

BNF for miniRA.jj

```
Goal ::= "MAIN" "[" IntegerLiteral "]" "[" IntegerLiteral "]"
      "[" IntegerLiteral "]" StmtList "END" ( SpillInfo )? ( Procedure )* <EOF>

StmtList ::= ( ( Label )? Stmt )*

Procedure ::= Label "[" IntegerLiteral "]" "[" IntegerLiteral "]"
            "[" IntegerLiteral "]" StmtList "END" ( SpillInfo )?

Stmt ::= NoOpStmt
      | ErrorStmt
      | CJumpStmt
      | JumpStmt
      | HStoreStmt
      | HLoadStmt
      | MoveStmt
      | PrintStmt
      | ALoadStmt
      | AStoreStmt
      | PassArgStmt
      | CallStmt

NoOpStmt ::= "NOOP"
ErrorStmt ::= "ERROR"
CJumpStmt ::= "CJUMP" Reg Label
JumpStmt ::= "JUMP" Label
HStoreStmt ::= "HSTORE" Reg IntegerLiteral Reg
HLoadStmt ::= "HLOAD" Reg Reg IntegerLiteral
MoveStmt ::= "MOVE" Reg Exp
PrintStmt ::= "PRINT" SimpleExp
ALoadStmt ::= "ALOAD" Reg SpilledArg
AStoreStmt ::= "ASTORE" SpilledArg Reg
PassArgStmt ::= "PASSARG" IntegerLiteral Reg
CallStmt ::= "CALL" SimpleExp

Exp ::= HAllocate
      | BinOp
      | SimpleExp

HAllocate ::= "HALLOCATE" SimpleExp
BinOp ::= Operator Reg SimpleExp
Operator ::= "LE"
          | "NE"
          | "PLUS"
          | "MINUS"
          | "TIMES"
```

```

        | "DIV"
SpilledArg ::= "SPILLEDARG" IntegerLiteral
SimpleExp ::= Reg
            | IntegerLiteral
            | Label
Reg ::= "a0"
      | "a1"
      | "a2"
      | "a3"
      | "t0"
      | "t1"
      | "t2"
      | "t3"
      | "t4"
      | "t5"
      | "t6"
      | "t7"
      | "s0"
      | "s1"
      | "s2"
      | "s3"
      | "s4"
      | "s5"
      | "s6"
      | "s7"
      | "t8"
      | "t9"
      | "v0"
      | "v1"
IntegerLiteral ::= <INTEGER_LITERAL>
Label ::= <IDENTIFIER>
SpillInfo ::= "/" SpillStatus
SpillStatus ::= <SPILLED>
              | <NOTSPILLED>

```