

# MCMEC Javadoc Documentation - module `hu.bme.mit.mcmec`

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November 2, 2018

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# Chapter 1

## Package hu.bme.mit.mcmec

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The type Mcmec.	

### 1.1 Class Mcmec

The type Mcmec.

#### 1.1.1 Declaration

```
public class Mcmec
    extends java.lang.Object
```

#### 1.1.2 Constructor summary

Mcmec()

#### 1.1.3 Method summary

**getIssuesFileName()** Gets issues file name.  
**getQueryFileName()** Gets query file name.  
**getUppaalHome()** Get uppaal home string.  
**getXtaFileName()** Gets xta file name.  
**main(String[])** The entry point of application.  
**run(String[])** Run string.

#### 1.1.4 Constructors

- Mcmec

```
public Mcmec()
```

### 1.1.5 Methods

- **getIssuesFileName**

```
public static java.lang.String getIssuesFileName()
```

- **Description**

- Gets issues file name.

- **Returns** – the issues file name

- **getQueryFileName**

```
public static java.lang.String getQueryFileName()
```

- **Description**

- Gets query file name.

- **Returns** – the query file name

- **getUppaalHome**

```
public static java.lang.String getUppaalHome()
```

- **Description**

- Get uppaal home string.

- **Returns** – the string

- **getXtaFileName**

```
public static java.lang.String getXtaFileName()
```

- **Description**

- Gets xta file name.

- **Returns** – the xta file name

- **main**

```
public static void main(java.lang.String[] args)
```

- **Description**

- The entry point of application.

- **Parameters**

- \* **args** – the input arguments

- **run**

```
public static java.lang.String run(java.lang.String[] args)
```

- **Description**

- Run string.

- **Parameters**

- \* **args** – the args

- **Returns** – the string

## Chapter 2

# Package hu.bme.mit.mcmec.gui

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The type Mcmec gui.	

### 2.1 Class McmeGui

The type Mcmec gui.

#### 2.1.1 Declaration

```
public class McmeGui
    extends java.lang.Object
```

#### 2.1.2 Constructor summary

McmeGui()

#### 2.1.3 Method summary

\$\$\$getRootComponent\$\$\$() \$\$\$ get root component \$\$\$ j component.  
setupUI() Sets ui.

#### 2.1.4 Constructors

- McmeGui

```
public McmeGui()
```

### 2.1.5 Methods

- **\$\$\$getRootComponent\$\$\$**

```
public javax.swing.JComponent $$$getRootComponent$$$()
```

- **Description**

- \$\$\$ get root component \$\$\$ j component.

- **Returns** – the j component

- **setupUI**

```
public static void setupUI()
```

- **Description**

- Sets ui.

MCMEC Javadoc Documentation - module  
hu.bme.mit.mcmec.tricheckparser

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November 2, 2018



# Contents

# Chapter 1

## Package

## hu.bme.mit.mcmec.tricheckparser.dsl

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The type Tri check parser.	

### 1.1 Class TriCheckParser

The type Tri check parser.

#### 1.1.1 Declaration

```
public class TriCheckParser
    extends java.lang.Object
```

#### 1.1.2 Constructor summary

```
TriCheckParser()
```

#### 1.1.3 Method summary

```
parseLitmusIntoQuery(String, String) Parse litmus into query.
```

#### 1.1.4 Constructors

- TriCheckParser

```
public TriCheckParser()
```

### 1.1.5 Methods

- **parseLitmusIntoQuery**

```
public static void parseLitmusIntoQuery(java.lang.String  
    litmusDirectory , java.lang.String outFile)
```

- **Description**

Parse litmus into query.

- **Parameters**

- \* **litmusDirectory** – the litmus directory
- \* **outFile** – the out file

## Chapter 2

### Package

**hu.bme.mit.mcmec.tricheckparser.dsl.gen**

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<b>TriCheckLitmusParser.ThreadContext</b> .....	??
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## 2.1 Interface TriCheckLitmusListener

This interface defines a complete listener for a parse tree produced by `TriCheckLitmusParser`.

### 2.1.1 Declaration

```
public interface TriCheckLitmusListener
```

### 2.1.2 All known subinterfaces

`TriCheckLitmusBaseListener`

### 2.1.3 All classes known to implement interface

`TriCheckLitmusBaseListener`

### 2.1.4 Method summary

```
enterAssignment(TriCheckLitmusParser.AssignmentContext) Enter a
    parse tree produced by assignment() .
enterCondition(TriCheckLitmusParser.ConditionContext) Enter a parse
    tree produced by condition() .
enterLine(TriCheckLitmusParser.LineContext) Enter a parse tree produced
    by line() .
enterLitmus(TriCheckLitmusParser.LitmusContext) Enter a parse tree pro-
    duced by litmus() .
enterPreliminary(TriCheckLitmusParser.PreliminaryContext) Enter a
    parse tree produced by preliminary() .
enterThread(TriCheckLitmusParser.ThreadContext) Enter a parse tree pro-
    duced by thread() .
enterThreads(TriCheckLitmusParser.ThreadsContext) Enter a parse tree
    produced by threads() .
enterVariables(TriCheckLitmusParser.VariablesContext) Enter a parse tree
    produced by variables() .
exitAssignment(TriCheckLitmusParser.AssignmentContext) Exit a parse
    tree produced by assignment() .
exitCondition(TriCheckLitmusParser.ConditionContext) Exit a parse tree
    produced by condition() .
```

**exitLine**(**TriCheckLitmusParser.LineContext**) Exit a parse tree produced by `line()` .

**exitLitmus**(**TriCheckLitmusParser.LitmusContext**) Exit a parse tree produced by `litmus()` .

**exitPreliminary**(**TriCheckLitmusParser.PreliminaryContext**) Exit a parse tree produced by `preliminary()` .

**exitThread**(**TriCheckLitmusParser.ThreadContext**) Exit a parse tree produced by `thread()` .

**exitThreads**(**TriCheckLitmusParser.ThreadsContext**) Exit a parse tree produced by `threads()` .

**exitVariables**(**TriCheckLitmusParser.VariablesContext**) Exit a parse tree produced by `variables()` .

### 2.1.5 Methods

- **enterAssignment**

**void** `enterAssignment`(**TriCheckLitmusParser.AssignmentContext** `ctx`)

- **Description**

Enter a parse tree produced by `assignment()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterCondition**

**void** `enterCondition`(**TriCheckLitmusParser.ConditionContext** `ctx`)

- **Description**

Enter a parse tree produced by `condition()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterLine**

**void** `enterLine`(**TriCheckLitmusParser.LineContext** `ctx`)

- **Description**

Enter a parse tree produced by `line()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterLitmus**

**void** enterLitmus (TriCheckLitmusParser.LitmusContext ctx)

- **Description**  
Enter a parse tree produced by `litmus()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterPreliminary**

**void** enterPreliminary (TriCheckLitmusParser.PreliminaryContext ctx)

- **Description**  
Enter a parse tree produced by `preliminary()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterThread**

**void** enterThread (TriCheckLitmusParser.ThreadContext ctx)

- **Description**  
Enter a parse tree produced by `thread()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterThreads**

**void** enterThreads (TriCheckLitmusParser.ThreadsContext ctx)

- **Description**  
Enter a parse tree produced by `threads()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterVariables**

**void** enterVariables (TriCheckLitmusParser.VariablesContext ctx)

- **Description**  
Enter a parse tree produced by `variables()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitAssignment**

```
void exitAssignment (TriCheckLitmusParser . AssignmentContext ctx)
```

- **Description**

- Exit a parse tree produced by `assignment()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitCondition**

```
void exitCondition (TriCheckLitmusParser . ConditionContext ctx)
```

- **Description**

- Exit a parse tree produced by `condition()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitLine**

```
void exitLine (TriCheckLitmusParser . LineContext ctx)
```

- **Description**

- Exit a parse tree produced by `line()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitLitmus**

```
void exitLitmus (TriCheckLitmusParser . LitmusContext ctx)
```

- **Description**

- Exit a parse tree produced by `litmus()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitPreliminary**



```
void exitPreliminary( TriCheckLitmusParser.PreliminaryContext ctx
)
```

– **Description**

Exit a parse tree produced by `preliminary()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitThread**

```
void exitThread( TriCheckLitmusParser.ThreadContext ctx)
```

– **Description**

Exit a parse tree produced by `thread()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitThreads**

```
void exitThreads( TriCheckLitmusParser.ThreadsContext ctx)
```

– **Description**

Exit a parse tree produced by `threads()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitVariables**

```
void exitVariables( TriCheckLitmusParser.VariablesContext ctx)
```

– **Description**

Exit a parse tree produced by `variables()` .

– **Parameters**

\* `ctx` – the parse tree

## 2.2 Interface TriCheckLitmusVisitor

This interface defines a complete generic visitor for a parse tree produced by `TriCheckLitmusParser` .

### 2.2.1 Declaration

```
public interface TriCheckLitmusVisitor
```

### 2.2.2 All known subinterfaces

```
TriCheckLitmusBaseVisitor
```

### 2.2.3 All classes known to implement interface

```
TriCheckLitmusBaseVisitor
```

### 2.2.4 Method summary

```
visitAssignment(TriCheckLitmusParser.AssignmentContext) Visit a parse
    tree produced by assignment() .
visitCondition(TriCheckLitmusParser.ConditionContext) Visit a parse tree
    produced by condition() .
visitLine(TriCheckLitmusParser.LineContext) Visit a parse tree produced by
    line() .
visitLitmus(TriCheckLitmusParser.LitmusContext) Visit a parse tree pro-
    duced by litmus() .
visitPreliminary(TriCheckLitmusParser.PreliminaryContext) Visit a parse
    tree produced by preliminary() .
visitThread(TriCheckLitmusParser.ThreadContext) Visit a parse tree pro-
    duced by thread() .
visitThreads(TriCheckLitmusParser.ThreadsContext) Visit a parse tree pro-
    duced by threads() .
visitVariables(TriCheckLitmusParser.VariablesContext) Visit a parse tree
    produced by variables() .
```

### 2.2.5 Methods

- **visitAssignment**

```
java.lang.Object visitAssignment(TriCheckLitmusParser.
    AssignmentContext ctx)
```

- **Description**

Visit a parse tree produced by `assignment()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitCondition**

```
java.lang.Object visitCondition (TriCheckLitmusParser.  
    ConditionContext ctx)
```

– **Description**

Visit a parse tree produced by `condition()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitLine**

```
java.lang.Object visitLine (TriCheckLitmusParser.LineContext ctx)
```

– **Description**

Visit a parse tree produced by `line()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitLitmus**

```
java.lang.Object visitLitmus (TriCheckLitmusParser.LitmusContext  
    ctx)
```

– **Description**

Visit a parse tree produced by `litmus()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitPreliminary**

```
java.lang.Object visitPreliminary (TriCheckLitmusParser.  
    PreliminaryContext ctx)
```

– **Description**

Visit a parse tree produced by `preliminary()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

- **visitThread**

```
java.lang.Object visitThread(TriCheckLitmusParser.ThreadContext
    ctx)
```

- **Description**  
Visit a parse tree produced by `thread()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitThreads**

```
java.lang.Object visitThreads(TriCheckLitmusParser.
    ThreadsContext ctx)
```

- **Description**  
Visit a parse tree produced by `threads()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitVariables**

```
java.lang.Object visitVariables(TriCheckLitmusParser.
    VariablesContext ctx)
```

- **Description**  
Visit a parse tree produced by `variables()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

## 2.3 Class **TriCheckLitmusBaseListener**

This class provides an empty implementation of `TriCheckLitmusListener` , which can be extended to create a listener which only needs to handle a subset of the available methods.

### 2.3.1 Declaration

```
public class TriCheckLitmusBaseListener
    extends java.lang.Object implements TriCheckLitmusListener
```

### 2.3.2 Constructor summary

`TriCheckLitmusBaseListener()`

### 2.3.3 Method summary

`enterAssignment(TriCheckLitmusParser.AssignmentContext)`  
`enterCondition(TriCheckLitmusParser.ConditionContext)`  
`enterEveryRule(ParserRuleContext)`  
`enterLine(TriCheckLitmusParser.LineContext)`  
`enterLitmus(TriCheckLitmusParser.LitmusContext)`  
`enterPreliminary(TriCheckLitmusParser.PreliminaryContext)`  
`enterThread(TriCheckLitmusParser.ThreadContext)`  
`enterThreads(TriCheckLitmusParser.ThreadsContext)`  
`enterVariables(TriCheckLitmusParser.VariablesContext)`  
`exitAssignment(TriCheckLitmusParser.AssignmentContext)`  
`exitCondition(TriCheckLitmusParser.ConditionContext)`  
`exitEveryRule(ParserRuleContext)`  
`exitLine(TriCheckLitmusParser.LineContext)`  
`exitLitmus(TriCheckLitmusParser.LitmusContext)`  
`exitPreliminary(TriCheckLitmusParser.PreliminaryContext)`  
`exitThread(TriCheckLitmusParser.ThreadContext)`  
`exitThreads(TriCheckLitmusParser.ThreadsContext)`  
`exitVariables(TriCheckLitmusParser.VariablesContext)`  
`visitErrorNode(ErrorNode)`  
`visitTerminal(TerminalNode)`

### 2.3.4 Constructors

- `TriCheckLitmusBaseListener`

```
public TriCheckLitmusBaseListener()
```

### 2.3.5 Methods

- `enterAssignment`

```
public void enterAssignment(TriCheckLitmusParser.
    AssignmentContext ctx)
```

– **Description**

The default implementation does nothing.

- `enterCondition`

```
public void enterCondition( TriCheckLitmusParser . ConditionContext
                           ctx )
```

– **Description**

The default implementation does nothing.

• **enterEveryRule**

```
public void enterEveryRule( ParserRuleContext ctx )
```

– **Description**

The default implementation does nothing.

• **enterLine**

```
public void enterLine( TriCheckLitmusParser . LineContext ctx )
```

– **Description**

The default implementation does nothing.

• **enterLitmus**

```
public void enterLitmus( TriCheckLitmusParser . LitmusContext ctx )
```

– **Description**

The default implementation does nothing.

• **enterPreliminary**

```
public void enterPreliminary( TriCheckLitmusParser .
                              PreliminaryContext ctx )
```

– **Description**

The default implementation does nothing.

• **enterThread**

```
public void enterThread( TriCheckLitmusParser . ThreadContext ctx )
```

– **Description**

The default implementation does nothing.

- **enterThreads**

```
public void enterThreads(TriCheckLitmusParser.ThreadsContext ctx
)
```

- **Description**

The default implementation does nothing.

- **enterVariables**

```
public void enterVariables(TriCheckLitmusParser.VariablesContext
ctx)
```

- **Description**

The default implementation does nothing.

- **exitAssignment**

```
public void exitAssignment(TriCheckLitmusParser.
AssignmentContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitCondition**

```
public void exitCondition(TriCheckLitmusParser.ConditionContext
ctx)
```

- **Description**

The default implementation does nothing.

- **exitEveryRule**

```
public void exitEveryRule(ParserRuleContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitLine**

```
public void exitLine(TriCheckLitmusParser.LineContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitLitmus**

```
public void exitLitmus(TriCheckLitmusParser.LitmusContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitPreliminary**

```
public void exitPreliminary(TriCheckLitmusParser.
    PreliminaryContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitThread**

```
public void exitThread(TriCheckLitmusParser.ThreadContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitThreads**

```
public void exitThreads(TriCheckLitmusParser.ThreadsContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitVariables**

```
public void exitVariables(TriCheckLitmusParser.VariablesContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **visitErrorNode**

```
public void visitErrorNode(ErrorNode node)
```



- **Description**

The default implementation does nothing.

- **visitTerminal**

```
public void visitTerminal(TerminalNode node)
```

- **Description**

The default implementation does nothing.

## 2.4 Class TriCheckLitmusBaseVisitor

This class provides an empty implementation of `TriCheckLitmusVisitor`, which can be extended to create a visitor which only needs to handle a subset of the available methods.

### 2.4.1 Declaration

```
public class TriCheckLitmusBaseVisitor
    extends <any> implements TriCheckLitmusVisitor
```

### 2.4.2 Constructor summary

```
TriCheckLitmusBaseVisitor()
```

### 2.4.3 Method summary

```
visitAssignment(TriCheckLitmusParser.AssignmentContext)
visitCondition(TriCheckLitmusParser.ConditionContext)
visitLine(TriCheckLitmusParser.LineContext)
visitLitmus(TriCheckLitmusParser.LitmusContext)
visitPreliminary(TriCheckLitmusParser.PreliminaryContext)
visitThread(TriCheckLitmusParser.ThreadContext)
visitThreads(TriCheckLitmusParser.ThreadsContext)
visitVariables(TriCheckLitmusParser.VariablesContext)
```

### 2.4.4 Constructors

- **TriCheckLitmusBaseVisitor**

```
public TriCheckLitmusBaseVisitor()
```

### 2.4.5 Methods

- **visitAssignment**

```
public java.lang.Object visitAssignment (TriCheckLitmusParser.  
    AssignmentContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitCondition**

```
public java.lang.Object visitCondition (TriCheckLitmusParser.  
    ConditionContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitLine**

```
public java.lang.Object visitLine (TriCheckLitmusParser.  
    LineContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitLitmus**

```
public java.lang.Object visitLitmus (TriCheckLitmusParser.  
    LitmusContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitPreliminary**

```
public java.lang.Object visitPreliminary (TriCheckLitmusParser.  
    PreliminaryContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitThread**

```
public java.lang.Object visitThread(TriCheckLitmusParser.  
    ThreadContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitThreads**

```
public java.lang.Object visitThreads(TriCheckLitmusParser.  
    ThreadsContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

- **visitVariables**

```
public java.lang.Object visitVariables(TriCheckLitmusParser.  
    VariablesContext ctx)
```

- **Description**

The default implementation returns the result of calling `TriCheckLitmusBaseVisitor` on `ctx`.

## 2.5 Class `TriCheckLitmusLexer`

### 2.5.1 Declaration

```
public class TriCheckLitmusLexer  
    extends Lexer
```

### 2.5.2 Field summary

`_ATN`  
`_decisionToDFA`  
`_serializedATN`  
`_sharedContextCache`  
`ACQUIRE`  
`ASSIGN`  
`COMMA`  
`EXISTS`  
`LBRACE`  
`LBRACKET`  
`LCURLY`  
`LINE_COMMENT`  
`LOAD`  
`MO`  
`modeNames`  
`NEWLINE`  
`NUMBERS`  
`RBRACE`  
`RBRACKET`  
`RCURLY`  
`RELAXED`  
`RELEASE`  
`RICHER`  
`RICTEXT`  
`ruleNames`  
`SEMICOLON`  
`SEQ_CST`  
`STORE`  
`tokenNames`  
`VOCABULARY`  
`WHITESPACE`

### 2.5.3 Constructor summary

`TriCheckLitmusLexer(CharStream)`

### 2.5.4 Method summary

`getATN()`  
`getGrammarFileName()`  
`getModeNames()`  
`getRuleNames()`  
`getSerializedATN()`  
`getTokenNames()`  
`getVocabulary()`

### 2.5.5 Fields

- protected static final DFA[] **\_decisionToDFA**
- protected static final PredictionContextCache **\_sharedContextCache**
- public static final int **LINE\_COMMENT**
- public static final int **NUMBERS**
- public static final int **COMMA**
- public static final int **LCURLY**
- public static final int **RCURLY**
- public static final int **LBRACKET**
- public static final int **RBRACKET**
- public static final int **LBRACE**
- public static final int **RBRACE**
- public static final int **SEMICOLON**
- public static final int **ASSIGN**
- public static final int **LOAD**
- public static final int **STORE**
- public static final int **MO**
- public static final int **EXISTS**
- public static final int **RELEASE**
- public static final int **RELAXED**
- public static final int **ACQUIRE**
- public static final int **SEQ\_CST**
- public static final int **RICHTEXT**
- public static final int **RICHER**
- public static final int **WHITESPACE**
- public static final int **NEWLINE**
- public static java.lang.String[] **modeNames**
- public static final java.lang.String[] **ruleNames**
- public static final Vocabulary **VOCABULARY**

- `public static final java.lang.String[] tokenNames`
- `public static final java.lang.String _serializedATN`
- `public static final ATN _ATN`

### 2.5.6 Constructors

- **TriCheckLitmusLexer**

