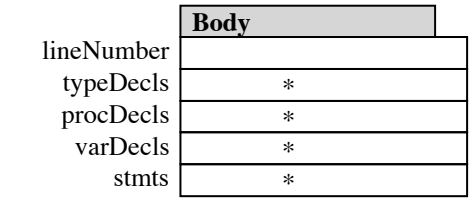
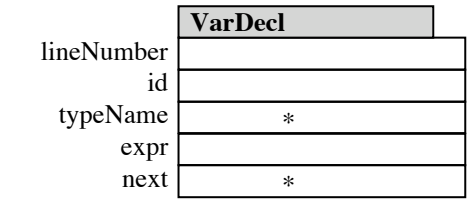
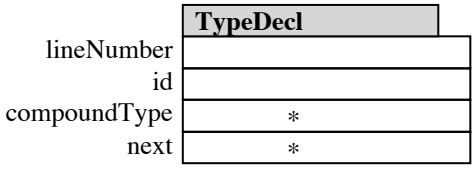
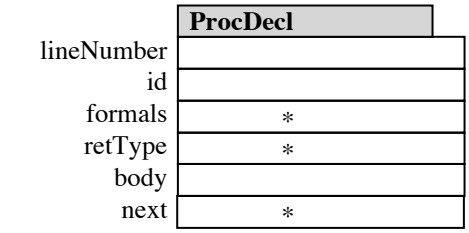
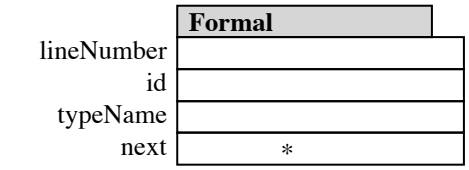
Abstract Syntax Tree – Class Summary (for Project 4)

