*Open access under* [*CC BY-NC-ND license.*](http://creativecommons.org/licenses/by-nc-nd/3.0/)



JJForester

pgen

javac

compile time run time

parse table

sglr | implode

Sort.parse("file")

JVM

AST

Java byte code

grammar in SDF

result

input term

user−supplied Java code

generated Java code



**Visitable**

accept\_bu accept\_td

expr1

***Expr***

***Type***

type1

expr0

expr2

type1

type0

**Apply**

**Var**

**Lambda**

**TVar**

**Arrow**

accept\_bu(Visitor v){ expr0.accept\_bu(v); expr1.accept\_bu(v); visitApply(this);

}

identifier0

identifier0

**Identifier**

identifier0

visit visitExpr visitApply

...

**Visitor**

Example of usage:



vars

visitVar

**FreeVarsVisitor**

visitLambda

visitLambda(Lambda lambda) { vars.remove(var.getIdentifier());

}

**GetVarsVisitor**

add remove

**Set**

visit visitExpr visitApply

...

**Visitor**

visitVar(Var var) { vars.add(var.getIdentifier());

}



...

v = new FreeVarsVisitor(); expr.accept\_bu(v);

...

|  |  |
| --- | --- |
| **Visitor** | |
| visit visitFunTerm visitProcDef  ... | |
|  |  |

send

add remove

**Set**

processName

theStack

srdb

currProcess

...

**String**

visitFunTerm visitProcDef visitProcDefArgs

visitFunTerm visitIdTerm visitIterStarSepTerm\_ visitOptVar visitStringTerm visitVnameVar

**SendReceiveVisitor**

**TermToStringVisitor**

push pop

**Stack**

match toString

...

**SendReceiveAction**

addReceiveAction addSendAction printMatchTable storeMatchTable

...

**SendReceiveDB**

receive

turn-on

Pump

report(D?)

activate(D?) on

GasStation

result(D?) request(D?,C?)

schedule(D?,C?)

remit(D?) change(D?)

okay(C)

stop prepay(D?,C?)

Operator

Customer