```
public TriCheckLitmusLexer(CharStream input)
```

### 2.5.7 Methods

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getModeNames**

```
public java.lang.String [] getModeNames()
```

- **getRuleNames**

```
public java.lang.String [] getRuleNames()
```

- **getSerializedATN**

```
public java.lang.String getSerializedATN()
```

- **getTokenNames**

```
public java.lang.String [] getTokenNames()
```

- **getVocabulary**

```
public Vocabulary getVocabulary()
```

## 2.6 Class TriCheckLitmusParser

### 2.6.1 Declaration

```
public class TriCheckLitmusParser
  extends Parser
```

### 2.6.2 Field summary

```
_ATN
_decisionToDFA
_serializedATN
_sharedContextCache
ACQUIRE
ASSIGN
COMMA
EXISTS
LBRACE
LBRACKET
LCURLY
LINE_COMMENT
LOAD
MO
NEWLINE
NUMBERS
RBRACE
RBRACKET
RCURLY
RELAXED
RELEASE
RICHER
RICHTEXT
RULE_assignment
RULE_condition
RULE_line
RULE_litmus
RULE_preliminary
RULE_thread
RULE_threads
RULE_variables
ruleNames
SEMICOLON
SEQ_CST
STORE
tokenNames
VOCABULARY
```

**WHITESPACE****2.6.3 Constructor summary****TriCheckLitmusParser(TokenStream)****2.6.4 Method summary**

**assignment()**  
**condition()**  
**getATN()**  
**getGrammarFileName()**  
**getRuleNames()**  
**getSerializedATN()**  
**getTokenNames()**  
**getVocabulary()**  
**line()**  
**litmus()**  
**preliminary()**  
**thread()**  
**threads()**  
**variables()**

**2.6.5 Fields**

- **protected static final DFA[] \_decisionToDFA**
- **protected static final PredictionContextCache \_sharedContextCache**
- **public static final int LINE\_COMMENT**
- **public static final int NUMBERS**
- **public static final int COMMA**
- **public static final int LCURLY**
- **public static final int RCURLY**
- **public static final int LBRACKET**
- **public static final int RBRACKET**
- **public static final int LBRACE**
- **public static final int RBRACE**
- **public static final int SEMICOLON**
- **public static final int ASSIGN**
- **public static final int LOAD**



- `public static final int STORE`
- `public static final int MO`
- `public static final int EXISTS`
- `public static final int RELEASE`
- `public static final int RELAXED`
- `public static final int ACQUIRE`
- `public static final int SEQ_CST`
- `public static final int RICHTEXT`
- `public static final int RICHER`
- `public static final int WHITESPACE`
- `public static final int NEWLINE`
- `public static final int RULE_litmus`
- `public static final int RULE_preliminary`
- `public static final int RULE_variables`
- `public static final int RULE_threads`
- `public static final int RULE_condition`
- `public static final int RULE_assignment`
- `public static final int RULE_thread`
- `public static final int RULE_line`
- `public static final java.lang.String[] ruleNames`
- `public static final Vocabulary VOCABULARY`
- `public static final java.lang.String[] tokenNames`
- `public static final java.lang.String _serializedATN`
- `public static final ATN _ATN`

### 2.6.6 Constructors

- `TriCheckLitmusParser`

```
public TriCheckLitmusParser(TokenStream input)
```

### 2.6.7 Methods

- **assignment**

```
public final TriCheckLitmusParser.AssignmentContext assignment()  
    throws RecognitionException
```

- **condition**

```
public final TriCheckLitmusParser.ConditionContext condition()  
    throws RecognitionException
```

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getRuleNames**

```
public java.lang.String [] getRuleNames()
```

- **getSerializedATN**

```
public java.lang.String getSerializedATN()
```

- **getTokenNames**

```
public java.lang.String [] getTokenNames()
```

- **getVocabulary**

```
public Vocabulary getVocabulary()
```

- **line**

```
public final TriCheckLitmusParser.LineContext line() throws  
    RecognitionException
```

- **litmus**

```
public final TriCheckLitmusParser.LitmusContext litmus() throws
    RecognitionException
```

- preliminary

```
public final TriCheckLitmusParser.PreliminaryContext preliminary
    () throws RecognitionException
```

- thread

```
public final TriCheckLitmusParser.ThreadContext thread() throws
    RecognitionException
```

- threads

```
public final TriCheckLitmusParser.ThreadsContext threads()
    throws RecognitionException
```

- variables

```
public final TriCheckLitmusParser.VariablesContext variables()
    throws RecognitionException
```

## 2.7 Class TriCheckLitmusParser.AssignmentContext

### 2.7.1 Declaration

```
public static class TriCheckLitmusParser.AssignmentContext
    extends ParserRuleContext
```

### 2.7.2 Constructor summary

```
AssignmentContext(ParserRuleContext, int)
```

### 2.7.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
LBRACKET()
NEWLINE()
NEWLINE(int)
```

```
NUMBERS()  
RBRACKET()  
RICHTEXT()  
WHITESPACE()  
WHITESPACE(int)
```

#### 2.7.4 Constructors

- **AssignmentContext**

```
public AssignmentContext(ParserRuleContext parent, int  
    invokingState)
```

#### 2.7.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **LBRACKET**

```
public TerminalNode LBRACKET()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **NUMBERS**

```
public TerminalNode NUMBERS()
```

- **RBRACKET**

```
public TerminalNode RBRACKET()
```

- **RICHTEXT**

```
public TerminalNode RICHTEXT()
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 2.8 Class `TriCheckLitmusParser.ConditionContext`

### 2.8.1 Declaration

```
public static class TriCheckLitmusParser.ConditionContext
    extends ParserRuleContext
```

### 2.8.2 Constructor summary

```
ConditionContext(ParserRuleContext, int)
```

### 2.8.3 Method summary

```
accept()
ASSIGN()
ASSIGN(int)
enterRule(ParseTreeListener)
EXISTS()
exitRule(ParseTreeListener)
getRuleIndex()
LBRACE()
NEWLINE()
NEWLINE(int)
```

```
NUMBERS()
NUMBERS(int)
RBRACE()
RICHER()
RICHER(int)
RICTEXT()
RICTEXT(int)
WHITESPACE()
WHITESPACE(int)
```

#### 2.8.4 Constructors

- **ConditionContext**

```
public ConditionContext(ParserRuleContext parent, int
    invokingState)
```

#### 2.8.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **ASSIGN**

```
public java.util.List ASSIGN()
```

- **ASSIGN**

```
public TerminalNode ASSIGN(int i)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **EXISTS**

```
public TerminalNode EXISTS()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **LBRACE**

```
public TerminalNode LBRACE()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **NUMBERS**

```
public java.util.List NUMBERS()
```

- **NUMBERS**

```
public TerminalNode NUMBERS(int i)
```

- **RBRACE**

```
public TerminalNode RBRACE()
```

- **RICHER**

```
public java.util.List RICHER()
```

- **RICHER**

```
public TerminalNode RICHER(int i)
```

- **RICHTEXT**

```
public java.util.List RICHTEXT()
```

- **RICHTEXT**

```
public TerminalNode RICHTEXT(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 2.9 Class TriCheckLitmusParser.LineContext

### 2.9.1 Declaration

```
public static class TriCheckLitmusParser.LineContext
    extends ParserRuleContext
```

### 2.9.2 Constructor summary

```
LineContext(ParserRuleContext, int)
```

### 2.9.3 Method summary

```
accept()
ACQUIRE()
COMMA()
COMMA(int)
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
LBRACE()
LOAD()
NEWLINE()
NEWLINE(int)
NUMBERS()
RBRACE()
RELAXED()
RELEASE()
RICHTEXT()
RICHTEXT(int)
SEMICOLON()
SEQ_CST()
STORE()
WHITESPACE()
WHITESPACE(int)
```



### 2.9.4 Constructors

- **LineContext**

```
public LineContext(ParserRuleContext parent, int invokingState)
```

### 2.9.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **ACQUIRE**

```
public TerminalNode ACQUIRE()
```

- **COMMA**

```
public java.util.List COMMA()
```

- **COMMA**

```
public TerminalNode COMMA(int i)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **LBRACE**

```
public TerminalNode LBRACE()
```

- **LOAD**

```
public TerminalNode LOAD()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **NUMBERS**

```
public TerminalNode NUMBERS()
```

- **RBRACE**

```
public TerminalNode RBRACE()
```

- **RELAXED**

```
public TerminalNode RELAXED()
```

- **RELEASE**

```
public TerminalNode RELEASE()
```

- **RICHTEXT**

```
public java.util.List RICHTEXT()
```

- **RICHTEXT**

```
public TerminalNode RICHTEXT(int i)
```

- **SEMICOLON**

```
public TerminalNode SEMICOLON()
```

- **SEQ\_CST**

```
public TerminalNode SEQ_CST()
```

- **STORE**

```
public TerminalNode STORE()
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 2.10 Class `TriCheckLitmusParser.LitmusContext`

### 2.10.1 Declaration

```
public static class TriCheckLitmusParser.LitmusContext  
    extends ParserRuleContext
```

### 2.10.2 Constructor summary

```
LitmusContext(ParserRuleContext, int)
```

### 2.10.3 Method summary

```
accept()  
condition()  
enterRule(ParseTreeListener)  
EOF()  
exitRule(ParseTreeListener)  
getRuleIndex()  
preliminary()  
threads()  
variables()
```

### 2.10.4 Constructors

- **LitmusContext**

```
public LitmusContext(ParserRuleContext parent, int invokingState)
```

### 2.10.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **condition**

```
public TriCheckLitmusParser.ConditionContext condition()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **EOF**

```
public TerminalNode EOF()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **preliminary**

```
public TriCheckLitmusParser.PreliminaryContext preliminary()
```

- **threads**

```
public TriCheckLitmusParser.ThreadsContext threads()
```

- **variables**

```
public TriCheckLitmusParser.VariablesContext variables()
```

## 2.11 Class TriCheckLitmusParser.PreliminaryContext

### 2.11.1 Declaration

```
public static class TriCheckLitmusParser.PreliminaryContext  
    extends ParserRuleContext
```

### 2.11.2 Constructor summary

**PreliminaryContext(ParserRuleContext, int)**

### 2.11.3 Method summary

**accept()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**  
**NEWLINE()**  
**NEWLINE(int)**  
**RICHTEXT()**  
**RICHTEXT(int)**  
**WHITESPACE()**  
**WHITESPACE(int)**

### 2.11.4 Constructors

- **PreliminaryContext**

```
public PreliminaryContext(ParserRuleContext parent, int
    invokingState)
```

### 2.11.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **RICHTEXT**

```
public java.util.List RICHTEXT()
```

- **RICHTEXT**

```
public TerminalNode RICHTEXT(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 2.12 Class TriCheckLitmusParser.ThreadContext

### 2.12.1 Declaration

```
public static class TriCheckLitmusParser.ThreadContext
    extends ParserRuleContext
```

### 2.12.2 Constructor summary

```
ThreadContext(ParserRuleContext, int)
```

### 2.12.3 Method summary

```
accept()
COMMA()
COMMA(int)
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
LBRACE()
LCURLY()
line()
line(int)
```

```
NEWLINE()
NEWLINE(int)
RBRACE()
RCURLY()
RICHTEXT()
RICHTEXT(int)
WHITESPACE()
WHITESPACE(int)
```

#### 2.12.4 Constructors

- ThreadContext

```
public ThreadContext(ParserRuleContext parent, int invokingState)
```

#### 2.12.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- COMMA

```
public java.util.List COMMA()
```

- COMMA

```
public TerminalNode COMMA(int i)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- getRuleIndex

```
public int getRuleIndex()
```

- LBRACE

```
public TerminalNode LBRACE()
```

- **LCURLY**

```
public TerminalNode LCURLY()
```

- **line**

```
public java.util.List line()
```

- **line**

```
public TriCheckLitmusParser.LineContext line(int i)
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **RBRACE**

```
public TerminalNode RBRACE()
```

- **RCURLY**

```
public TerminalNode RCURLY()
```

- **RICHTEXT**

```
public java.util.List RICHTEXT()
```

- **RICHTEXT**

```
public TerminalNode RICHTEXT(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```



## 2.13 Class `TriCheckLitmusParser.ThreadsContext`

### 2.13.1 Declaration

```
public static class TriCheckLitmusParser.ThreadsContext  
    extends ParserRuleContext
```

### 2.13.2 Constructor summary

```
ThreadsContext(ParserRuleContext, int)
```

### 2.13.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
NEWLINE()  
NEWLINE(int)  
thread()  
thread(int)  
WHITESPACE()  
WHITESPACE(int)
```

### 2.13.4 Constructors

- `ThreadsContext`

```
public ThreadsContext(ParserRuleContext parent, int invokingState  
    )
```

### 2.13.5 Methods

- `accept`

```
public java.lang.Object accept(<any> visitor)
```

- `enterRule`

```
public void enterRule(ParseTreeListener listener)
```

- `exitRule`

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **thread**

```
public java.util.List thread()
```

- **thread**

```
public TriCheckLitmusParser.ThreadContext thread(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 2.14 Class TriCheckLitmusParser.VariablesContext

### 2.14.1 Declaration

```
public static class TriCheckLitmusParser.VariablesContext
    extends ParserRuleContext
```

### 2.14.2 Constructor summary

```
VariablesContext(ParserRuleContext, int)
```

### 2.14.3 Method summary

```

accept()
assignment()
assignment(int)
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
LCURLY()
NEWLINE()
NEWLINE(int)
RCURLY()
SEMICOLON()
SEMICOLON(int)
WHITESPACE()
WHITESPACE(int)

```

### 2.14.4 Constructors

- VariablesContext

```

public VariablesContext(ParserRuleContext parent, int
    invokingState)

```

### 2.14.5 Methods

- accept

```

public java.lang.Object accept(<any> visitor)

```

- assignment

```

public java.util.List assignment()

```

- assignment

```

public TriCheckLitmusParser.AssignmentContext assignment(int i)

```

- enterRule

```

public void enterRule(ParseTreeListener listener)

```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **LCURLY**

```
public TerminalNode LCURLY()
```

- **NEWLINE**

```
public java.util.List NEWLINE()
```

- **NEWLINE**

```
public TerminalNode NEWLINE(int i)
```

- **RCURLY**

```
public TerminalNode RCURLY()
```

- **SEMICOLON**

```
public java.util.List SEMICOLON()
```

- **SEMICOLON**

```
public TerminalNode SEMICOLON(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

# MCMEC Javadoc Documentation - module hu.bme.mit.mcmec.c2xta

Levente Bajczi

November 2, 2018

# Contents

# Chapter 1

## Package hu.bme.mit.mcmec.c2xta.c

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<b>MyCVisitor</b> ..... ??	
The type My c visitor.	

### 1.1 Class MyCVisitor

The type My c visitor.

#### 1.1.1 Declaration

```
public class MyCVisitor
extends hu.bme.mit.mcmec.c2xta.gen.CBaseVisitor
```

#### 1.1.2 Constructor summary

**MyCVisitor()** Instantiates a new My c visitor.

#### 1.1.3 Method summary

**toString()** To string string.

**visitBlockItem(CParser.BlockItemContext)** Visit block item object.

**visitDirectDeclarator(CParser.DirectDeclaratorContext)** Visit direct declarator object.

**visitExternalDeclaration(CParser.ExternalDeclarationContext)** Visit external declaration object.

**visitFunctionDefinition(CParser.FunctionDefinitionContext)** Visit function definition object.

**visitTypeQualifier(CParser.TypeQualifierContext)** Visit type qualifier object.

**visitTypeSpecifier(CParser.TypeSpecifierContext)** Visit type specifier object.

### 1.1.4 Constructors

- **MyCVisitor**

```
public MyCVisitor()
```

- **Description**

Instantiates a new My c visitor.

### 1.1.5 Methods

- **toString**

```
public java.lang.String toString()
```

- **Description**

To string string.

- **Returns** – the string

- **visitBlockItem**

```
public java.lang.Object visitBlockItem(hu.bme.mit.mcmecc2xta.gen.CParser.BlockItemContext ctx)
```

- **Description**

Visit block item object.

- **Parameters**

\* **ctx** – the ctx

- **Returns** – the object

- **visitDirectDeclarator**

```
public java.lang.Object visitDirectDeclarator(hu.bme.mit.mcmecc2xta.gen.CParser.DirectDeclaratorContext ctx)
```

- **Description**

Visit direct declarator object.

- **Parameters**

\* **ctx** – the ctx

- **Returns** – the object

- **visitExternalDeclaration**



```
public java.lang.Object visitExternalDeclaration(hu.bme.mit.mcmecc2xta.gen.CParser.ExternalDeclarationContext ctx)
```

– **Description**

Visit external declaration object.

– **Parameters**

\* **ctx** – the ctx

– **Returns** – the object

• **visitFunctionDefinition**

```
public java.lang.Object visitFunctionDefinition(hu.bme.mit.mcmecc2xta.gen.CParser.FunctionDefinitionContext ctx)
```

– **Description**

Visit function definition object.

– **Parameters**

\* **ctx** – the ctx

– **Returns** – the object

• **visitTypeQualifier**

```
public java.lang.Object visitTypeQualifier(hu.bme.mit.mcmecc2xta.gen.CParser.TypeQualifierContext ctx)
```

– **Description**

Visit type qualifier object.

– **Parameters**

\* **ctx** – the ctx

– **Returns** – the object

• **visitTypeSpecifier**

```
public java.lang.Object visitTypeSpecifier(hu.bme.mit.mcmecc2xta.gen.CParser.TypeSpecifierContext ctx)
```

– **Description**

Visit type specifier object.