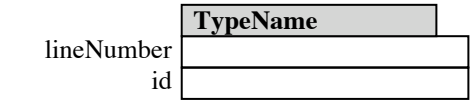


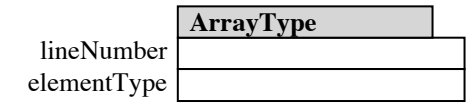


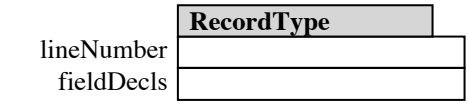


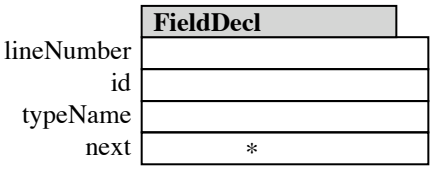


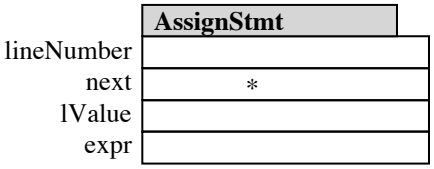


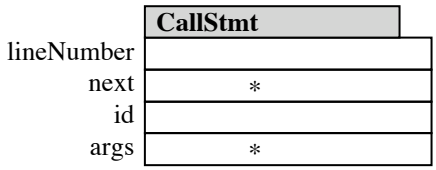


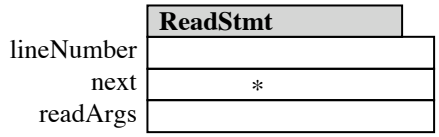


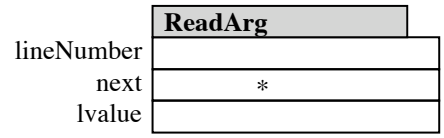


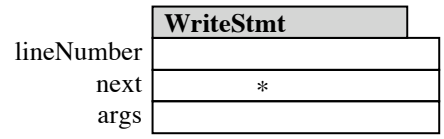


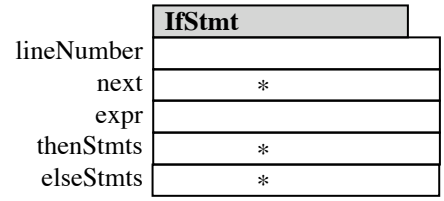


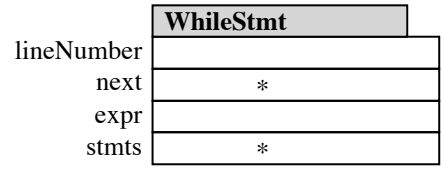




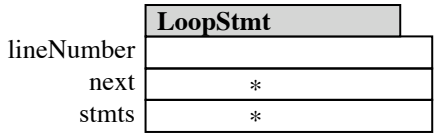


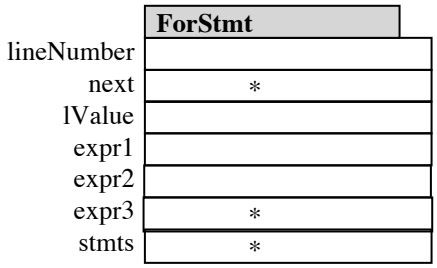


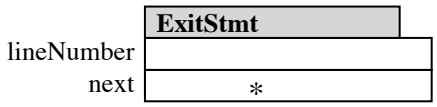


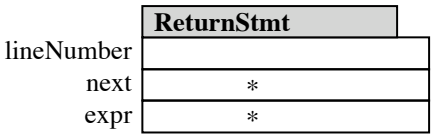


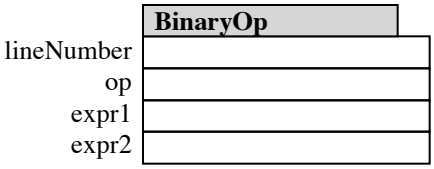
Note: * means this field may be null

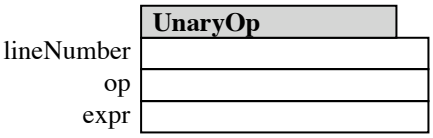


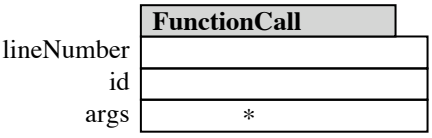


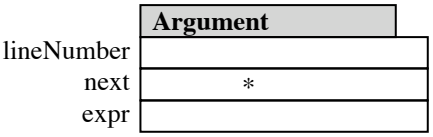


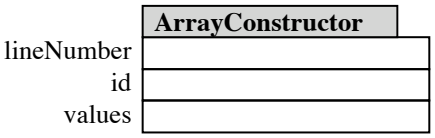


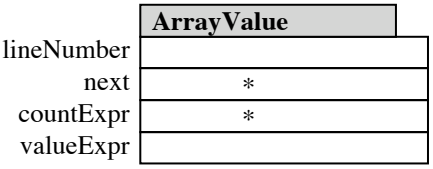


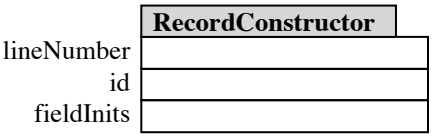


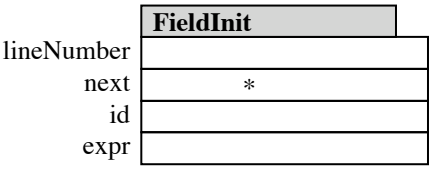


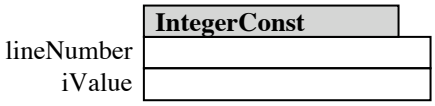


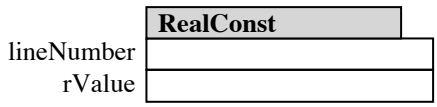


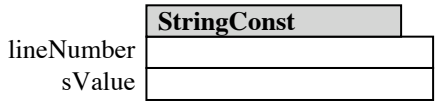


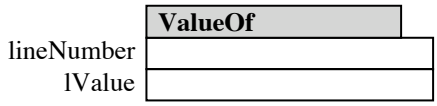


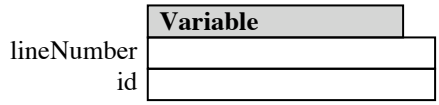


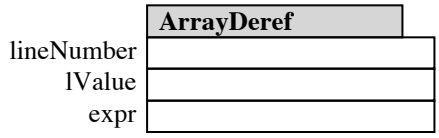


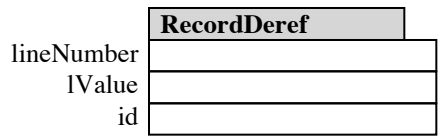












Note: * means this field may be null

Node
- *lineNumber: int*

Body
- *typeDecls: TypeDecl ***
- *procDecls: ProcDecl ***
- *varDecls: VarDecl ***
- *stmts: Stmt ***

VarDecl
- *id: String*
- *typeName: TypeName ***
- *expr: Expr*
- *next: VarDecl ***

TypeDecl
- *id: String*
- *compoundType: CompoundType*
- *next: TypeDecl ***

ProcDecl
- *id: String*
- *formals: Formal ***
- *retType: TypeName ***
- *body: Body*
- *next: ProcDecl ***

Formal
- *id: String*
- *typeName: TypeName*
- *next: Formal ***

TypeName
- *id: String*

CompoundType

ArrayType
- *elementType: TypeName*

RecordType
- *fieldDecls: FieldDecl*

FieldDecl
- *id: String*
- *typeName: TypeName*
- *next: FieldDecl ***

Stmt
- *next: Stmt ***

AssignStmt
- *lValue: LValue*
- *expr: Expr*

CallStmt
- *id: String*
- *args: Argument ***

ReadStmt
- *readArgs: ReadArg*

WriteStmt
- *args: Argument*

IfStmt
- *expr: Expr*
- *thenStmts: Stmt ***
- *elseStmts: Stmt ***

WhileStmt
- *expr: Expr*
- *stmts: Stmt ***

LoopStmt
- *stmts: Stmt ***

Node (continued...)

Stmt (continued...)

ForStmt
- *lValue: LValue*
- *expr1: Expr*
- *expr2: Expr*
- *expr3: Expr ***
- *stmts: Stmt ***

ExitStmt

ReturnStmt
- *expr: Expr ***

ReadArg
- *next: ReadArg*
- *lValue: LValue*

Expr

BinaryOp
- *op: int*
- *expr1: Expr*
- *expr2: Expr*

UnaryOp
- *op: int*
- *expr: Expr*

FunctionCall
- *id: String*
- *args: Argument ***

ArrayConstructor
- *id: String*
- *values: ArrayValue*

RecordConstructor
- *id: String*
- *fieldInits: FieldInit*

IntegerConst
- *iValue: int*

RealConst
- *rValue: double*

StringConst
- *sValue: String*

ValueOf
- *lValue: LValue*

Argument
- *next: Argument ***
- *expr: Expr*

ArrayValue
- *next: ArrayValue ***
- *countExpr: Expr ***
- *valueExpr: Expr*

FieldInit
- *next: FieldInit ***
- *id: String*
- *expr: Expr*

LValue

Variable
- *id: String*

ArrayDeref
- *lValue: LValue*
- *expr: Expr*

RecordDeref
- *lValue: LValue*
- *id: String*

Note: *** means this field may be null