never reduced.

0 conflicts detected (0 expected).

Code written to "parser.java", and "sym.java".

----- (CUP v0.11b \${cupversion} (SVN rev))

```
javac -g -cp ./deps:. ast.java
```

```
javac -g -cp ./deps:. sym.java
```

```
java -cp ./deps:. JLex.Main b.jlex
```

Processing first section -- user code.

Processing second section -- JLex declarations.

Processing third section -- lexical rules.

Creating NFA machine representation.

NFA comprised of 284 states.

Working on character

classes:.....

NFA has 47 distinct character classes.

Creating DFA transition table.

Working on DFA states.....

Minimizing DFA transition table.

99 states after removal of redundant states.

Outputting lexical analyzer code.

```
javac -g -cp ./deps:. ErrMsg.java
```

```
javac -g -cp ./deps:. b.jlex.java
```

```
javac -g -cp ./deps:. parser.java
```

Note: parser.java uses or overrides a deprecated API.

Note: Recompile with -Xlint:deprecation for details.

```
javac -g -cp ./deps:. P3.java
```

4. Execute the following

a. make test

5. Expected outputs are below:

```
java -cp ./deps:. P3 test.b test.out
```

program parsed correctly.

Note

1. Nothing special.