– **Parameters**

\* **ctx** – the ctx

– **Returns** – the object

### 1.1.6 Members inherited from class CBaseVisitor

hu.bme.mit.mcmech.c2xta.gen.CBaseVisitor

- public Object visitAbstractDeclarator(CParser.AbstractDeclaratorContext ctx)
- public Object visitAdditiveExpression(CParser.AdditiveExpressionContext ctx)
- public Object visitAlignmentSpecifier(CParser.AlignmentSpecifierContext ctx)
- public Object visitAndExpression(CParser.AndExpressionContext ctx)
- public Object visitArgumentExpressionList(CParser.ArgumentExpressionListContext ctx)
- public Object visitAssignmentExpression(CParser.AssignmentExpressionContext ctx)
- public Object visitAssignmentOperator(CParser.AssignmentOperatorContext ctx)
- public Object visitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext ctx)
- public Object visitBlockItem(CParser.BlockItemContext ctx)
- public Object visitBlockItemList(CParser.BlockItemListContext ctx)
- public Object visitCastExpression(CParser.CastExpressionContext ctx)
- public Object visitCompilationUnit(CParser.CompilationUnitContext ctx)
- public Object visitCompoundStatement(CParser.CompoundStatementContext ctx)
- public Object visitConditionalExpression(CParser.ConditionalExpressionContext ctx)
- public Object visitConstantExpression(CParser.ConstantExpressionContext ctx)
- public Object visitDeclaration(CParser.DeclarationContext ctx)
- public Object visitDeclarationList(CParser.DeclarationListContext ctx)
- public Object visitDeclarationSpecifier(CParser.DeclarationSpecifierContext ctx)
- public Object visitDeclarationSpecifiers(CParser.DeclarationSpecifiersContext ctx)
- public Object visitDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context ctx)
- public Object visitDeclarator(CParser.DeclaratorContext ctx)
- public Object visitDesignation(CParser.DesignationContext ctx)
- public Object visitDesignator(CParser.DesignatorContext ctx)
- public Object visitDesignatorList(CParser.DesignatorListContext ctx)
- public Object visitDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext ctx)
- public Object visitDirectDeclarator(CParser.DirectDeclaratorContext ctx)
- public Object visitEnumerationConstant(CParser.EnumerationConstantContext ctx)
- public Object visitEnumerator(CParser.EnumeratorContext ctx)
- public Object visitEnumeratorList(CParser.EnumeratorListContext ctx)
- public Object visitEnumSpecifier(CParser.EnumSpecifierContext ctx)
- public Object visitEqualityExpression(CParser.EqualityExpressionContext ctx)
- public Object visitExclusiveOrExpression(CParser.ExclusiveOrExpressionContext ctx)
- public Object visitExpression(CParser.ExpressionContext ctx)
- public Object visitExpressionStatement(CParser.ExpressionStatementContext ctx)
- public Object visitExternalDeclaration(CParser.ExternalDeclarationContext ctx)
- public Object visitForCondition(CParser.ForConditionContext ctx)
- public Object visitForDeclaration(CParser.ForDeclarationContext ctx)
- public Object visitForExpression(CParser.ForExpressionContext ctx)
- public Object visitFunctionDefinition(CParser.FunctionDefinitionContext ctx)
- public Object visitFunctionSpecifier(CParser.FunctionSpecifierContext ctx)
- public Object visitGccAttribute(CParser.GccAttributeContext ctx)
- public Object visitGccAttributeList(CParser.GccAttributeListContext ctx)
- public Object visitGccAttributeSpecifier(CParser.GccAttributeSpecifierContext ctx)
- public Object visitGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext ctx)
- public Object visitGenericAssociation(CParser.GenericAssociationContext ctx)
- public Object visitGenericAssocList(CParser.GenericAssocListContext ctx)
- public Object visitGenericSelection(CParser.GenericSelectionContext ctx)

- public Object visitIdentifierList(CParser.IdentifierListContext ctx)
- public Object visitInclusiveOrExpression(CParser.InclusiveOrExpressionContext ctx)
- public Object visitInitDeclarator(CParser.InitDeclaratorContext ctx)
- public Object visitInitDeclaratorList(CParser.InitDeclaratorListContext ctx)
- public Object visitInitializer(CParser.InitializerContext ctx)
- public Object visitInitializerList(CParser.InitializerListContext ctx)
- public Object visitIterationStatement(CParser.IterationStatementContext ctx)
- public Object visitJumpStatement(CParser.JumpStatementContext ctx)
- public Object visitLabeledStatement(CParser.LabeledStatementContext ctx)
- public Object visitLogicalAndExpression(CParser.LogicalAndExpressionContext ctx)
- public Object visitLogicalOrExpression(CParser.LogicalOrExpressionContext ctx)
- public Object visitMultiplicativeExpression(CParser.MultiplicativeExpressionContext ctx)
- public Object visitNestedParenthesesBlock(CParser.NestedParenthesesBlockContext ctx)
- public Object visitParameterDeclaration(CParser.ParameterDeclarationContext ctx)
- public Object visitParameterList(CParser.ParameterListContext ctx)
- public Object visitParameterTypeList(CParser.ParameterTypeListContext ctx)
- public Object visitPointer(CParser.PointerContext ctx)
- public Object visitPostfixExpression(CParser.PostfixExpressionContext ctx)
- public Object visitPrimaryExpression(CParser.PrimaryExpressionContext ctx)
- public Object visitRelationalExpression(CParser.RelationalExpressionContext ctx)
- public Object visitSelectionStatement(CParser.SelectionStatementContext ctx)
- public Object visitShiftExpression(CParser.ShiftExpressionContext ctx)
- public Object visitSpecifierQualifierList(CParser.SpecifierQualifierListContext ctx)
- public Object visitStatement(CParser.StatementContext ctx)
- public Object visitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext ctx)
- public Object visitStorageClassSpecifier(CParser.StorageClassSpecifierContext ctx)
- public Object visitStructDeclaration(CParser.StructDeclarationContext ctx)
- public Object visitStructDeclarationList(CParser.StructDeclarationListContext ctx)
- public Object visitStructDeclarator(CParser.StructDeclaratorContext ctx)
- public Object visitStructDeclaratorList(CParser.StructDeclaratorListContext ctx)
- public Object visitStructOrUnion(CParser.StructOrUnionContext ctx)
- public Object visitStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext ctx)
- public Object visitTranslationUnit(CParser.TranslationUnitContext ctx)
- public Object visitTypedefName(CParser.TypedefNameContext ctx)
- public Object visitTypeName(CParser.TypeNameContext ctx)
- public Object visitTypeQualifier(CParser.TypeQualifierContext ctx)
- public Object visitTypeQualifierList(CParser.TypeQualifierListContext ctx)
- public Object visitTypeSpecifier(CParser.TypeSpecifierContext ctx)
- public Object visitUnaryExpression(CParser.UnaryExpressionContext ctx)
- public Object visitUnaryOperator(CParser.UnaryOperatorContext ctx)

## Chapter 2

### Package

### hu.bme.mit.mcmec.c2xta.gen

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## 2.1 Interface CListener

This interface defines a complete listener for a parse tree produced by `CParser` .

### 2.1.1 Declaration

```
public interface CListener
```

### 2.1.2 All known subinterfaces

```
CBaseListener
```

### 2.1.3 All classes known to implement interface

```
CBaseListener
```



### 2.1.4 Method summary

**enterAbstractDeclarator(CParser.AbstractDeclaratorContext)** Enter a parse tree produced by `abstractDeclarator()` .

**enterAdditiveExpression(CParser.AdditiveExpressionContext)** Enter a parse tree produced by `additiveExpression()` .

**enterAlignmentSpecifier(CParser.AlignmentSpecifierContext)** Enter a parse tree produced by `alignmentSpecifier()` .

**enterAndExpression(CParser.AndExpressionContext)** Enter a parse tree produced by `andExpression()` .

**enterArgumentExpressionList(CParser.ArgumentExpressionListContext)** Enter a parse tree produced by `argumentExpressionList()` .

**enterAssignmentExpression(CParser.AssignmentExpressionContext)** Enter a parse tree produced by `assignmentExpression()` .

**enterAssignmentOperator(CParser.AssignmentOperatorContext)** Enter a parse tree produced by `assignmentOperator()` .

**enterAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)** Enter a parse tree produced by `atomicTypeSpecifier()` .

**enterBlockItem(CParser.BlockItemContext)** Enter a parse tree produced by `blockItem()` .

**enterBlockItemList(CParser.BlockItemListContext)** Enter a parse tree produced by `blockItemList()` .

**enterCastExpression(CParser.CastExpressionContext)** Enter a parse tree produced by `castExpression()` .

**enterCompilationUnit(CParser.CompilationUnitContext)** Enter a parse tree produced by `compilationUnit()` .

**enterCompoundStatement(CParser.CompoundStatementContext)** Enter a parse tree produced by `compoundStatement()` .

**enterConditionalExpression(CParser.ConditionalExpressionContext)** Enter a parse tree produced by `conditionalExpression()` .

**enterConstantExpression(CParser.ConstantExpressionContext)** Enter a parse tree produced by `constantExpression()` .

**enterDeclaration(CParser.DeclarationContext)** Enter a parse tree produced by `declaration()` .

**enterDeclarationList(CParser.DeclarationListContext)** Enter a parse tree produced by `declarationList()` .

**enterDeclarationSpecifier(CParser.DeclarationSpecifierContext)** Enter a parse tree produced by `declarationSpecifier()` .

**enterDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)** Enter a parse tree produced by `declarationSpecifiers()` .

**enterDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)** Enter a parse tree produced by `declarationSpecifiers2()` .

**enterDeclarator(CParser.DeclaratorContext)** Enter a parse tree produced by `declarator()` .

**enterDesignation(CParser.DesignationContext)** Enter a parse tree produced by `designation()` .

**enterDesignator(CParser.DesignatorContext)** Enter a parse tree produced by

**designator()** .  
**enterDesignatorList(CParser.DesignatorListContext)** Enter a parse tree produced by **designatorList()** .  
**enterDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)** Enter a parse tree produced by **directAbstractDeclarator()** .  
**enterDirectDeclarator(CParser.DirectDeclaratorContext)** Enter a parse tree produced by **directDeclarator()** .  
**enterEnumerationConstant(CParser.EnumerationConstantContext)** Enter a parse tree produced by **enumerationConstant()** .  
**enterEnumerator(CParser.EnumeratorContext)** Enter a parse tree produced by **enumerator()** .  
**enterEnumeratorList(CParser.EnumeratorListContext)** Enter a parse tree produced by **enumeratorList()** .  
**enterEnumSpecifier(CParser.EnumSpecifierContext)** Enter a parse tree produced by **enumSpecifier()** .  
**enterEqualityExpression(CParser.EqualityExpressionContext)** Enter a parse tree produced by **equalityExpression()** .  
**enterExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)** Enter a parse tree produced by **exclusiveOrExpression()** .  
**enterExpression(CParser.ExpressionContext)** Enter a parse tree produced by **expression()** .  
**enterExpressionStatement(CParser.ExpressionStatementContext)** Enter a parse tree produced by **expressionStatement()** .  
**enterExternalDeclaration(CParser.ExternalDeclarationContext)** Enter a parse tree produced by **externalDeclaration()** .  
**enterForCondition(CParser.ForConditionContext)** Enter a parse tree produced by **forCondition()** .  
**enterForDeclaration(CParser.ForDeclarationContext)** Enter a parse tree produced by **forDeclaration()** .  
**enterForExpression(CParser.ForExpressionContext)** Enter a parse tree produced by **forExpression()** .  
**enterFunctionDefinition(CParser.FunctionDefinitionContext)** Enter a parse tree produced by **functionDefinition()** .  
**enterFunctionSpecifier(CParser.FunctionSpecifierContext)** Enter a parse tree produced by **functionSpecifier()** .  
**enterGccAttribute(CParser.GccAttributeContext)** Enter a parse tree produced by **gccAttribute()** .  
**enterGccAttributeList(CParser.GccAttributeListContext)** Enter a parse tree produced by **gccAttributeList()** .  
**enterGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)** Enter a parse tree produced by **gccAttributeSpecifier()** .  
**enterGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)** Enter a parse tree produced by **gccDeclaratorExtension()** .  
**enterGenericAssociation(CParser.GenericAssociationContext)** Enter a parse tree produced by **genericAssociation()** .  
**enterGenericAssocList(CParser.GenericAssocListContext)** Enter a parse

tree produced by `genericAssocList()` .

**enterGenericSelection(CParser.GenericSelectionContext)** Enter a parse tree produced by `genericSelection()` .

**enterIdentifierList(CParser.IdentifierListContext)** Enter a parse tree produced by `identifierList()` .

**enterInclusiveOrExpression(CParser.InclusiveOrExpressionContext)** Enter a parse tree produced by `inclusiveOrExpression()` .

**enterInitDeclarator(CParser.InitDeclaratorContext)** Enter a parse tree produced by `initDeclarator()` .

**enterInitDeclaratorList(CParser.InitDeclaratorListContext)** Enter a parse tree produced by `initDeclaratorList()` .

**enterInitializer(CParser.InitializerContext)** Enter a parse tree produced by `initializer()` .

**enterInitializerList(CParser.InitializerListContext)** Enter a parse tree produced by `initializerList()` .

**enterIterationStatement(CParser.IterationStatementContext)** Enter a parse tree produced by `iterationStatement()` .

**enterJumpStatement(CParser.JumpStatementContext)** Enter a parse tree produced by `jumpStatement()` .

**enterLabeledStatement(CParser.LabeledStatementContext)** Enter a parse tree produced by `labeledStatement()` .

**enterLogicalAndExpression(CParser.LogicalAndExpressionContext)** Enter a parse tree produced by `logicalAndExpression()` .

**enterLogicalOrExpression(CParser.LogicalOrExpressionContext)** Enter a parse tree produced by `logicalOrExpression()` .

**enterMultiplicativeExpression(CParser.MultiplicativeExpressionContext)** Enter a parse tree produced by `multiplicativeExpression()` .

**enterNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)** Enter a parse tree produced by `nestedParenthesesBlock()` .

**enterParameterDeclaration(CParser.ParameterDeclarationContext)** Enter a parse tree produced by `parameterDeclaration()` .

**enterParameterList(CParser.ParameterListContext)** Enter a parse tree produced by `parameterList()` .

**enterParameterTypeList(CParser.ParameterTypeListContext)** Enter a parse tree produced by `parameterTypeList()` .

**enterPointer(CParser.PointerContext)** Enter a parse tree produced by `pointer()` .

**enterPostfixExpression(CParser.PostfixExpressionContext)** Enter a parse tree produced by `postfixExpression()` .

**enterPrimaryExpression(CParser.PrimaryExpressionContext)** Enter a parse tree produced by `primaryExpression()` .

**enterRelationalExpression(CParser.RelationalExpressionContext)** Enter a parse tree produced by `relationalExpression()` .

**enterSelectionStatement(CParser.SelectionStatementContext)** Enter a parse tree produced by `selectionStatement()` .

**enterShiftExpression(CParser.ShiftExpressionContext)** Enter a parse tree

produced by `shiftExpression()` .  
**enterSpecifierQualifierList(CParser.SpecifierQualifierListContext)** Enter a parse tree produced by `specifierQualifierList()` .  
**enterStatement(CParser.StatementContext)** Enter a parse tree produced by `statement()` .  
**enterStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)** Enter a parse tree produced by `staticAssertDeclaration()` .  
**enterStorageClassSpecifier(CParser.StorageClassSpecifierContext)** Enter a parse tree produced by `storageClassSpecifier()` .  
**enterStructDeclaration(CParser.StructDeclarationContext)** Enter a parse tree produced by `structDeclaration()` .  
**enterStructDeclarationList(CParser.StructDeclarationListContext)** Enter a parse tree produced by `structDeclarationList()` .  
**enterStructDeclarator(CParser.StructDeclaratorContext)** Enter a parse tree produced by `structDeclarator()` .  
**enterStructDeclaratorList(CParser.StructDeclaratorListContext)** Enter a parse tree produced by `structDeclaratorList()` .  
**enterStructOrUnion(CParser.StructOrUnionContext)** Enter a parse tree produced by `structOrUnion()` .  
**enterStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)** Enter a parse tree produced by `structOrUnionSpecifier()` .  
**enterTranslationUnit(CParser.TranslationUnitContext)** Enter a parse tree produced by `translationUnit()` .  
**enterTypedefName(CParser.TypedefNameContext)** Enter a parse tree produced by `typedefName()` .  
**enterTypeName(CParser.TypeNameContext)** Enter a parse tree produced by `typeName()` .  
**enterTypeQualifier(CParser.TypeQualifierContext)** Enter a parse tree produced by `typeQualifier()` .  
**enterTypeQualifierList(CParser.TypeQualifierListContext)** Enter a parse tree produced by `typeQualifierList()` .  
**enterTypeSpecifier(CParser.TypeSpecifierContext)** Enter a parse tree produced by `typeSpecifier()` .  
**enterUnaryExpression(CParser.UnaryExpressionContext)** Enter a parse tree produced by `unaryExpression()` .  
**enterUnaryOperator(CParser.UnaryOperatorContext)** Enter a parse tree produced by `unaryOperator()` .  
**exitAbstractDeclarator(CParser.AbstractDeclaratorContext)** Exit a parse tree produced by `abstractDeclarator()` .  
**exitAdditiveExpression(CParser.AdditiveExpressionContext)** Exit a parse tree produced by `additiveExpression()` .  
**exitAlignmentSpecifier(CParser.AlignmentSpecifierContext)** Exit a parse tree produced by `alignmentSpecifier()` .  
**exitAndExpression(CParser.AndExpressionContext)** Exit a parse tree produced by `andExpression()` .  
**exitArgumentExpressionList(CParser.ArgumentExpressionListContext)**

Exit a parse tree produced by `argumentExpressionList()` .

**exitAssignmentExpression(CParser.AssignmentExpressionContext)** Exit a parse tree produced by `assignmentExpression()` .

**exitAssignmentOperator(CParser.AssignmentOperatorContext)** Exit a parse tree produced by `assignmentOperator()` .

**exitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)** Exit a parse tree produced by `atomicTypeSpecifier()` .

**exitBlockItem(CParser.BlockItemContext)** Exit a parse tree produced by `blockItem()` .

**exitBlockItemList(CParser.BlockItemListContext)** Exit a parse tree produced by `blockItemList()` .

**exitCastExpression(CParser.CastExpressionContext)** Exit a parse tree produced by `castExpression()` .

**exitCompilationUnit(CParser.CompilationUnitContext)** Exit a parse tree produced by `compilationUnit()` .

**exitCompoundStatement(CParser.CompoundStatementContext)** Exit a parse tree produced by `compoundStatement()` .

**exitConditionalExpression(CParser.ConditionalExpressionContext)** Exit a parse tree produced by `conditionalExpression()` .

**exitConstantExpression(CParser.ConstantExpressionContext)** Exit a parse tree produced by `constantExpression()` .

**exitDeclaration(CParser.DeclarationContext)** Exit a parse tree produced by `declaration()` .

**exitDeclarationList(CParser.DeclarationListContext)** Exit a parse tree produced by `declarationList()` .

**exitDeclarationSpecifier(CParser.DeclarationSpecifierContext)** Exit a parse tree produced by `declarationSpecifier()` .

**exitDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)** Exit a parse tree produced by `declarationSpecifiers()` .

**exitDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)** Exit a parse tree produced by `declarationSpecifiers2()` .

**exitDeclarator(CParser.DeclaratorContext)** Exit a parse tree produced by `declarator()` .

**exitDesignation(CParser.DesignationContext)** Exit a parse tree produced by `designation()` .

**exitDesignator(CParser.DesignatorContext)** Exit a parse tree produced by `designator()` .

**exitDesignatorList(CParser.DesignatorListContext)** Exit a parse tree produced by `designatorList()` .

**exitDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)** Exit a parse tree produced by `directAbstractDeclarator()` .

**exitDirectDeclarator(CParser.DirectDeclaratorContext)** Exit a parse tree produced by `directDeclarator()` .

**exitEnumerationConstant(CParser.EnumerationConstantContext)** Exit a parse tree produced by `enumerationConstant()` .

**exitEnumerator(CParser.EnumeratorContext)** Exit a parse tree produced by

**enumerator()** .  
**exitEnumeratorList(CParser.EnumeratorListContext)** Exit a parse tree produced by `enumeratorList()` .  
**exitEnumSpecifier(CParser.EnumSpecifierContext)** Exit a parse tree produced by `enumSpecifier()` .  
**exitEqualityExpression(CParser.EqualityExpressionContext)** Exit a parse tree produced by `equalityExpression()` .  
**exitExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)** Exit a parse tree produced by `exclusiveOrExpression()` .  
**exitExpression(CParser.ExpressionContext)** Exit a parse tree produced by `expression()` .  
**exitExpressionStatement(CParser.ExpressionStatementContext)** Exit a parse tree produced by `expressionStatement()` .  
**exitExternalDeclaration(CParser.ExternalDeclarationContext)** Exit a parse tree produced by `externalDeclaration()` .  
**exitForCondition(CParser.ForConditionContext)** Exit a parse tree produced by `forCondition()` .  
**exitForDeclaration(CParser.ForDeclarationContext)** Exit a parse tree produced by `forDeclaration()` .  
**exitForExpression(CParser.ForExpressionContext)** Exit a parse tree produced by `forExpression()` .  
**exitFunctionDefinition(CParser.FunctionDefinitionContext)** Exit a parse tree produced by `functionDefinition()` .  
**exitFunctionSpecifier(CParser.FunctionSpecifierContext)** Exit a parse tree produced by `functionSpecifier()` .  
**exitGccAttribute(CParser.GccAttributeContext)** Exit a parse tree produced by `gccAttribute()` .  
**exitGccAttributeList(CParser.GccAttributeListContext)** Exit a parse tree produced by `gccAttributeList()` .  
**exitGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)** Exit a parse tree produced by `gccAttributeSpecifier()` .  
**exitGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)** Exit a parse tree produced by `gccDeclaratorExtension()` .  
**exitGenericAssociation(CParser.GenericAssociationContext)** Exit a parse tree produced by `genericAssociation()` .  
**exitGenericAssocList(CParser.GenericAssocListContext)** Exit a parse tree produced by `genericAssocList()` .  
**exitGenericSelection(CParser.GenericSelectionContext)** Exit a parse tree produced by `genericSelection()` .  
**exitIdentifierList(CParser.IdentifierListContext)** Exit a parse tree produced by `identifierList()` .  
**exitInclusiveOrExpression(CParser.InclusiveOrExpressionContext)** Exit a parse tree produced by `inclusiveOrExpression()` .  
**exitInitDeclarator(CParser.InitDeclaratorContext)** Exit a parse tree produced by `initDeclarator()` .  
**exitInitDeclaratorList(CParser.InitDeclaratorListContext)** Exit a parse

tree produced by `initDeclaratorList()` .

