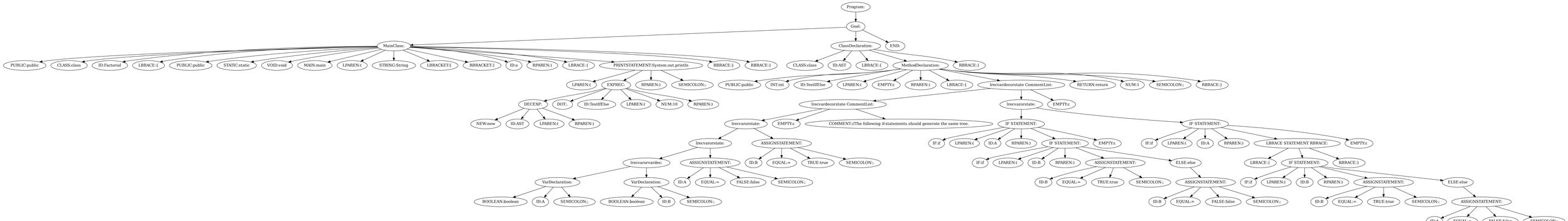
Program:
Goal:
MainClass:
PUBLIC:public
CLASS:class
ID:Factorial
LBRACE:{
PUBLIC:public
STATIC:static
VOID:void
MAIN:main
LPAREN:(
STRING:String
LBRACKET:[
RBRACKET:]
ID:a
RPAREN:)
LBRACE:{
PRINTSTATEMENT:System.out.println
RBRACE:}
RBRACE:}
LPAREN:(
EXPREC:
RPAREN:)
SEMICOLON:;
DECEXP:
DOT:.
ID:TestIfElse
LPAREN:(
NUM:10
RPAREN:)
NEW:new
ID:AST
LPAREN:(
RPAREN:)
ClassDeclaration:
END:
CLASS:class
ID:AST
LBRACE:{
MethodDeclaration:
RBRACE:}
PUBLIC:public
INT:int
ID:TestIfElse
LPAREN:(
EMPTY:ε
RPAREN:)
LBRACE:{
lrecvardecorstate CommentList:
RETURN:return
NUM:1
SEMICOLON:;
RBRACE:}
lrecvardecorstate CommentList:
lrecvarorstate:
EMPTY:ε
lrecvarorstate:
EMPTY:ε
COMMENT://The following if-statements should generate the same tree.
lrecvarorstate:
ASSIGNSTATEMENT:
lrecvarvardec:
ASSIGNSTATEMENT:
VarDeclaration:
VarDeclaration:
BOOLEAN:boolean
ID:A
SEMICOLON:;
BOOLEAN:boolean
ID:B
SEMICOLON:;
ID:A
EQUAL:=
FALSE:false
SEMICOLON:;
ID:B
EQUAL:=
TRUE:true
SEMICOLON:;
IF STATEMENT:
IF STATEMENT:
IF:if
LPAREN:(
ID:A
RPAREN:)
IF STATEMENT:
EMPTY:ε
IF:if
LPAREN:(
ID:B
RPAREN:)
ASSIGNSTATEMENT:
ELSE:else
ID:B
EQUAL:=
TRUE:true
SEMICOLON:;
ASSIGNSTATEMENT:
ID:B
EQUAL:=
FALSE:false
SEMICOLON:;
IF STATEMENT:
IF:if
LPAREN:(
ID:A
RPAREN:)
LBRACE STATEMENT RBRACE:
EMPTY:ε
LBRACE:{
IF STATEMENT:
RBRACE:}
IF:if
LPAREN:(
ID:B
RPAREN:)
ASSIGNSTATEMENT:
ELSE:else
ID:B
EQUAL:=
TRUE:true
SEMICOLON:;
ASSIGNSTATEMENT:
ID:A
EQUAL:=
FALSE:false
SEMICOLON:;