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This directory includes files including as following:

**P4.java**

The main program that:

- calls the parser
- calls the name analyzer
- calls unparsed function of a successful parser

**CFlat.jlex** (unchanged)

A JLex specification for the YES language.

**CFlat.cup** (unchanged)

A Java cup specified for the YES language.

**ErrMsg.java** (same as the file given in P2)

This class is used to generate warning and fatal error messages.

**DuplicateSymException.java**

This class defines duplicate Sym exception.

**EmptySymTableException.java**

This class defines empty Sym table.

**CFlat.cup**

A Java CUP specification for the grammar defined in YES language.

**ast.java**

Contains class definitions for the AST structure that the parser will build.

Un-parsing code is also added so as to make correct parsing and indent for the output file.

Name analyzer method is added to provide the correct name analyzer for different classes.

**test.cf**

Thoroughly test different grammars to see whether it output correctly.

**test.res**

Provide the correct output file after running P4(name analyzer and unparsed) with test.cf. Compare “test.res” with this “test.out” to decide whether the un-parsing and name analyzer method is right.

**nameErrors.cf**

Thoroughly test every error report.

## **Makefile**

A makefile for program 3

- run “\$ make” to make a parser for the YES language.
- run “\$ make test” to test the name analyzer. The “test.out” file is compared with our given output the correct output file “test.res” to see whether it is correct.
- run “\$ make testError” to test the error report of the name analyzer given the “nameError.cf” file.
- run “\$ make clean” to clean all corresponding files created.