**exitInitializer(CParser.InitializerContext)** Exit a parse tree produced by `initializer()` .

**exitInitializerList(CParser.InitializerListContext)** Exit a parse tree produced by `initializerList()` .

**exitIterationStatement(CParser.IterationStatementContext)** Exit a parse tree produced by `iterationStatement()` .

**exitJumpStatement(CParser.JumpStatementContext)** Exit a parse tree produced by `jumpStatement()` .

**exitLabeledStatement(CParser.LabeledStatementContext)** Exit a parse tree produced by `labeledStatement()` .

**exitLogicalAndExpression(CParser.LogicalAndExpressionContext)** Exit a parse tree produced by `logicalAndExpression()` .

**exitLogicalOrExpression(CParser.LogicalOrExpressionContext)** Exit a parse tree produced by `logicalOrExpression()` .

**exitMultiplicativeExpression(CParser.MultiplicativeExpressionContext)** Exit a parse tree produced by `multiplicativeExpression()` .

**exitNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)** Exit a parse tree produced by `nestedParenthesesBlock()` .

**exitParameterDeclaration(CParser.ParameterDeclarationContext)** Exit a parse tree produced by `parameterDeclaration()` .

**exitParameterList(CParser.ParameterListContext)** Exit a parse tree produced by `parameterList()` .

**exitParameterTypeList(CParser.ParameterTypeListContext)** Exit a parse tree produced by `parameterTypeList()` .

**exitPointer(CParser.PointerContext)** Exit a parse tree produced by `pointer()` .

**exitPostfixExpression(CParser.PostfixExpressionContext)** Exit a parse tree produced by `postfixExpression()` .

**exitPrimaryExpression(CParser.PrimaryExpressionContext)** Exit a parse tree produced by `primaryExpression()` .

**exitRelationalExpression(CParser.RelationalExpressionContext)** Exit a parse tree produced by `relationalExpression()` .

**exitSelectionStatement(CParser.SelectionStatementContext)** Exit a parse tree produced by `selectionStatement()` .

**exitShiftExpression(CParser.ShiftExpressionContext)** Exit a parse tree produced by `shiftExpression()` .

**exitSpecifierQualifierList(CParser.SpecifierQualifierListContext)** Exit a parse tree produced by `specifierQualifierList()` .

**exitStatement(CParser.StatementContext)** Exit a parse tree produced by `statement()` .

**exitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)** Exit a parse tree produced by `staticAssertDeclaration()` .

**exitStorageClassSpecifier(CParser.StorageClassSpecifierContext)** Exit a parse tree produced by `storageClassSpecifier()` .

**exitStructDeclaration(CParser.StructDeclarationContext)** Exit a parse

tree produced by `structDeclaration()` .

**exitStructDeclarationList(CParser.StructDeclarationListContext)** Exit a parse tree produced by `structDeclarationList()` .

**exitStructDeclarator(CParser.StructDeclaratorContext)** Exit a parse tree produced by `structDeclarator()` .

**exitStructDeclaratorList(CParser.StructDeclaratorListContext)** Exit a parse tree produced by `structDeclaratorList()` .

**exitStructOrUnion(CParser.StructOrUnionContext)** Exit a parse tree produced by `structOrUnion()` .

**exitStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)** Exit a parse tree produced by `structOrUnionSpecifier()` .

**exitTranslationUnit(CParser.TranslationUnitContext)** Exit a parse tree produced by `translationUnit()` .

**exitTypedefName(CParser.TypedefNameContext)** Exit a parse tree produced by `typedefName()` .

**exitTypeName(CParser.TypeNameContext)** Exit a parse tree produced by `typeName()` .

**exitTypeQualifier(CParser.TypeQualifierContext)** Exit a parse tree produced by `typeQualifier()` .

**exitTypeQualifierList(CParser.TypeQualifierListContext)** Exit a parse tree produced by `typeQualifierList()` .

**exitTypeSpecifier(CParser.TypeSpecifierContext)** Exit a parse tree produced by `typeSpecifier()` .

**exitUnaryExpression(CParser.UnaryExpressionContext)** Exit a parse tree produced by `unaryExpression()` .

**exitUnaryOperator(CParser.UnaryOperatorContext)** Exit a parse tree produced by `unaryOperator()` .

### 2.1.5 Methods

- **enterAbstractDeclarator**

**void** `enterAbstractDeclarator(CParser.AbstractDeclaratorContext ctx)`

- **Description**

Enter a parse tree produced by `abstractDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterAdditiveExpression**

**void** `enterAdditiveExpression(CParser.AdditiveExpressionContext ctx)`



- **Description**

Enter a parse tree produced by `additiveExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterAlignmentSpecifier**

```
void enterAlignmentSpecifier(CParser.AlignmentSpecifierContext
    ctx)
```

- **Description**

Enter a parse tree produced by `alignmentSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterAndExpression**

```
void enterAndExpression(CParser.AndExpressionContext ctx)
```

- **Description**

Enter a parse tree produced by `andExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterArgumentExpressionList**

```
void enterArgumentExpressionList(CParser.
    ArgumentExpressionListContext ctx)
```

- **Description**

Enter a parse tree produced by `argumentExpressionList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterAssignmentExpression**

```
void enterAssignmentExpression(CParser.
    AssignmentExpressionContext ctx)
```

- **Description**

Enter a parse tree produced by `assignmentExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterAssignmentOperator**

```
void enterAssignmentOperator(CParser.AssignmentOperatorContext
    ctx)
```

- **Description**

- Enter a parse tree produced by `assignmentOperator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterAtomicTypeSpecifier**

```
void enterAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext
    ctx)
```

- **Description**

- Enter a parse tree produced by `atomicTypeSpecifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterBlockItem**

```
void enterBlockItem(CParser.BlockItemContext ctx)
```

- **Description**

- Enter a parse tree produced by `blockItem()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterBlockItemList**

```
void enterBlockItemList(CParser.BlockItemListContext ctx)
```

- **Description**

- Enter a parse tree produced by `blockItemList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterCastExpression**

```
void enterCastExpression ( CParser . CastExpressionContext ctx )
```

- **Description**

Enter a parse tree produced by `castExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterCompilationUnit**

```
void enterCompilationUnit ( CParser . CompilationUnitContext ctx )
```

- **Description**

Enter a parse tree produced by `compilationUnit()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterCompoundStatement**

```
void enterCompoundStatement ( CParser . CompoundStatementContext ctx
    )
```

- **Description**

Enter a parse tree produced by `compoundStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterConditionalExpression**

```
void enterConditionalExpression ( CParser .
    ConditionalExpressionContext ctx )
```

- **Description**

Enter a parse tree produced by `conditionalExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterConstantExpression**

```
void enterConstantExpression(CParser.ConstantExpressionContext
    ctx)
```

– **Description**

Enter a parse tree produced by `constantExpression()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterDeclaration**

```
void enterDeclaration(CParser.DeclarationContext ctx)
```

– **Description**

Enter a parse tree produced by `declaration()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterDeclarationList**

```
void enterDeclarationList(CParser.DeclarationListContext ctx)
```

– **Description**

Enter a parse tree produced by `declarationList()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterDeclarationSpecifier**

```
void enterDeclarationSpecifier(CParser.
    DeclarationSpecifierContext ctx)
```

– **Description**

Enter a parse tree produced by `declarationSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterDeclarationSpecifiers**

```
void enterDeclarationSpecifiers(CParser.
    DeclarationSpecifiersContext ctx)
```

- **Description**  
Enter a parse tree produced by `declarationSpecifiers()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterDeclarationSpecifiers2**

```
void enterDeclarationSpecifiers2(CParser.
    DeclarationSpecifiers2Context ctx)
```

- **Description**  
Enter a parse tree produced by `declarationSpecifiers2()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterDeclarator**

```
void enterDeclarator(CParser.DeclaratorContext ctx)
```

- **Description**  
Enter a parse tree produced by `declarator()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterDesignation**

```
void enterDesignation(CParser.DesignationContext ctx)
```

- **Description**  
Enter a parse tree produced by `designation()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterDesignator**

```
void enterDesignator(CParser.DesignatorContext ctx)
```

- **Description**  
Enter a parse tree produced by `designator()` .
- **Parameters**  
\* `ctx` – the parse tree

- **enterDesignatorList**

```
void enterDesignatorList ( CParser.DesignatorListContext ctx )
```

- **Description**

Enter a parse tree produced by `designatorList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterDirectAbstractDeclarator**

```
void enterDirectAbstractDeclarator ( CParser.DirectAbstractDeclaratorContext ctx )
```

- **Description**

Enter a parse tree produced by `directAbstractDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterDirectDeclarator**

```
void enterDirectDeclarator ( CParser.DirectDeclaratorContext ctx )
```

- **Description**

Enter a parse tree produced by `directDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterEnumerationConstant**

```
void enterEnumerationConstant ( CParser.EnumerationConstantContext ctx )
```

- **Description**

Enter a parse tree produced by `enumerationConstant()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterEnumerator**

```
void enterEnumerator ( CParser.EnumeratorContext ctx )
```

- **Description**

Enter a parse tree produced by `enumerator()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterEnumeratorList**

```
void enterEnumeratorList ( CParser . EnumeratorListContext ctx )
```

- **Description**

Enter a parse tree produced by `enumeratorList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterEnumSpecifier**

```
void enterEnumSpecifier ( CParser . EnumSpecifierContext ctx )
```

- **Description**

Enter a parse tree produced by `enumSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterEqualityExpression**

```
void enterEqualityExpression ( CParser . EqualityExpressionContext  
    ctx )
```

- **Description**

Enter a parse tree produced by `equalityExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterExclusiveOrExpression**

```
void enterExclusiveOrExpression ( CParser .  
    ExclusiveOrExpressionContext ctx )
```

- **Description**

Enter a parse tree produced by `exclusiveOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterExpression**

**void** enterExpression(CParser.ExpressionContext ctx)

- **Description**

Enter a parse tree produced by `expression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterExpressionStatement**

**void** enterExpressionStatement(CParser.ExpressionStatementContext ctx)

- **Description**

Enter a parse tree produced by `expressionStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterExternalDeclaration**

**void** enterExternalDeclaration(CParser.ExternalDeclarationContext ctx)

- **Description**

Enter a parse tree produced by `externalDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterForCondition**

**void** enterForCondition(CParser.ForConditionContext ctx)

- **Description**

Enter a parse tree produced by `forCondition()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterForDeclaration**



**void** enterForDeclaration ( CParser . ForDeclarationContext ctx )

– **Description**

Enter a parse tree produced by `forDeclaration()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterForExpression**

**void** enterForExpression ( CParser . ForExpressionContext ctx )

– **Description**

Enter a parse tree produced by `forExpression()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterFunctionDefinition**

**void** enterFunctionDefinition ( CParser . FunctionDefinitionContext  
ctx )

– **Description**

Enter a parse tree produced by `functionDefinition()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterFunctionSpecifier**

**void** enterFunctionSpecifier ( CParser . FunctionSpecifierContext ctx  
)

– **Description**

Enter a parse tree produced by `functionSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterGccAttribute**

**void** enterGccAttribute ( CParser . GccAttributeContext ctx )

– **Description**

Enter a parse tree produced by `gccAttribute()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterGccAttributeList**

```
void enterGccAttributeList(CParser.GccAttributeListContext ctx)
```

- **Description**

- Enter a parse tree produced by `gccAttributeList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterGccAttributeSpecifier**

```
void enterGccAttributeSpecifier(CParser.
    GccAttributeSpecifierContext ctx)
```

- **Description**

- Enter a parse tree produced by `gccAttributeSpecifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterGccDeclaratorExtension**

```
void enterGccDeclaratorExtension(CParser.
    GccDeclaratorExtensionContext ctx)
```

- **Description**

- Enter a parse tree produced by `gccDeclaratorExtension()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterGenericAssociation**

```
void enterGenericAssociation(CParser.GenericAssociationContext
    ctx)
```

- **Description**

- Enter a parse tree produced by `genericAssociation()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterGenericAssocList**

```
void enterGenericAssocList ( CParser.GenericAssocListContext ctx )
```

- **Description**

Enter a parse tree produced by `genericAssocList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterGenericSelection**

```
void enterGenericSelection ( CParser.GenericSelectionContext ctx )
```

- **Description**

Enter a parse tree produced by `genericSelection()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterIdentifierList**

```
void enterIdentifierList ( CParser.IdentifierListContext ctx )
```

- **Description**

Enter a parse tree produced by `identifierList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterInclusiveOrExpression**

```
void enterInclusiveOrExpression ( CParser.InclusiveOrExpressionContext ctx )
```

- **Description**

Enter a parse tree produced by `inclusiveOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterInitDeclarator**

```
void enterInitDeclarator ( CParser.InitDeclaratorContext ctx )
```

- **Description**

Enter a parse tree produced by `initDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterInitDeclaratorList**

```
void enterInitDeclaratorList(CParser.InitDeclaratorListContext
    ctx)
```

- **Description**

Enter a parse tree produced by `initDeclaratorList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterInitializer**

```
void enterInitializer(CParser.InitializerContext ctx)
```

- **Description**

Enter a parse tree produced by `initializer()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterInitializerList**

```
void enterInitializerList(CParser.InitializerListContext ctx)
```

- **Description**

Enter a parse tree produced by `initializerList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterIterationStatement**

```
void enterIterationStatement(CParser.IterationStatementContext
    ctx)
```

- **Description**

Enter a parse tree produced by `iterationStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterJumpStatement**

**void** enterJumpStatement(CParser.JumpStatementContext ctx)

- **Description**

Enter a parse tree produced by `jumpStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterLabeledStatement**

**void** enterLabeledStatement(CParser.LabeledStatementContext ctx)

- **Description**

Enter a parse tree produced by `labeledStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterLogicalAndExpression**

**void** enterLogicalAndExpression(CParser.  
LogicalAndExpressionContext ctx)

- **Description**

Enter a parse tree produced by `logicalAndExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterLogicalOrExpression**

**void** enterLogicalOrExpression(CParser.LogicalOrExpressionContext  
ctx)

- **Description**

Enter a parse tree produced by `logicalOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterMultiplicativeExpression**

```
void enterMultiplicativeExpression ( CParser .
    MultiplicativeExpressionContext ctx )
```

– **Description**

Enter a parse tree produced by `multiplicativeExpression()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterNestedParenthesesBlock**

```
void enterNestedParenthesesBlock ( CParser .
    NestedParenthesesBlockContext ctx )
```

– **Description**

Enter a parse tree produced by `nestedParenthesesBlock()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterParameterDeclaration**

```
void enterParameterDeclaration ( CParser .
    ParameterDeclarationContext ctx )
```

– **Description**

Enter a parse tree produced by `parameterDeclaration()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterParameterList**

```
void enterParameterList ( CParser . ParameterListContext ctx )
```

– **Description**

Enter a parse tree produced by `parameterList()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterParameterTypeList**

```
void enterParameterTypeList ( CParser . ParameterTypeListContext ctx
    )
```

- **Description**

Enter a parse tree produced by `parameterTypeList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterPointer**

```
void enterPointer(CParser.PointerContext ctx)
```

- **Description**

Enter a parse tree produced by `pointer()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterPostfixExpression**

```
void enterPostfixExpression(CParser.PostfixExpressionContext ctx
)
```

- **Description**

Enter a parse tree produced by `postfixExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterPrimaryExpression**

```
void enterPrimaryExpression(CParser.PrimaryExpressionContext ctx
)
```

- **Description**

Enter a parse tree produced by `primaryExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterRelationalExpression**

```
void enterRelationalExpression(CParser.
    RelationalExpressionContext ctx)
```

- **Description**

Enter a parse tree produced by `relationalExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterSelectionStatement**

```
void enterSelectionStatement(CParser.SelectionStatementContext
    ctx)
```

- **Description**

- Enter a parse tree produced by `selectionStatement()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterShiftExpression**

```
void enterShiftExpression(CParser.ShiftExpressionContext ctx)
```

- **Description**

- Enter a parse tree produced by `shiftExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterSpecifierQualifierList**

```
void enterSpecifierQualifierList(CParser.
    SpecifierQualifierListContext ctx)
```

- **Description**

- Enter a parse tree produced by `specifierQualifierList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterStatement**

```
void enterStatement(CParser.StatementContext ctx)
```

- **Description**

- Enter a parse tree produced by `statement()` .

- **Parameters**

- \* `ctx` – the parse tree



- **enterStaticAssertDeclaration**

```
void enterStaticAssertDeclaration(CParser.  
    StaticAssertDeclarationContext ctx)
```

- **Description**

Enter a parse tree produced by `staticAssertDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterStorageClassSpecifier**

```
void enterStorageClassSpecifier(CParser.  
    StorageClassSpecifierContext ctx)
```

- **Description**

Enter a parse tree produced by `storageClassSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterStructDeclaration**

```
void enterStructDeclaration(CParser.StructDeclarationContext ctx  
    )
```

- **Description**

Enter a parse tree produced by `structDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterStructDeclarationList**

```
void enterStructDeclarationList(CParser.  
    StructDeclarationListContext ctx)
```

- **Description**

Enter a parse tree produced by `structDeclarationList()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterStructDeclarator**

**void** enterStructDeclarator ( CParser . StructDeclaratorContext ctx )

– **Description**

Enter a parse tree produced by `structDeclarator()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterStructDeclaratorList**

**void** enterStructDeclaratorList ( CParser .  
StructDeclaratorListContext ctx )

– **Description**

Enter a parse tree produced by `structDeclaratorList()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterStructOrUnion**

**void** enterStructOrUnion ( CParser . StructOrUnionContext ctx )

– **Description**

Enter a parse tree produced by `structOrUnion()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterStructOrUnionSpecifier**

**void** enterStructOrUnionSpecifier ( CParser .  
StructOrUnionSpecifierContext ctx )

– **Description**

Enter a parse tree produced by `structOrUnionSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterTranslationUnit**

**void** enterTranslationUnit ( CParser . TranslationUnitContext ctx )

– **Description**

Enter a parse tree produced by `translationUnit()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterTypedefName**

```
void enterTypedefName( CParser.TypedefNameContext ctx )
```

- **Description**

- Enter a parse tree produced by `typedefName()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterTypeName**

```
void enterTypeName( CParser.TypeNameContext ctx )
```

- **Description**

- Enter a parse tree produced by `typeName()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterTypeQualifier**

```
void enterTypeQualifier( CParser.TypeQualifierContext ctx )
```

- **Description**

- Enter a parse tree produced by `typeQualifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterTypeQualifierList**

```
void enterTypeQualifierList( CParser.TypeQualifierListContext ctx )
```

- **Description**

- Enter a parse tree produced by `typeQualifierList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **enterTypeSpecifier**

**void** enterTypeSpecifier ( CParser . TypeSpecifierContext ctx )

– **Description**

Enter a parse tree produced by `typeSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterUnaryExpression**

**void** enterUnaryExpression ( CParser . UnaryExpressionContext ctx )

– **Description**

Enter a parse tree produced by `unaryExpression()` .

– **Parameters**

\* `ctx` – the parse tree

• **enterUnaryOperator**

**void** enterUnaryOperator ( CParser . UnaryOperatorContext ctx )

– **Description**

Enter a parse tree produced by `unaryOperator()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitAbstractDeclarator**

**void** exitAbstractDeclarator ( CParser . AbstractDeclaratorContext  
ctx )

– **Description**

Exit a parse tree produced by `abstractDeclarator()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitAdditiveExpression**

**void** exitAdditiveExpression ( CParser . AdditiveExpressionContext  
ctx )

– **Description**

Exit a parse tree produced by `additiveExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitAlignmentSpecifier**

```
void exitAlignmentSpecifier ( CParser . AlignmentSpecifierContext
                             ctx )
```

- **Description**

- Exit a parse tree produced by `alignmentSpecifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitAndExpression**

```
void exitAndExpression ( CParser . AndExpressionContext ctx )
```

- **Description**

- Exit a parse tree produced by `andExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitArgumentExpressionList**

```
void exitArgumentExpressionList ( CParser .
                                   ArgumentExpressionListContext ctx )
```

- **Description**

- Exit a parse tree produced by `argumentExpressionList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitAssignmentExpression**

```
void exitAssignmentExpression ( CParser .
                                 AssignmentExpressionContext ctx )
```

- **Description**

- Exit a parse tree produced by `assignmentExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitAssignmentOperator**

```
void exitAssignmentOperator(CParser.AssignmentOperatorContext
    ctx)
```

- **Description**

Exit a parse tree produced by `assignmentOperator()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitAtomicTypeSpecifier**

```
void exitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext
    ctx)
```

- **Description**

Exit a parse tree produced by `atomicTypeSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitBlockItem**

```
void exitBlockItem(CParser.BlockItemContext ctx)
```

- **Description**

Exit a parse tree produced by `blockItem()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitBlockItemList**

```
void exitBlockItemList(CParser.BlockItemListContext ctx)
```

- **Description**

Exit a parse tree produced by `blockItemList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitCastExpression**

```
void exitCastExpression(CParser.CastExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `castExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitCompilationUnit**

```
void exitCompilationUnit ( CParser.CompilationUnitContext ctx )
```

- **Description**

Exit a parse tree produced by `compilationUnit()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitCompoundStatement**

```
void exitCompoundStatement ( CParser.CompoundStatementContext ctx )
```

- **Description**

Exit a parse tree produced by `compoundStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitConditionalExpression**

```
void exitConditionalExpression ( CParser.
    ConditionalExpressionContext ctx )
```

- **Description**

Exit a parse tree produced by `conditionalExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitConstantExpression**

```
void exitConstantExpression ( CParser.ConstantExpressionContext
    ctx )
```

- **Description**

Exit a parse tree produced by `constantExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitDeclaration**

**void** exitDeclaration(CParser.DeclarationContext ctx)

- **Description**

Exit a parse tree produced by `declaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitDeclarationList**

**void** exitDeclarationList(CParser.DeclarationListContext ctx)

- **Description**

Exit a parse tree produced by `declarationList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitDeclarationSpecifier**

**void** exitDeclarationSpecifier(CParser.  
DeclarationSpecifierContext ctx)

- **Description**

Exit a parse tree produced by `declarationSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitDeclarationSpecifiers**

**void** exitDeclarationSpecifiers(CParser.  
DeclarationSpecifiersContext ctx)

- **Description**

Exit a parse tree produced by `declarationSpecifiers()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitDeclarationSpecifiers2**



```
void exitDeclarationSpecifiers2(CParser.
    DeclarationSpecifiers2Context ctx)
```

– **Description**

Exit a parse tree produced by `declarationSpecifiers2()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitDeclarator**

```
void exitDeclarator(CParser.DeclaratorContext ctx)
```

– **Description**

Exit a parse tree produced by `declarator()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitDesignation**

```
void exitDesignation(CParser.DesignationContext ctx)
```

– **Description**

Exit a parse tree produced by `designation()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitDesignator**

```
void exitDesignator(CParser.DesignatorContext ctx)
```

– **Description**

Exit a parse tree produced by `designator()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitDesignatorList**

```
void exitDesignatorList(CParser.DesignatorListContext ctx)
```

– **Description**

Exit a parse tree produced by `designatorList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitDirectAbstractDeclarator**

```
void exitDirectAbstractDeclarator ( CParser .
    DirectAbstractDeclaratorContext ctx )
```

- **Description**

- Exit a parse tree produced by `directAbstractDeclarator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitDirectDeclarator**

```
void exitDirectDeclarator ( CParser . DirectDeclaratorContext ctx )
```

- **Description**

- Exit a parse tree produced by `directDeclarator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitEnumerationConstant**

```
void exitEnumerationConstant ( CParser . EnumerationConstantContext
    ctx )
```

- **Description**

- Exit a parse tree produced by `enumerationConstant()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitEnumerator**

```
void exitEnumerator ( CParser . EnumeratorContext ctx )
```

- **Description**

- Exit a parse tree produced by `enumerator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitEnumeratorList**

```
void exitEnumeratorList ( CParser . EnumeratorListContext ctx )
```

- **Description**

Exit a parse tree produced by `enumeratorList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitEnumSpecifier**

```
void exitEnumSpecifier ( CParser . EnumSpecifierContext ctx )
```

- **Description**

Exit a parse tree produced by `enumSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitEqualityExpression**

```
void exitEqualityExpression ( CParser . EqualityExpressionContext  
ctx )
```

- **Description**

Exit a parse tree produced by `equalityExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitExclusiveOrExpression**

```
void exitExclusiveOrExpression ( CParser .  
ExclusiveOrExpressionContext ctx )
```

- **Description**

Exit a parse tree produced by `exclusiveOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitExpression**

```
void exitExpression ( CParser . ExpressionContext ctx )
```

- **Description**  
Exit a parse tree produced by `expression()` .

- **Parameters**  
\* `ctx` – the parse tree

- **exitExpressionStatement**

```
void exitExpressionStatement(CParser.ExpressionStatementContext
    ctx)
```

- **Description**  
Exit a parse tree produced by `expressionStatement()` .

- **Parameters**  
\* `ctx` – the parse tree

- **exitExternalDeclaration**

```
void exitExternalDeclaration(CParser.ExternalDeclarationContext
    ctx)
```

- **Description**  
Exit a parse tree produced by `externalDeclaration()` .

- **Parameters**  
\* `ctx` – the parse tree

- **exitForCondition**

```
void exitForCondition(CParser.ForConditionContext ctx)
```

- **Description**  
Exit a parse tree produced by `forCondition()` .

- **Parameters**  
\* `ctx` – the parse tree

- **exitForDeclaration**

```
void exitForDeclaration(CParser.ForDeclarationContext ctx)
```

- **Description**  
Exit a parse tree produced by `forDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitForExpression**

```
void exitForExpression(CParser.ForExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `forExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitFunctionDefinition**

```
void exitFunctionDefinition(CParser.FunctionDefinitionContext
    ctx)
```

- **Description**

Exit a parse tree produced by `functionDefinition()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitFunctionSpecifier**

```
void exitFunctionSpecifier(CParser.FunctionSpecifierContext ctx)
```

- **Description**

Exit a parse tree produced by `functionSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitGccAttribute**

```
void exitGccAttribute(CParser.GccAttributeContext ctx)
```

- **Description**

Exit a parse tree produced by `gccAttribute()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitGccAttributeList**

```
void exitGccAttributeList ( CParser . GccAttributeListContext ctx )
```

– **Description**

Exit a parse tree produced by `gccAttributeList()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitGccAttributeSpecifier**

```
void exitGccAttributeSpecifier ( CParser .  
    GccAttributeSpecifierContext ctx )
```

– **Description**

Exit a parse tree produced by `gccAttributeSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitGccDeclaratorExtension**

```
void exitGccDeclaratorExtension ( CParser .  
    GccDeclaratorExtensionContext ctx )
```

– **Description**

Exit a parse tree produced by `gccDeclaratorExtension()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitGenericAssociation**

```
void exitGenericAssociation ( CParser . GenericAssociationContext  
    ctx )
```

– **Description**

Exit a parse tree produced by `genericAssociation()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitGenericAssocList**

```
void exitGenericAssocList ( CParser . GenericAssocListContext ctx )
```

- **Description**

Exit a parse tree produced by `genericAssocList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitGenericSelection**

```
void exitGenericSelection ( CParser.GenericSelectionContext ctx )
```

- **Description**

Exit a parse tree produced by `genericSelection()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitIdentifierList**

```
void exitIdentifierList ( CParser.IdentifierListContext ctx )
```

- **Description**

Exit a parse tree produced by `identifierList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitInclusiveOrExpression**

```
void exitInclusiveOrExpression ( CParser.InclusiveOrExpressionContext ctx )
```

- **Description**

Exit a parse tree produced by `inclusiveOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitInitDeclarator**

```
void exitInitDeclarator ( CParser.InitDeclaratorContext ctx )
```

- **Description**

Exit a parse tree produced by `initDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitInitDeclaratorList**

```
void exitInitDeclaratorList(CParser.InitDeclaratorListContext
    ctx)
```

- **Description**

Exit a parse tree produced by `initDeclaratorList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitInitializer**

```
void exitInitializer(CParser.InitializerContext ctx)
```

- **Description**

Exit a parse tree produced by `initializer()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitInitializerList**

```
void exitInitializerList(CParser.InitializerListContext ctx)
```

- **Description**

Exit a parse tree produced by `initializerList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitIterationStatement**

```
void exitIterationStatement(CParser.IterationStatementContext
    ctx)
```

- **Description**

Exit a parse tree produced by `iterationStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitJumpStatement**

```
void exitJumpStatement(CParser.JumpStatementContext ctx)
```



- **Description**

Exit a parse tree produced by `jumpStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitLabeledStatement**

```
void exitLabeledStatement(CParser.LabeledStatementContext ctx)
```

- **Description**

Exit a parse tree produced by `labeledStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitLogicalAndExpression**

```
void exitLogicalAndExpression(CParser.
    LogicalAndExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `logicalAndExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitLogicalOrExpression**

```
void exitLogicalOrExpression(CParser.LogicalOrExpressionContext
    ctx)
```

- **Description**

Exit a parse tree produced by `logicalOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitMultiplicativeExpression**

```
void exitMultiplicativeExpression(CParser.
    MultiplicativeExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `multiplicativeExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitNestedParenthesesBlock**

```
void exitNestedParenthesesBlock(CParser.
    NestedParenthesesBlockContext ctx)
```

- **Description**

- Exit a parse tree produced by `nestedParenthesesBlock()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitParameterDeclaration**

```
void exitParameterDeclaration(CParser.
    ParameterDeclarationContext ctx)
```

- **Description**

- Exit a parse tree produced by `parameterDeclaration()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitParameterList**

```
void exitParameterList(CParser.ParameterListContext ctx)
```

- **Description**

- Exit a parse tree produced by `parameterList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitParameterTypeList**

```
void exitParameterTypeList(CParser.ParameterTypeListContext ctx)
```

- **Description**

- Exit a parse tree produced by `parameterTypeList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitPointer**

```
void exitPointer(CParser.PointerContext ctx)
```

- **Description**

Exit a parse tree produced by `pointer()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitPostfixExpression**

```
void exitPostfixExpression(CParser.PostfixExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `postfixExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitPrimaryExpression**

```
void exitPrimaryExpression(CParser.PrimaryExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `primaryExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitRelationalExpression**

```
void exitRelationalExpression(CParser.
    RelationalExpressionContext ctx)
```

- **Description**

Exit a parse tree produced by `relationalExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitSelectionStatement**

```
void exitSelectionStatement(CParser.SelectionStatementContext
    ctx)
```

- **Description**

Exit a parse tree produced by `selectionStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitShiftExpression**

```
void exitShiftExpression ( CParser.ShiftExpressionContext ctx )
```

- **Description**

Exit a parse tree produced by `shiftExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitSpecifierQualifierList**

```
void exitSpecifierQualifierList ( CParser.
    SpecifierQualifierListContext ctx )
```

- **Description**

Exit a parse tree produced by `specifierQualifierList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStatement**

```
void exitStatement ( CParser.StatementContext ctx )
```

- **Description**

Exit a parse tree produced by `statement()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStaticAssertDeclaration**

```
void exitStaticAssertDeclaration ( CParser.
    StaticAssertDeclarationContext ctx )
```

- **Description**

Exit a parse tree produced by `staticAssertDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStorageClassSpecifier**

```
void exitStorageClassSpecifier(CParser.
    StorageClassSpecifierContext ctx)
```

- **Description**

Exit a parse tree produced by `storageClassSpecifier()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStructDeclaration**

```
void exitStructDeclaration(CParser.StructDeclarationContext ctx)
```

- **Description**

Exit a parse tree produced by `structDeclaration()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStructDeclarationList**

```
void exitStructDeclarationList(CParser.
    StructDeclarationListContext ctx)
```

- **Description**

Exit a parse tree produced by `structDeclarationList()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStructDeclarator**

```
void exitStructDeclarator(CParser.StructDeclaratorContext ctx)
```

- **Description**

Exit a parse tree produced by `structDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitStructDeclaratorList**

```
void exitStructDeclaratorList ( CParser .
    StructDeclaratorListContext ctx )
```

– **Description**

Exit a parse tree produced by `structDeclaratorList()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitStructOrUnion**

```
void exitStructOrUnion ( CParser . StructOrUnionContext ctx )
```

– **Description**

Exit a parse tree produced by `structOrUnion()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitStructOrUnionSpecifier**

```
void exitStructOrUnionSpecifier ( CParser .
    StructOrUnionSpecifierContext ctx )
```

– **Description**

Exit a parse tree produced by `structOrUnionSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitTranslationUnit**

```
void exitTranslationUnit ( CParser . TranslationUnitContext ctx )
```

– **Description**

Exit a parse tree produced by `translationUnit()` .

– **Parameters**

\* `ctx` – the parse tree

• **exitTypedefName**

```
void exitTypedefName ( CParser . TypedefNameContext ctx )
```

– **Description**

Exit a parse tree produced by `typedefName()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitTypeName**

```
void exitTypeName(CParser.TypeNameContext ctx)
```

- **Description**

- Exit a parse tree produced by `typeName()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitTypeQualifier**

```
void exitTypeQualifier(CParser.TypeQualifierContext ctx)
```

- **Description**

- Exit a parse tree produced by `typeQualifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitTypeQualifierList**

```
void exitTypeQualifierList(CParser.TypeQualifierListContext ctx)
```

- **Description**

- Exit a parse tree produced by `typeQualifierList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitTypeSpecifier**

```
void exitTypeSpecifier(CParser.TypeSpecifierContext ctx)
```

- **Description**

- Exit a parse tree produced by `typeSpecifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **exitUnaryExpression**

```
void exitUnaryExpression ( CParser.UnaryExpressionContext ctx )
```

– **Description**

Exit a parse tree produced by unaryExpression() .

– **Parameters**

\* **ctx** – the parse tree

• **exitUnaryOperator**

```
void exitUnaryOperator ( CParser.UnaryOperatorContext ctx )
```

– **Description**

Exit a parse tree produced by unaryOperator() .

– **Parameters**

\* **ctx** – the parse tree

## 2.2 Interface CVisitor

This interface defines a complete generic visitor for a parse tree produced by CParser .

### 2.2.1 Declaration

```
public interface CVisitor
```

### 2.2.2 All known subinterfaces

MyCVisitor , CBaseVisitor

### 2.2.3 All classes known to implement interface

CBaseVisitor

### 2.2.4 Method summary

**visitAbstractDeclarator(CParser.AbstractDeclaratorContext)** Visit a parse tree produced by abstractDeclarator() .

**visitAdditiveExpression(CParser.AdditiveExpressionContext)** Visit a parse tree produced by additiveExpression() .

**visitAlignmentSpecifier(CParser.AlignmentSpecifierContext)** Visit a parse tree produced by alignmentSpecifier() .

**visitAndExpression(CParser.AndExpressionContext)** Visit a parse tree produced by andExpression() .

**visitArgumentExpressionList(CParser.ArgumentExpressionListContext)** Visit a parse tree produced by argumentExpressionList() .



**visitAssignmentExpression(CParser.AssignmentExpressionContext)**  
 Visit a parse tree produced by assignmentExpression() .

**visitAssignmentOperator(CParser.AssignmentOperatorContext)** Visit a  
 parse tree produced by assignmentOperator() .

**visitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)** Visit a  
 parse tree produced by atomicTypeSpecifier() .

**visitBlockItem(CParser.BlockItemContext)** Visit a parse tree produced by  
 blockItem() .

**visitBlockItemList(CParser.BlockItemListContext)** Visit a parse tree pro-  
 duced by blockItemList() .

**visitCastExpression(CParser.CastExpressionContext)** Visit a parse tree  
 produced by castExpression() .

**visitCompilationUnit(CParser.CompilationUnitContext)** Visit a parse tree  
 produced by compilationUnit() .

**visitCompoundStatement(CParser.CompoundStatementContext)** Visit a  
 parse tree produced by compoundStatement() .

**visitConditionalExpression(CParser.ConditionalExpressionContext)**  
 Visit a parse tree produced by conditionalExpression() .

**visitConstantExpression(CParser.ConstantExpressionContext)** Visit a  
 parse tree produced by constantExpression() .

**visitDeclaration(CParser.DeclarationContext)** Visit a parse tree produced by  
 declaration() .

**visitDeclarationList(CParser.DeclarationListContext)** Visit a parse tree pro-  
 duced by declarationList() .

**visitDeclarationSpecifier(CParser.DeclarationSpecifierContext)** Visit a  
 parse tree produced by declarationSpecifier() .

**visitDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)** Visit a  
 parse tree produced by declarationSpecifiers() .

**visitDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)** Visit  
 a parse tree produced by declarationSpecifiers2() .

**visitDeclarator(CParser.DeclaratorContext)** Visit a parse tree produced by  
 declarator() .

**visitDesignation(CParser.DesignationContext)** Visit a parse tree produced by  
 designation() .

**visitDesignator(CParser.DesignatorContext)** Visit a parse tree produced by  
 designator() .

**visitDesignatorList(CParser.DesignatorListContext)** Visit a parse tree pro-  
 duced by designatorList() .

**visitDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)**  
 Visit a parse tree produced by directAbstractDeclarator() .

**visitDirectDeclarator(CParser.DirectDeclaratorContext)** Visit a parse tree  
 produced by directDeclarator() .

**visitEnumerationConstant(CParser.EnumerationConstantContext)** Visit  
 a parse tree produced by enumerationConstant() .

**visitEnumerator(CParser.EnumeratorContext)** Visit a parse tree produced  
 by enumerator() .

**visitEnumeratorList(CParser.EnumeratorListContext)** Visit a parse tree produced by `enumeratorList()` .

**visitEnumSpecifier(CParser.EnumSpecifierContext)** Visit a parse tree produced by `enumSpecifier()` .

**visitEqualityExpression(CParser.EqualityExpressionContext)** Visit a parse tree produced by `equalityExpression()` .

**visitExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)** Visit a parse tree produced by `exclusiveOrExpression()` .

**visitExpression(CParser.ExpressionContext)** Visit a parse tree produced by `expression()` .

**visitExpressionStatement(CParser.ExpressionStatementContext)** Visit a parse tree produced by `expressionStatement()` .

**visitExternalDeclaration(CParser.ExternalDeclarationContext)** Visit a parse tree produced by `externalDeclaration()` .

**visitForCondition(CParser.ForConditionContext)** Visit a parse tree produced by `forCondition()` .

**visitForDeclaration(CParser.ForDeclarationContext)** Visit a parse tree produced by `forDeclaration()` .

**visitForExpression(CParser.ForExpressionContext)** Visit a parse tree produced by `forExpression()` .

**visitFunctionDefinition(CParser.FunctionDefinitionContext)** Visit a parse tree produced by `functionDefinition()` .

**visitFunctionSpecifier(CParser.FunctionSpecifierContext)** Visit a parse tree produced by `functionSpecifier()` .

**visitGccAttribute(CParser.GccAttributeContext)** Visit a parse tree produced by `gccAttribute()` .

**visitGccAttributeList(CParser.GccAttributeListContext)** Visit a parse tree produced by `gccAttributeList()` .

**visitGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)** Visit a parse tree produced by `gccAttributeSpecifier()` .

**visitGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)** Visit a parse tree produced by `gccDeclaratorExtension()` .

**visitGenericAssociation(CParser.GenericAssociationContext)** Visit a parse tree produced by `genericAssociation()` .

**visitGenericAssocList(CParser.GenericAssocListContext)** Visit a parse tree produced by `genericAssocList()` .

**visitGenericSelection(CParser.GenericSelectionContext)** Visit a parse tree produced by `genericSelection()` .

**visitIdentifierList(CParser.IdentifierListContext)** Visit a parse tree produced by `identifierList()` .

**visitInclusiveOrExpression(CParser.InclusiveOrExpressionContext)** Visit a parse tree produced by `inclusiveOrExpression()` .

**visitInitDeclarator(CParser.InitDeclaratorContext)** Visit a parse tree produced by `initDeclarator()` .

**visitInitDeclaratorList(CParser.InitDeclaratorListContext)** Visit a parse tree produced by `initDeclaratorList()` .

**visitInitializer(CParser.InitializerContext)** Visit a parse tree produced by `initializer()` .

**visitInitializerList(CParser.InitializerListContext)** Visit a parse tree produced by `initializerList()` .

**visitIterationStatement(CParser.IterationStatementContext)** Visit a parse tree produced by `iterationStatement()` .

**visitJumpStatement(CParser.JumpStatementContext)** Visit a parse tree produced by `jumpStatement()` .

**visitLabeledStatement(CParser.LabeledStatementContext)** Visit a parse tree produced by `labeledStatement()` .

**visitLogicalAndExpression(CParser.LogicalAndExpressionContext)** Visit a parse tree produced by `logicalAndExpression()` .

**visitLogicalOrExpression(CParser.LogicalOrExpressionContext)** Visit a parse tree produced by `logicalOrExpression()` .

**visitMultiplicativeExpression(CParser.MultiplicativeExpressionContext)** Visit a parse tree produced by `multiplicativeExpression()` .

**visitNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)** Visit a parse tree produced by `nestedParenthesesBlock()` .

**visitParameterDeclaration(CParser.ParameterDeclarationContext)** Visit a parse tree produced by `parameterDeclaration()` .

**visitParameterList(CParser.ParameterListContext)** Visit a parse tree produced by `parameterList()` .

**visitParameterTypeList(CParser.ParameterTypeListContext)** Visit a parse tree produced by `parameterTypeList()` .

**visitPointer(CParser.PointerContext)** Visit a parse tree produced by `pointer()` .

**visitPostfixExpression(CParser.PostfixExpressionContext)** Visit a parse tree produced by `postfixExpression()` .

**visitPrimaryExpression(CParser.PrimaryExpressionContext)** Visit a parse tree produced by `primaryExpression()` .

**visitRelationalExpression(CParser.RelationalExpressionContext)** Visit a parse tree produced by `relationalExpression()` .

**visitSelectionStatement(CParser.SelectionStatementContext)** Visit a parse tree produced by `selectionStatement()` .

**visitShiftExpression(CParser.ShiftExpressionContext)** Visit a parse tree produced by `shiftExpression()` .

**visitSpecifierQualifierList(CParser.SpecifierQualifierListContext)** Visit a parse tree produced by `specifierQualifierList()` .

**visitStatement(CParser.StatementContext)** Visit a parse tree produced by `statement()` .

**visitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)** Visit a parse tree produced by `staticAssertDeclaration()` .

**visitStorageClassSpecifier(CParser.StorageClassSpecifierContext)** Visit a parse tree produced by `storageClassSpecifier()` .

**visitStructDeclaration(CParser.StructDeclarationContext)** Visit a parse tree produced by `structDeclaration()` .

**visitStructDeclarationList(CParser.StructDeclarationListContext)** Visit a parse tree produced by `structDeclarationList()` .

**visitStructDeclarator(CParser.StructDeclaratorContext)** Visit a parse tree produced by `structDeclarator()` .

**visitStructDeclaratorList(CParser.StructDeclaratorListContext)** Visit a parse tree produced by `structDeclaratorList()` .

**visitStructOrUnion(CParser.StructOrUnionContext)** Visit a parse tree produced by `structOrUnion()` .

**visitStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)** Visit a parse tree produced by `structOrUnionSpecifier()` .

**visitTranslationUnit(CParser.TranslationUnitContext)** Visit a parse tree produced by `translationUnit()` .

**visitTypedefName(CParser.TypedefNameContext)** Visit a parse tree produced by `typedefName()` .

**visitTypeName(CParser.TypeNameContext)** Visit a parse tree produced by `typeName()` .

**visitTypeQualifier(CParser.TypeQualifierContext)** Visit a parse tree produced by `typeQualifier()` .

**visitTypeQualifierList(CParser.TypeQualifierListContext)** Visit a parse tree produced by `typeQualifierList()` .

**visitTypeSpecifier(CParser.TypeSpecifierContext)** Visit a parse tree produced by `typeSpecifier()` .

**visitUnaryExpression(CParser.UnaryExpressionContext)** Visit a parse tree produced by `unaryExpression()` .

**visitUnaryOperator(CParser.UnaryOperatorContext)** Visit a parse tree produced by `unaryOperator()` .

### 2.2.5 Methods

- **visitAbstractDeclarator**

```
java.lang.Object visitAbstractDeclarator(CParser.
    AbstractDeclaratorContext ctx)
```

- **Description**

Visit a parse tree produced by `abstractDeclarator()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitAdditiveExpression**

```
java.lang.Object visitAdditiveExpression(CParser.
    AdditiveExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `additiveExpression()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitAlignmentSpecifier**

```
java.lang.Object visitAlignmentSpecifier(CParser.
    AlignmentSpecifierContext ctx)
```

- **Description**  
Visit a parse tree produced by `alignmentSpecifier()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitAndExpression**

```
java.lang.Object visitAndExpression(CParser.AndExpressionContext
    ctx)
```

- **Description**  
Visit a parse tree produced by `andExpression()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitArgumentExpressionList**

```
java.lang.Object visitArgumentExpressionList(CParser.
    ArgumentExpressionListContext ctx)
```

- **Description**  
Visit a parse tree produced by `argumentExpressionList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitAssignmentExpression**

```
java.lang.Object visitAssignmentExpression(CParser.  
    AssignmentExpressionContext ctx)
```

– **Description**

Visit a parse tree produced by `assignmentExpression()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitAssignmentOperator**

```
java.lang.Object visitAssignmentOperator(CParser.  
    AssignmentOperatorContext ctx)
```

– **Description**

Visit a parse tree produced by `assignmentOperator()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitAtomicTypeSpecifier**

```
java.lang.Object visitAtomicTypeSpecifier(CParser.  
    AtomicTypeSpecifierContext ctx)
```

– **Description**

Visit a parse tree produced by `atomicTypeSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitBlockItem**

```
java.lang.Object visitBlockItem(CParser.BlockItemContext ctx)
```

– **Description**

Visit a parse tree produced by `blockItem()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

- **visitBlockItemList**

```
java.lang.Object visitBlockItemList(CParser.BlockItemListContext  
    ctx)
```

- **Description**

- Visit a parse tree produced by `blockItemList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitCastExpression**

```
java.lang.Object visitCastExpression(CParser.  
    CastExpressionContext ctx)
```

- **Description**

- Visit a parse tree produced by `castExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitCompilationUnit**

```
java.lang.Object visitCompilationUnit(CParser.  
    CompilationUnitContext ctx)
```

- **Description**

- Visit a parse tree produced by `compilationUnit()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitCompoundStatement**

```
java.lang.Object visitCompoundStatement(CParser.  
    CompoundStatementContext ctx)
```

- **Description**

- Visit a parse tree produced by `compoundStatement()` .

- **Parameters**

- \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitConditionalExpression**

```
java.lang.Object visitConditionalExpression(CParser.
    ConditionalExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `conditionalExpression()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitConstantExpression**

```
java.lang.Object visitConstantExpression(CParser.
    ConstantExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `constantExpression()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclaration**

```
java.lang.Object visitDeclaration(CParser.DeclarationContext ctx
    )
```

- **Description**  
Visit a parse tree produced by `declaration()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclarationList**

```
java.lang.Object visitDeclarationList(CParser.
    DeclarationListContext ctx)
```



- **Description**  
Visit a parse tree produced by `declarationList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclarationSpecifier**

```
java.lang.Object visitDeclarationSpecifier(CParser.  
    DeclarationSpecifierContext ctx)
```

- **Description**  
Visit a parse tree produced by `declarationSpecifier()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclarationSpecifiers**

```
java.lang.Object visitDeclarationSpecifiers(CParser.  
    DeclarationSpecifiersContext ctx)
```

- **Description**  
Visit a parse tree produced by `declarationSpecifiers()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclarationSpecifiers2**

```
java.lang.Object visitDeclarationSpecifiers2(CParser.  
    DeclarationSpecifiers2Context ctx)
```

- **Description**  
Visit a parse tree produced by `declarationSpecifiers2()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDeclarator**

```
java.lang.Object visitDeclarator(CParser.DeclaratorContext ctx)
```

- **Description**  
Visit a parse tree produced by `declarator()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDesignation**

```
java.lang.Object visitDesignation(CParser.DesignationContext ctx)
```

- **Description**  
Visit a parse tree produced by `designation()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDesignator**

```
java.lang.Object visitDesignator(CParser.DesignatorContext ctx)
```

- **Description**  
Visit a parse tree produced by `designator()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDesignatorList**

```
java.lang.Object visitDesignatorList(CParser.  
DesignatorListContext ctx)
```

- **Description**  
Visit a parse tree produced by `designatorList()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitDirectAbstractDeclarator**

```
java.lang.Object visitDirectAbstractDeclarator(CParser.  
    DirectAbstractDeclaratorContext ctx)
```

- **Description**

- Visit a parse tree produced by `directAbstractDeclarator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitDirectDeclarator**

```
java.lang.Object visitDirectDeclarator(CParser.  
    DirectDeclaratorContext ctx)
```

- **Description**

- Visit a parse tree produced by `directDeclarator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitEnumerationConstant**

```
java.lang.Object visitEnumerationConstant(CParser.  
    EnumerationConstantContext ctx)
```

- **Description**

- Visit a parse tree produced by `enumerationConstant()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitEnumerator**

```
java.lang.Object visitEnumerator(CParser.EnumeratorContext ctx)
```

- **Description**

- Visit a parse tree produced by `enumerator()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitEnumeratorList**

```
java.lang.Object visitEnumeratorList(CParser.  
    EnumeratorListContext ctx)
```

- **Description**  
Visit a parse tree produced by `enumeratorList()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitEnumSpecifier**

```
java.lang.Object visitEnumSpecifier(CParser.EnumSpecifierContext  
    ctx)
```

- **Description**  
Visit a parse tree produced by `enumSpecifier()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitEqualityExpression**

```
java.lang.Object visitEqualityExpression(CParser.  
    EqualityExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `equalityExpression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitExclusiveOrExpression**

```
java.lang.Object visitExclusiveOrExpression(CParser.  
    ExclusiveOrExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `exclusiveOrExpression()` .

- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitExpression**

```
java.lang.Object visitExpression(CParser.ExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `expression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitExpressionStatement**

```
java.lang.Object visitExpressionStatement(CParser.  
    ExpressionStatementContext ctx)
```

- **Description**  
Visit a parse tree produced by `expressionStatement()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitExternalDeclaration**

```
java.lang.Object visitExternalDeclaration(CParser.  
    ExternalDeclarationContext ctx)
```

- **Description**  
Visit a parse tree produced by `externalDeclaration()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitForCondition**

```
java.lang.Object visitForCondition(CParser.ForConditionContext  
    ctx)
```

- **Description**  
Visit a parse tree produced by `forCondition()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitForDeclaration**

```
java.lang.Object visitForDeclaration(CParser.  
    ForDeclarationContext ctx)
```

- **Description**  
Visit a parse tree produced by `forDeclaration()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitForExpression**

```
java.lang.Object visitForExpression(CParser.ForExpressionContext  
    ctx)
```

- **Description**  
Visit a parse tree produced by `forExpression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitFunctionDefinition**

```
java.lang.Object visitFunctionDefinition(CParser.  
    FunctionDefinitionContext ctx)
```

- **Description**  
Visit a parse tree produced by `functionDefinition()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitFunctionSpecifier**

```
java.lang.Object visitFunctionSpecifier(CParser.
    FunctionSpecifierContext ctx)
```

– **Description**

Visit a parse tree produced by `functionSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitGccAttribute**

```
java.lang.Object visitGccAttribute(CParser.GccAttributeContext
    ctx)
```

– **Description**

Visit a parse tree produced by `gccAttribute()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitGccAttributeList**

```
java.lang.Object visitGccAttributeList(CParser.
    GccAttributeListContext ctx)
```

– **Description**

Visit a parse tree produced by `gccAttributeList()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitGccAttributeSpecifier**

```
java.lang.Object visitGccAttributeSpecifier(CParser.
    GccAttributeSpecifierContext ctx)
```

– **Description**

Visit a parse tree produced by `gccAttributeSpecifier()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

- **visitGccDeclaratorExtension**

```
java.lang.Object visitGccDeclaratorExtension(CParser.  
    GccDeclaratorExtensionContext ctx)
```

- **Description**

- Visit a parse tree produced by `gccDeclaratorExtension()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitGenericAssociation**

```
java.lang.Object visitGenericAssociation(CParser.  
    GenericAssociationContext ctx)
```

- **Description**

- Visit a parse tree produced by `genericAssociation()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitGenericAssocList**

```
java.lang.Object visitGenericAssocList(CParser.  
    GenericAssocListContext ctx)
```

- **Description**

- Visit a parse tree produced by `genericAssocList()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitGenericSelection**

```
java.lang.Object visitGenericSelection(CParser.  
    GenericSelectionContext ctx)
```

- **Description**

- Visit a parse tree produced by `genericSelection()` .

- **Parameters**



- \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitIdentifierList**

```
java.lang.Object visitIdentifierList(CParser.
    IdentifierListContext ctx)
```

- **Description**  
Visit a parse tree produced by `identifierList()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitInclusiveOrExpression**

```
java.lang.Object visitInclusiveOrExpression(CParser.
    InclusiveOrExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `inclusiveOrExpression()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitInitDeclarator**

```
java.lang.Object visitInitDeclarator(CParser.
    InitDeclaratorContext ctx)
```

- **Description**  
Visit a parse tree produced by `initDeclarator()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitInitDeclaratorList**

```
java.lang.Object visitInitDeclaratorList(CParser.
    InitDeclaratorListContext ctx)
```

- **Description**  
Visit a parse tree produced by `initDeclaratorList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitInitializer**

```
java.lang.Object visitInitializer(CParser.InitializerContext ctx
)
```

- **Description**  
Visit a parse tree produced by `initializer()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitInitializerList**

```
java.lang.Object visitInitializerList(CParser.
    InitializerListContext ctx)
```

- **Description**  
Visit a parse tree produced by `initializerList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitIterationStatement**

```
java.lang.Object visitIterationStatement(CParser.
    IterationStatementContext ctx)
```

- **Description**  
Visit a parse tree produced by `iterationStatement()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitJumpStatement**

```
java.lang.Object visitJumpStatement(CParser.JumpStatementContext  
    ctx)
```

- **Description**

Visit a parse tree produced by `jumpStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitLabeledStatement**

```
java.lang.Object visitLabeledStatement(CParser.  
    LabeledStatementContext ctx)
```

- **Description**

Visit a parse tree produced by `labeledStatement()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitLogicalAndExpression**

```
java.lang.Object visitLogicalAndExpression(CParser.  
    LogicalAndExpressionContext ctx)
```

- **Description**

Visit a parse tree produced by `logicalAndExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitLogicalOrExpression**

```
java.lang.Object visitLogicalOrExpression(CParser.  
    LogicalOrExpressionContext ctx)
```

- **Description**

Visit a parse tree produced by `logicalOrExpression()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitMultiplicativeExpression**

```
java.lang.Object visitMultiplicativeExpression(CParser.  
    MultiplicativeExpressionContext ctx)
```

- **Description**

- Visit a parse tree produced by `multiplicativeExpression()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitNestedParenthesesBlock**

```
java.lang.Object visitNestedParenthesesBlock(CParser.  
    NestedParenthesesBlockContext ctx)
```

- **Description**

- Visit a parse tree produced by `nestedParenthesesBlock()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitParameterDeclaration**

```
java.lang.Object visitParameterDeclaration(CParser.  
    ParameterDeclarationContext ctx)
```

- **Description**

- Visit a parse tree produced by `parameterDeclaration()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitParameterList**

```
java.lang.Object visitParameterList(CParser.ParameterListContext  
    ctx)
```

- **Description**

- Visit a parse tree produced by `parameterList()` .

- **Parameters**

- \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitParameterTypeList**

```
java.lang.Object visitParameterTypeList(CParser.
    ParameterTypeListContext ctx)
```

- **Description**  
Visit a parse tree produced by `parameterTypeList()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitPointer**

```
java.lang.Object visitPointer(CParser.PointerContext ctx)
```

- **Description**  
Visit a parse tree produced by `pointer()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitPostfixExpression**

```
java.lang.Object visitPostfixExpression(CParser.
    PostfixExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `postfixExpression()`.
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitPrimaryExpression**

```
java.lang.Object visitPrimaryExpression(CParser.
    PrimaryExpressionContext ctx)
```

- **Description**  
Visit a parse tree produced by `primaryExpression()`.

- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitRelationalExpression**

```
java.lang.Object visitRelationalExpression(CParser.
    RelationalExpressionContext ctx)
```

- **Description**

Visit a parse tree produced by `relationalExpression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitSelectionStatement**

```
java.lang.Object visitSelectionStatement(CParser.
    SelectionStatementContext ctx)
```

- **Description**

Visit a parse tree produced by `selectionStatement()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitShiftExpression**

```
java.lang.Object visitShiftExpression(CParser.
    ShiftExpressionContext ctx)
```

- **Description**

Visit a parse tree produced by `shiftExpression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitSpecifierQualifierList**

```
java.lang.Object visitSpecifierQualifierList(CParser.
    SpecifierQualifierListContext ctx)
```

- **Description**  
Visit a parse tree produced by `specifierQualifierList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitStatement**

```
java.lang.Object visitStatement(CParser.StatementContext ctx)
```

- **Description**  
Visit a parse tree produced by `statement()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitStaticAssertDeclaration**

```
java.lang.Object visitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext ctx)
```

- **Description**  
Visit a parse tree produced by `staticAssertDeclaration()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitStorageClassSpecifier**

```
java.lang.Object visitStorageClassSpecifier(CParser.StorageClassSpecifierContext ctx)
```

- **Description**  
Visit a parse tree produced by `storageClassSpecifier()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitStructDeclaration**

```
java.lang.Object visitStructDeclaration(CParser.
    StructDeclarationContext ctx)
```

– **Description**

Visit a parse tree produced by `structDeclaration()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitStructDeclarationList**

```
java.lang.Object visitStructDeclarationList(CParser.
    StructDeclarationListContext ctx)
```

– **Description**

Visit a parse tree produced by `structDeclarationList()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitStructDeclarator**

```
java.lang.Object visitStructDeclarator(CParser.
    StructDeclaratorContext ctx)
```

– **Description**

Visit a parse tree produced by `structDeclarator()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result

• **visitStructDeclaratorList**

```
java.lang.Object visitStructDeclaratorList(CParser.
    StructDeclaratorListContext ctx)
```

– **Description**

Visit a parse tree produced by `structDeclaratorList()` .

– **Parameters**

\* `ctx` – the parse tree

– **Returns** – the visitor result



- **visitStructOrUnion**

```
java.lang.Object visitStructOrUnion(CParser.StructOrUnionContext  
    ctx)
```

- **Description**

- Visit a parse tree produced by `structOrUnion()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitStructOrUnionSpecifier**

```
java.lang.Object visitStructOrUnionSpecifier(CParser.  
    StructOrUnionSpecifierContext ctx)
```

- **Description**

- Visit a parse tree produced by `structOrUnionSpecifier()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitTranslationUnit**

```
java.lang.Object visitTranslationUnit(CParser.  
    TranslationUnitContext ctx)
```

- **Description**

- Visit a parse tree produced by `translationUnit()` .

- **Parameters**

- \* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitTypedefName**

```
java.lang.Object visitTypedefName(CParser.TypedefNameContext ctx  
    )
```

- **Description**

- Visit a parse tree produced by `typedefName()` .

- **Parameters**

- \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitTypeName**

```
java.lang.Object visitTypeName(CParser.TypeNameContext ctx)
```

- **Description**  
Visit a parse tree produced by `typeName()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitTypeQualifier**

```
java.lang.Object visitTypeQualifier(CParser.TypeQualifierContext  
    ctx)
```

- **Description**  
Visit a parse tree produced by `typeQualifier()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitTypeQualifierList**

```
java.lang.Object visitTypeQualifierList(CParser.  
    TypeQualifierListContext ctx)
```

- **Description**  
Visit a parse tree produced by `typeQualifierList()` .
- **Parameters**  
\* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitTypeSpecifier**

```
java.lang.Object visitTypeSpecifier(CParser.TypeSpecifierContext  
    ctx)
```

- **Description**  
Visit a parse tree produced by `typeSpecifier()` .

- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitUnaryExpression**

```
java.lang.Object visitUnaryExpression(CParser.
    UnaryExpressionContext ctx)
```

- **Description**

Visit a parse tree produced by `unaryExpression()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitUnaryOperator**

```
java.lang.Object visitUnaryOperator(CParser.UnaryOperatorContext
    ctx)
```

- **Description**

Visit a parse tree produced by `unaryOperator()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

## 2.3 Class CBaseListener

This class provides an empty implementation of `CListener` , which can be extended to create a listener which only needs to handle a subset of the available methods.

### 2.3.1 Declaration

```
public class CBaseListener
    extends java.lang.Object implements CListener
```

### 2.3.2 Constructor summary

```
CBaseListener()
```

### 2.3.3 Method summary

```

enterAbstractDeclarator(CParser.AbstractDeclaratorContext)
enterAdditiveExpression(CParser.AdditiveExpressionContext)
enterAlignmentSpecifier(CParser.AlignmentSpecifierContext)
enterAndExpression(CParser.AndExpressionContext)
enterArgumentExpressionList(CParser.ArgumentExpressionListContext)
enterAssignmentExpression(CParser.AssignmentExpressionContext)
enterAssignmentOperator(CParser.AssignmentOperatorContext)
enterAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)
enterBlockItem(CParser.BlockItemContext)
enterBlockItemList(CParser.BlockItemListContext)
enterCastExpression(CParser.CastExpressionContext)
enterCompilationUnit(CParser.CompilationUnitContext)
enterCompoundStatement(CParser.CompoundStatementContext)
enterConditionalExpression(CParser.ConditionalExpressionContext)
enterConstantExpression(CParser.ConstantExpressionContext)
enterDeclaration(CParser.DeclarationContext)
enterDeclarationList(CParser.DeclarationListContext)
enterDeclarationSpecifier(CParser.DeclarationSpecifierContext)
enterDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)
enterDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)
enterDeclarator(CParser.DeclaratorContext)
enterDesignation(CParser.DesignationContext)
enterDesignator(CParser.DesignatorContext)
enterDesignatorList(CParser.DesignatorListContext)
enterDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)
enterDirectDeclarator(CParser.DirectDeclaratorContext)
enterEnumerationConstant(CParser.EnumerationConstantContext)
enterEnumerator(CParser.EnumeratorContext)
enterEnumeratorList(CParser.EnumeratorListContext)
enterEnumSpecifier(CParser.EnumSpecifierContext)
enterEqualityExpression(CParser.EqualityExpressionContext)
enterEveryRule(ParserRuleContext)
enterExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)
enterExpression(CParser.ExpressionContext)
enterExpressionStatement(CParser.ExpressionStatementContext)
enterExternalDeclaration(CParser.ExternalDeclarationContext)
enterForCondition(CParser.ForConditionContext)
enterForDeclaration(CParser.ForDeclarationContext)
enterForExpression(CParser.ForExpressionContext)
enterFunctionDefinition(CParser.FunctionDefinitionContext)
enterFunctionSpecifier(CParser.FunctionSpecifierContext)
enterGccAttribute(CParser.GccAttributeContext)
enterGccAttributeList(CParser.GccAttributeListContext)
enterGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)
enterGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)

```

```

enterGenericAssociation(CParser.GenericAssociationContext)
enterGenericAssocList(CParser.GenericAssocListContext)
enterGenericSelection(CParser.GenericSelectionContext)
enterIdentifierList(CParser.IdentifierListContext)
enterInclusiveOrExpression(CParser.InclusiveOrExpressionContext)
enterInitDeclarator(CParser.InitDeclaratorContext)
enterInitDeclaratorList(CParser.InitDeclaratorListContext)
enterInitializer(CParser.InitializerContext)
enterInitializerList(CParser.InitializerListContext)
enterIterationStatement(CParser.IterationStatementContext)
enterJumpStatement(CParser.JumpStatementContext)
enterLabeledStatement(CParser.LabeledStatementContext)
enterLogicalAndExpression(CParser.LogicalAndExpressionContext)
enterLogicalOrExpression(CParser.LogicalOrExpressionContext)
enterMultiplicativeExpression(CParser.MultiplicativeExpressionContext)
enterNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)
enterParameterDeclaration(CParser.ParameterDeclarationContext)
enterParameterList(CParser.ParameterListContext)
enterParameterTypeList(CParser.ParameterTypeListContext)
enterPointer(CParser.PointerContext)
enterPostfixExpression(CParser.PostfixExpressionContext)
enterPrimaryExpression(CParser.PrimaryExpressionContext)
enterRelationalExpression(CParser.RelationalExpressionContext)
enterSelectionStatement(CParser.SelectionStatementContext)
enterShiftExpression(CParser.ShiftExpressionContext)
enterSpecifierQualifierList(CParser.SpecifierQualifierListContext)
enterStatement(CParser.StatementContext)
enterStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)
enterStorageClassSpecifier(CParser.StorageClassSpecifierContext)
enterStructDeclaration(CParser.StructDeclarationContext)
enterStructDeclarationList(CParser.StructDeclarationListContext)
enterStructDeclarator(CParser.StructDeclaratorContext)
enterStructDeclaratorList(CParser.StructDeclaratorListContext)
enterStructOrUnion(CParser.StructOrUnionContext)
enterStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)
enterTranslationUnit(CParser.TranslationUnitContext)
enterTypedefName(CParser.TypedefNameContext)
enterTypeName(CParser.TypeNameContext)
enterTypeQualifier(CParser.TypeQualifierContext)
enterTypeQualifierList(CParser.TypeQualifierListContext)
enterTypeSpecifier(CParser.TypeSpecifierContext)
enterUnaryExpression(CParser.UnaryExpressionContext)
enterUnaryOperator(CParser.UnaryOperatorContext)
exitAbstractDeclarator(CParser.AbstractDeclaratorContext)
exitAdditiveExpression(CParser.AdditiveExpressionContext)
exitAlignmentSpecifier(CParser.AlignmentSpecifierContext)

```

```

exitAndExpression(CParser.AndExpressionContext)
exitArgumentExpressionList(CParser.ArgumentExpressionListContext)
exitAssignmentExpression(CParser.AssignmentExpressionContext)
exitAssignmentOperator(CParser.AssignmentOperatorContext)
exitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)
exitBlockItem(CParser.BlockItemContext)
exitBlockItemList(CParser.BlockItemListContext)
exitCastExpression(CParser.CastExpressionContext)
exitCompilationUnit(CParser.CompilationUnitContext)
exitCompoundStatement(CParser.CompoundStatementContext)
exitConditionalExpression(CParser.ConditionalExpressionContext)
exitConstantExpression(CParser.ConstantExpressionContext)
exitDeclaration(CParser.DeclarationContext)
exitDeclarationList(CParser.DeclarationListContext)
exitDeclarationSpecifier(CParser.DeclarationSpecifierContext)
exitDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)
exitDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)
exitDeclarator(CParser.DeclaratorContext)
exitDesignation(CParser.DesignationContext)
exitDesignator(CParser.DesignatorContext)
exitDesignatorList(CParser.DesignatorListContext)
exitDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)
exitDirectDeclarator(CParser.DirectDeclaratorContext)
exitEnumerationConstant(CParser.EnumerationConstantContext)
exitEnumerator(CParser.EnumeratorContext)
exitEnumeratorList(CParser.EnumeratorListContext)
exitEnumSpecifier(CParser.EnumSpecifierContext)
exitEqualityExpression(CParser.EqualityExpressionContext)
exitEveryRule(ParserRuleContext)
exitExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)
exitExpression(CParser.ExpressionContext)
exitExpressionStatement(CParser.ExpressionStatementContext)
exitExternalDeclaration(CParser.ExternalDeclarationContext)
exitForCondition(CParser.ForConditionContext)
exitForDeclaration(CParser.ForDeclarationContext)
exitForExpression(CParser.ForExpressionContext)
exitFunctionDefinition(CParser.FunctionDefinitionContext)
exitFunctionSpecifier(CParser.FunctionSpecifierContext)
exitGccAttribute(CParser.GccAttributeContext)
exitGccAttributeList(CParser.GccAttributeListContext)
exitGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)
exitGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)
exitGenericAssociation(CParser.GenericAssociationContext)
exitGenericAssocList(CParser.GenericAssocListContext)
exitGenericSelection(CParser.GenericSelectionContext)
exitIdentifierList(CParser.IdentifierListContext)

```

```

exitInclusiveOrExpression(CParser.InclusiveOrExpressionContext)
exitInitDeclarator(CParser.InitDeclaratorContext)
exitInitDeclaratorList(CParser.InitDeclaratorListContext)
exitInitializer(CParser.InitializerContext)
exitInitializerList(CParser.InitializerListContext)
exitIterationStatement(CParser.IterationStatementContext)
exitJumpStatement(CParser.JumpStatementContext)
exitLabeledStatement(CParser.LabeledStatementContext)
exitLogicalAndExpression(CParser.LogicalAndExpressionContext)
exitLogicalOrExpression(CParser.LogicalOrExpressionContext)
exitMultiplicativeExpression(CParser.MultiplicativeExpressionContext)
exitNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)
exitParameterDeclaration(CParser.ParameterDeclarationContext)
exitParameterList(CParser.ParameterListContext)
exitParameterTypeList(CParser.ParameterTypeListContext)
exitPointer(CParser.PointerContext)
exitPostfixExpression(CParser.PostfixExpressionContext)
exitPrimaryExpression(CParser.PrimaryExpressionContext)
exitRelationalExpression(CParser.RelationalExpressionContext)
exitSelectionStatement(CParser.SelectionStatementContext)
exitShiftExpression(CParser.ShiftExpressionContext)
exitSpecifierQualifierList(CParser.SpecifierQualifierListContext)
exitStatement(CParser.StatementContext)
exitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)
exitStorageClassSpecifier(CParser.StorageClassSpecifierContext)
exitStructDeclaration(CParser.StructDeclarationContext)
exitStructDeclarationList(CParser.StructDeclarationListContext)
exitStructDeclarator(CParser.StructDeclaratorContext)
exitStructDeclaratorList(CParser.StructDeclaratorListContext)
exitStructOrUnion(CParser.StructOrUnionContext)
exitStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)
exitTranslationUnit(CParser.TranslationUnitContext)
exitTypedefName(CParser.TypedefNameContext)
exitTypeName(CParser.TypeNameContext)
exitTypeQualifier(CParser.TypeQualifierContext)
exitTypeQualifierList(CParser.TypeQualifierListContext)
exitTypeSpecifier(CParser.TypeSpecifierContext)
exitUnaryExpression(CParser.UnaryExpressionContext)
exitUnaryOperator(CParser.UnaryOperatorContext)
visitErrorNode(ErrorNode)
visitTerminal(TerminalNode)

```

### 2.3.4 Constructors

- CBaseListener

```
public CBaseListener()
```

### 2.3.5 Methods

- **enterAbstractDeclarator**

```
public void enterAbstractDeclarator(CParser.  
    AbstractDeclaratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterAdditiveExpression**

```
public void enterAdditiveExpression(CParser.  
    AdditiveExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterAlignmentSpecifier**

```
public void enterAlignmentSpecifier(CParser.  
    AlignmentSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterAndExpression**

```
public void enterAndExpression(CParser.AndExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterArgumentExpressionList**

```
public void enterArgumentExpressionList(CParser.  
    ArgumentExpressionListContext ctx)
```

- **Description**

The default implementation does nothing.



- **enterAssignmentExpression**

```
public void enterAssignmentExpression(CParser.  
    AssignmentExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterAssignmentOperator**

```
public void enterAssignmentOperator(CParser.  
    AssignmentOperatorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterAtomicTypeSpecifier**

```
public void enterAtomicTypeSpecifier(CParser.  
    AtomicTypeSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterBlockItem**

```
public void enterBlockItem(CParser.BlockItemContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterBlockItemList**

```
public void enterBlockItemList(CParser.BlockItemListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterCastExpression**

```
public void enterCastExpression(CParser.CastExpressionContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterCompilationUnit**

```
public void enterCompilationUnit(CParser.CompilationUnitContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterCompoundStatement**

```
public void enterCompoundStatement(CParser.
    CompoundStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterConditionalExpression**

```
public void enterConditionalExpression(CParser.
    ConditionalExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterConstantExpression**

```
public void enterConstantExpression(CParser.
    ConstantExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterDeclaration**

```
public void enterDeclaration(CParser.DeclarationContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterDeclarationList**

```
public void enterDeclarationList(CParser.DeclarationListContext  
    ctx)
```

– **Description**

The default implementation does nothing.

• **enterDeclarationSpecifier**

```
public void enterDeclarationSpecifier(CParser.  
    DeclarationSpecifierContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterDeclarationSpecifiers**

```
public void enterDeclarationSpecifiers(CParser.  
    DeclarationSpecifiersContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterDeclarationSpecifiers2**

```
public void enterDeclarationSpecifiers2(CParser.  
    DeclarationSpecifiers2Context ctx)
```

– **Description**

The default implementation does nothing.

• **enterDeclarator**

```
public void enterDeclarator(CParser.DeclaratorContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterDesignation**

```
public void enterDesignation(CParser.DesignationContext ctx)
```

– **Description**

The default implementation does nothing.

- **enterDesignator**

```
public void enterDesignator(CParser.DesignatorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterDesignatorList**

```
public void enterDesignatorList(CParser.DesignatorListContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterDirectAbstractDeclarator**

```
public void enterDirectAbstractDeclarator(CParser.  
    DirectAbstractDeclaratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterDirectDeclarator**

```
public void enterDirectDeclarator(CParser.  
    DirectDeclaratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterEnumerationConstant**

```
public void enterEnumerationConstant(CParser.  
    EnumerationConstantContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterEnumerator**

```
public void enterEnumerator(CParser.EnumeratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterEnumeratorList**

```
public void enterEnumeratorList ( CParser . EnumeratorListContext
                                ctx )
```

- **Description**

The default implementation does nothing.

- **enterEnumSpecifier**

```
public void enterEnumSpecifier ( CParser . EnumSpecifierContext ctx )
```

- **Description**

The default implementation does nothing.

- **enterEqualityExpression**

```
public void enterEqualityExpression ( CParser .
                                     EqualityExpressionContext ctx )
```

- **Description**

The default implementation does nothing.

- **enterEveryRule**

```
public void enterEveryRule ( ParserRuleContext ctx )
```

- **Description**

The default implementation does nothing.

- **enterExclusiveOrExpression**

```
public void enterExclusiveOrExpression ( CParser .
                                         ExclusiveOrExpressionContext ctx )
```

- **Description**

The default implementation does nothing.

- **enterExpression**

```
public void enterExpression(CParser.ExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterExpressionStatement**

```
public void enterExpressionStatement(CParser.
    ExpressionStatementContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterExternalDeclaration**

```
public void enterExternalDeclaration(CParser.
    ExternalDeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterForCondition**

```
public void enterForCondition(CParser.ForConditionContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterForDeclaration**

```
public void enterForDeclaration(CParser.ForDeclarationContext
    ctx)
```

– **Description**

The default implementation does nothing.

• **enterForExpression**

```
public void enterForExpression(CParser.ForExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

- **enterFunctionDefinition**

```
public void enterFunctionDefinition(CParser.  
    FunctionDefinitionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterFunctionSpecifier**

```
public void enterFunctionSpecifier(CParser.  
    FunctionSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGccAttribute**

```
public void enterGccAttribute(CParser.GccAttributeContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGccAttributeList**

```
public void enterGccAttributeList(CParser.  
    GccAttributeListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGccAttributeSpecifier**

```
public void enterGccAttributeSpecifier(CParser.  
    GccAttributeSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGccDeclaratorExtension**

```
public void enterGccDeclaratorExtension(CParser.  
    GccDeclaratorExtensionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGenericAssociation**

```
public void enterGenericAssociation(CParser.
    GenericAssociationContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGenericAssocList**

```
public void enterGenericAssocList(CParser.
    GenericAssocListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterGenericSelection**

```
public void enterGenericSelection(CParser.
    GenericSelectionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterIdentifierList**

```
public void enterIdentifierList(CParser.IdentifierListContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterInclusiveOrExpression**

```
public void enterInclusiveOrExpression(CParser.
    InclusiveOrExpressionContext ctx)
```

- **Description**

The default implementation does nothing.



- **enterInitDeclarator**

```
public void enterInitDeclarator(CParser.InitDeclaratorContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterInitDeclaratorList**

```
public void enterInitDeclaratorList(CParser.  
    InitDeclaratorListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterInitializer**

```
public void enterInitializer(CParser.InitializerContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterInitializerList**

```
public void enterInitializerList(CParser.InitializerListContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterIterationStatement**

```
public void enterIterationStatement(CParser.  
    IterationStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterJumpStatement**

```
public void enterJumpStatement(CParser.JumpStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterLabeledStatement**

```
public void enterLabeledStatement(CParser.
    LabeledStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterLogicalAndExpression**

```
public void enterLogicalAndExpression(CParser.
    LogicalAndExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterLogicalOrExpression**

```
public void enterLogicalOrExpression(CParser.
    LogicalOrExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterMultiplicativeExpression**

```
public void enterMultiplicativeExpression(CParser.
    MultiplicativeExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterNestedParenthesesBlock**

```
public void enterNestedParenthesesBlock(CParser.
    NestedParenthesesBlockContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterParameterDeclaration**

```
public void enterParameterDeclaration(CParser.  
    ParameterDeclarationContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterParameterList**

```
public void enterParameterList(CParser.ParameterListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterParameterTypeList**

```
public void enterParameterTypeList(CParser.  
    ParameterTypeListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterPointer**

```
public void enterPointer(CParser.PointerContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterPostfixExpression**

```
public void enterPostfixExpression(CParser.  
    PostfixExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterPrimaryExpression**

```
public void enterPrimaryExpression(CParser.  
    PrimaryExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterRelationalExpression**

```
public void enterRelationalExpression(CParser.
    RelationalExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterSelectionStatement**

```
public void enterSelectionStatement(CParser.
    SelectionStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterShiftExpression**

```
public void enterShiftExpression(CParser.ShiftExpressionContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterSpecifierQualifierList**

```
public void enterSpecifierQualifierList(CParser.
    SpecifierQualifierListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterStatement**

```
public void enterStatement(CParser.StatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterStaticAssertDeclaration**

```
public void enterStaticAssertDeclaration(CParser.  
    StaticAssertDeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterStorageClassSpecifier**

```
public void enterStorageClassSpecifier(CParser.  
    StorageClassSpecifierContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterStructDeclaration**

```
public void enterStructDeclaration(CParser.  
    StructDeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterStructDeclarationList**

```
public void enterStructDeclarationList(CParser.  
    StructDeclarationListContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterStructDeclarator**

```
public void enterStructDeclarator(CParser.  
    StructDeclaratorContext ctx)
```

– **Description**

The default implementation does nothing.

• **enterStructDeclaratorList**

```
public void enterStructDeclaratorList(CParser.  
    StructDeclaratorListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterStructOrUnion**

```
public void enterStructOrUnion(CParser.StructOrUnionContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterStructOrUnionSpecifier**

```
public void enterStructOrUnionSpecifier(CParser.  
StructOrUnionSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterTranslationUnit**

```
public void enterTranslationUnit(CParser.TranslationUnitContext  
ctx)
```

- **Description**

The default implementation does nothing.

- **enterTypedefName**

```
public void enterTypedefName(CParser.TypedefNameContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterTypeName**

```
public void enterTypeName(CParser.TypeNameContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterTypeQualifier**

```
public void enterTypeQualifier(CParser.TypeQualifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterTypeQualifierList**

```
public void enterTypeQualifierList(CParser.  
    TypeQualifierListContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterTypeSpecifier**

```
public void enterTypeSpecifier(CParser.TypeSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterUnaryExpression**

```
public void enterUnaryExpression(CParser.UnaryExpressionContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **enterUnaryOperator**

```
public void enterUnaryOperator(CParser.UnaryOperatorContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitAbstractDeclarator**

```
public void exitAbstractDeclarator(CParser.  
    AbstractDeclaratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitAdditiveExpression**

```
public void exitAdditiveExpression(CParser.
    AdditiveExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitAlignmentSpecifier**

```
public void exitAlignmentSpecifier(CParser.
    AlignmentSpecifierContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitAndExpression**

```
public void exitAndExpression(CParser.AndExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitArgumentExpressionList**

```
public void exitArgumentExpressionList(CParser.
    ArgumentExpressionListContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitAssignmentExpression**

```
public void exitAssignmentExpression(CParser.
    AssignmentExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitAssignmentOperator**

```
public void exitAssignmentOperator(CParser.
    AssignmentOperatorContext ctx)
```



- **Description**

The default implementation does nothing.

- **exitAtomicTypeSpecifier**

```
public void exitAtomicTypeSpecifier(CParser.
    AtomicTypeSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitBlockItem**

```
public void exitBlockItem(CParser.BlockItemContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitBlockItemList**

```
public void exitBlockItemList(CParser.BlockItemListContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitCastExpression**

```
public void exitCastExpression(CParser.CastExpressionContext ctx
    )
```

- **Description**

The default implementation does nothing.

- **exitCompilationUnit**

```
public void exitCompilationUnit(CParser.CompilationUnitContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitCompoundStatement**

```
public void exitCompoundStatement(CParser.  
    CompoundStatementContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitConditionalExpression**

```
public void exitConditionalExpression(CParser.  
    ConditionalExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitConstantExpression**

```
public void exitConstantExpression(CParser.  
    ConstantExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitDeclaration**

```
public void exitDeclaration(CParser.DeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitDeclarationList**

```
public void exitDeclarationList(CParser.DeclarationListContext  
    ctx)
```

– **Description**

The default implementation does nothing.

• **exitDeclarationSpecifier**

```
public void exitDeclarationSpecifier(CParser.  
    DeclarationSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitDeclarationSpecifiers**

```
public void exitDeclarationSpecifiers(CParser.
    DeclarationSpecifiersContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitDeclarationSpecifiers2**

```
public void exitDeclarationSpecifiers2(CParser.
    DeclarationSpecifiers2Context ctx)
```

- **Description**

The default implementation does nothing.

- **exitDeclarator**

```
public void exitDeclarator(CParser.DeclaratorContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitDesignation**

```
public void exitDesignation(CParser.DesignationContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitDesignator**

```
public void exitDesignator(CParser.DesignatorContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitDesignatorList**

```
public void exitDesignatorList(CParser.DesignatorListContext ctx
)
```

– **Description**

The default implementation does nothing.

• **exitDirectAbstractDeclarator**

```
public void exitDirectAbstractDeclarator(CParser.
DirectAbstractDeclaratorContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitDirectDeclarator**

```
public void exitDirectDeclarator(CParser.DirectDeclaratorContext
ctx)
```

– **Description**

The default implementation does nothing.

• **exitEnumerationConstant**

```
public void exitEnumerationConstant(CParser.
EnumerationConstantContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitEnumerator**

```
public void exitEnumerator(CParser.EnumeratorContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitEnumeratorList**

```
public void exitEnumeratorList(CParser.EnumeratorListContext ctx
)
```

- **Description**

The default implementation does nothing.

- **exitEnumSpecifier**

```
public void exitEnumSpecifier(CParser.EnumSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitEqualityExpression**

```
public void exitEqualityExpression(CParser.  
    EqualityExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitEveryRule**

```
public void exitEveryRule(ParserRuleContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitExclusiveOrExpression**

```
public void exitExclusiveOrExpression(CParser.  
    ExclusiveOrExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitExpression**

```
public void exitExpression(CParser.ExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitExpressionStatement**

```
public void exitExpressionStatement(CParser.  
    ExpressionStatementContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitExternalDeclaration**

```
public void exitExternalDeclaration(CParser.  
    ExternalDeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitForCondition**

```
public void exitForCondition(CParser.ForConditionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitForDeclaration**

```
public void exitForDeclaration(CParser.ForDeclarationContext ctx  
    )
```

– **Description**

The default implementation does nothing.

• **exitForExpression**

```
public void exitForExpression(CParser.ForExpressionContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitFunctionDefinition**

```
public void exitFunctionDefinition(CParser.  
    FunctionDefinitionContext ctx)
```

– **Description**

The default implementation does nothing.

- **exitFunctionSpecifier**

```
public void exitFunctionSpecifier(CParser.  
    FunctionSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitGccAttribute**

```
public void exitGccAttribute(CParser.GccAttributeContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitGccAttributeList**

```
public void exitGccAttributeList(CParser.GccAttributeListContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitGccAttributeSpecifier**

```
public void exitGccAttributeSpecifier(CParser.  
    GccAttributeSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitGccDeclaratorExtension**

```
public void exitGccDeclaratorExtension(CParser.  
    GccDeclaratorExtensionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitGenericAssociation**

```
public void exitGenericAssociation(CParser.  
    GenericAssociationContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitGenericAssocList**

```
public void exitGenericAssocList(CParser.GenericAssocListContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitGenericSelection**

```
public void exitGenericSelection(CParser.GenericSelectionContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitIdentifierList**

```
public void exitIdentifierList(CParser.IdentifierListContext ctx
    )
```

- **Description**

The default implementation does nothing.

- **exitInclusiveOrExpression**

```
public void exitInclusiveOrExpression(CParser.
    InclusiveOrExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitInitDeclarator**

```
public void exitInitDeclarator(CParser.InitDeclaratorContext ctx
    )
```

- **Description**

The default implementation does nothing.



- **exitInitDeclaratorList**

```
public void exitInitDeclaratorList(CParser.  
    InitDeclaratorListContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitInitializer**

```
public void exitInitializer(CParser.InitializerContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitInitializerList**

```
public void exitInitializerList(CParser.InitializerListContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitIterationStatement**

```
public void exitIterationStatement(CParser.  
    IterationStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitJumpStatement**

```
public void exitJumpStatement(CParser.JumpStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitLabeledStatement**

```
public void exitLabeledStatement(CParser.LabeledStatementContext  
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitLogicalAndExpression**

```
public void exitLogicalAndExpression(CParser.
    LogicalAndExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitLogicalOrExpression**

```
public void exitLogicalOrExpression(CParser.
    LogicalOrExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitMultiplicativeExpression**

```
public void exitMultiplicativeExpression(CParser.
    MultiplicativeExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitNestedParenthesesBlock**

```
public void exitNestedParenthesesBlock(CParser.
    NestedParenthesesBlockContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitParameterDeclaration**

```
public void exitParameterDeclaration(CParser.
    ParameterDeclarationContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitParameterList**

```
public void exitParameterList(CParser.ParameterListContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitParameterTypeList**

```
public void exitParameterTypeList(CParser.  
ParameterTypeListContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitPointer**

```
public void exitPointer(CParser.PointerContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitPostfixExpression**

```
public void exitPostfixExpression(CParser.  
PostfixExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitPrimaryExpression**

```
public void exitPrimaryExpression(CParser.  
PrimaryExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitRelationalExpression**

```
public void exitRelationalExpression(CParser.  
RelationalExpressionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitSelectionStatement**

```
public void exitSelectionStatement(CParser.
    SelectionStatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitShiftExpression**

```
public void exitShiftExpression(CParser.ShiftExpressionContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitSpecifierQualifierList**

```
public void exitSpecifierQualifierList(CParser.
    SpecifierQualifierListContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitStatement**

```
public void exitStatement(CParser.StatementContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitStaticAssertDeclaration**

```
public void exitStaticAssertDeclaration(CParser.
    StaticAssertDeclarationContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitStorageClassSpecifier**

```
public void exitStorageClassSpecifier(CParser.
    StorageClassSpecifierContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitStructDeclaration**

```
public void exitStructDeclaration(CParser.
    StructDeclarationContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitStructDeclarationList**

```
public void exitStructDeclarationList(CParser.
    StructDeclarationListContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitStructDeclarator**

```
public void exitStructDeclarator(CParser.StructDeclaratorContext
    ctx)
```

– **Description**

The default implementation does nothing.

• **exitStructDeclaratorList**

```
public void exitStructDeclaratorList(CParser.
    StructDeclaratorListContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitStructOrUnion**

```
public void exitStructOrUnion(CParser.StructOrUnionContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitStructOrUnionSpecifier**

```
public void exitStructOrUnionSpecifier(CParser.
    StructOrUnionSpecifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitTranslationUnit**

```
public void exitTranslationUnit(CParser.TranslationUnitContext
    ctx)
```

- **Description**

The default implementation does nothing.

- **exitTypedefName**

```
public void exitTypedefName(CParser.TypedefNameContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitTypeName**

```
public void exitTypeName(CParser.TypeNameContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitTypeQualifier**

```
public void exitTypeQualifier(CParser.TypeQualifierContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitTypeQualifierList**

```
public void exitTypeQualifierList(CParser.  
    TypeQualifierListContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitTypeSpecifier**

```
public void exitTypeSpecifier(CParser.TypeSpecifierContext ctx)
```

– **Description**

The default implementation does nothing.

• **exitUnaryExpression**

```
public void exitUnaryExpression(CParser.UnaryExpressionContext  
    ctx)
```

– **Description**

The default implementation does nothing.

• **exitUnaryOperator**

```
public void exitUnaryOperator(CParser.UnaryOperatorContext ctx)
```

– **Description**

The default implementation does nothing.

• **visitErrorNode**

```
public void visitErrorNode(ErrorNode node)
```

– **Description**

The default implementation does nothing.

• **visitTerminal**

```
public void visitTerminal(TerminalNode node)
```

– **Description**

The default implementation does nothing.

## 2.4 Class CBaseVisitor

This class provides an empty implementation of `CVisitor`, which can be extended to create a visitor which only needs to handle a subset of the available methods.

### 2.4.1 Declaration

```
public class CBaseVisitor
  extends <any> implements CVisitor
```

### 2.4.2 All known subclasses

MyCVisitor

### 2.4.3 Constructor summary

`CBaseVisitor()`

### 2.4.4 Method summary

```
visitAbstractDeclarator(CParser.AbstractDeclaratorContext)
visitAdditiveExpression(CParser.AdditiveExpressionContext)
visitAlignmentSpecifier(CParser.AlignmentSpecifierContext)
visitAndExpression(CParser.AndExpressionContext)
visitArgumentExpressionList(CParser.ArgumentExpressionListContext)
visitAssignmentExpression(CParser.AssignmentExpressionContext)
visitAssignmentOperator(CParser.AssignmentOperatorContext)
visitAtomicTypeSpecifier(CParser.AtomicTypeSpecifierContext)
visitBlockItem(CParser.BlockItemContext)
visitBlockItemList(CParser.BlockItemListContext)
visitCastExpression(CParser.CastExpressionContext)
visitCompilationUnit(CParser.CompilationUnitContext)
visitCompoundStatement(CParser.CompoundStatementContext)
visitConditionalExpression(CParser.ConditionalExpressionContext)
visitConstantExpression(CParser.ConstantExpressionContext)
visitDeclaration(CParser.DeclarationContext)
visitDeclarationList(CParser.DeclarationListContext)
visitDeclarationSpecifier(CParser.DeclarationSpecifierContext)
visitDeclarationSpecifiers(CParser.DeclarationSpecifiersContext)
visitDeclarationSpecifiers2(CParser.DeclarationSpecifiers2Context)
visitDeclarator(CParser.DeclaratorContext)
visitDesignation(CParser.DesignationContext)
visitDesignator(CParser.DesignatorContext)
visitDesignatorList(CParser.DesignatorListContext)
visitDirectAbstractDeclarator(CParser.DirectAbstractDeclaratorContext)
visitDirectDeclarator(CParser.DirectDeclaratorContext)
visitEnumerationConstant(CParser.EnumerationConstantContext)
```



```

visitEnumerator(CParser.EnumeratorContext)
visitEnumeratorList(CParser.EnumeratorListContext)
visitEnumSpecifier(CParser.EnumSpecifierContext)
visitEqualityExpression(CParser.EqualityExpressionContext)
visitExclusiveOrExpression(CParser.ExclusiveOrExpressionContext)
visitExpression(CParser.ExpressionContext)
visitExpressionStatement(CParser.ExpressionStatementContext)
visitExternalDeclaration(CParser.ExternalDeclarationContext)
visitForCondition(CParser.ForConditionContext)
visitForDeclaration(CParser.ForDeclarationContext)
visitForExpression(CParser.ForExpressionContext)
visitFunctionDefinition(CParser.FunctionDefinitionContext)
visitFunctionSpecifier(CParser.FunctionSpecifierContext)
visitGccAttribute(CParser.GccAttributeContext)
visitGccAttributeList(CParser.GccAttributeListContext)
visitGccAttributeSpecifier(CParser.GccAttributeSpecifierContext)
visitGccDeclaratorExtension(CParser.GccDeclaratorExtensionContext)
visitGenericAssociation(CParser.GenericAssociationContext)
visitGenericAssocList(CParser.GenericAssocListContext)
visitGenericSelection(CParser.GenericSelectionContext)
visitIdentifierList(CParser.IdentifierListContext)
visitInclusiveOrExpression(CParser.InclusiveOrExpressionContext)
visitInitDeclarator(CParser.InitDeclaratorContext)
visitInitDeclaratorList(CParser.InitDeclaratorListContext)
visitInitializer(CParser.InitializerContext)
visitInitializerList(CParser.InitializerListContext)
visitIterationStatement(CParser.IterationStatementContext)
visitJumpStatement(CParser.JumpStatementContext)
visitLabeledStatement(CParser.LabeledStatementContext)
visitLogicalAndExpression(CParser.LogicalAndExpressionContext)
visitLogicalOrExpression(CParser.LogicalOrExpressionContext)
visitMultiplicativeExpression(CParser.MultiplicativeExpressionContext)
visitNestedParenthesesBlock(CParser.NestedParenthesesBlockContext)
visitParameterDeclaration(CParser.ParameterDeclarationContext)
visitParameterList(CParser.ParameterListContext)
visitParameterTypeList(CParser.ParameterTypeListContext)
visitPointer(CParser.PointerContext)
visitPostfixExpression(CParser.PostfixExpressionContext)
visitPrimaryExpression(CParser.PrimaryExpressionContext)
visitRelationalExpression(CParser.RelationalExpressionContext)
visitSelectionStatement(CParser.SelectionStatementContext)
visitShiftExpression(CParser.ShiftExpressionContext)
visitSpecifierQualifierList(CParser.SpecifierQualifierListContext)
visitStatement(CParser.StatementContext)
visitStaticAssertDeclaration(CParser.StaticAssertDeclarationContext)
visitStorageClassSpecifier(CParser.StorageClassSpecifierContext)

```

```

visitStructDeclaration(CParser.StructDeclarationContext)
visitStructDeclarationList(CParser.StructDeclarationListContext)
visitStructDeclarator(CParser.StructDeclaratorContext)
visitStructDeclaratorList(CParser.StructDeclaratorListContext)
visitStructOrUnion(CParser.StructOrUnionContext)
visitStructOrUnionSpecifier(CParser.StructOrUnionSpecifierContext)
visitTranslationUnit(CParser.TranslationUnitContext)
visitTypedefName(CParser.TypedefNameContext)
visitTypeName(CParser.TypeNameContext)
visitTypeQualifier(CParser.TypeQualifierContext)
visitTypeQualifierList(CParser.TypeQualifierListContext)
visitTypeSpecifier(CParser.TypeSpecifierContext)
visitUnaryExpression(CParser.UnaryExpressionContext)
visitUnaryOperator(CParser.UnaryOperatorContext)

```

#### 2.4.5 Constructors

- **CBaseVisitor**

```
public CBaseVisitor()
```

#### 2.4.6 Methods

- **visitAbstractDeclarator**

```
public java.lang.Object visitAbstractDeclarator(CParser.
    AbstractDeclaratorContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAdditiveExpression**

```
public java.lang.Object visitAdditiveExpression(CParser.
    AdditiveExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAlignmentSpecifier**

```
public java.lang.Object visitAlignmentSpecifier(CParser.
    AlignmentSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAndExpression**

```
public java.lang.Object visitAndExpression(CParser.
    AndExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitArgumentExpressionList**

```
public java.lang.Object visitArgumentExpressionList(CParser.
    ArgumentExpressionListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAssignmentExpression**

```
public java.lang.Object visitAssignmentExpression(CParser.
    AssignmentExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAssignmentOperator**

```
public java.lang.Object visitAssignmentOperator(CParser.
    AssignmentOperatorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitAtomicTypeSpecifier**

```
public java.lang.Object visitAtomicTypeSpecifier(CParser.
    AtomicTypeSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitBlockItem**

```
public java.lang.Object visitBlockItem(CParser.BlockItemContext  
    ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitBlockItemList**

```
public java.lang.Object visitBlockItemList(CParser.  
    BlockItemListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitCastExpression**

```
public java.lang.Object visitCastExpression(CParser.  
    CastExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitCompilationUnit**

```
public java.lang.Object visitCompilationUnit(CParser.  
    CompilationUnitContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitCompoundStatement**

```
public java.lang.Object visitCompoundStatement(CParser.  
    CompoundStatementContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitConditionalExpression**

```
public java.lang.Object visitConditionalExpression(CParser.  
    ConditionalExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitConstantExpression**

```
public java.lang.Object visitConstantExpression(CParser.  
    ConstantExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitDeclaration**

```
public java.lang.Object visitDeclaration(CParser.  
    DeclarationContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitDeclarationList**

```
public java.lang.Object visitDeclarationList(CParser.  
    DeclarationListContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitDeclarationSpecifier**

```
public java.lang.Object visitDeclarationSpecifier(CParser.  
    DeclarationSpecifierContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitDeclarationSpecifiers**

```
public java.lang.Object visitDeclarationSpecifiers(CParser.  
    DeclarationSpecifiersContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDeclarationSpecifiers2**

```
public java.lang.Object visitDeclarationSpecifiers2(CParser.
    DeclarationSpecifiers2Context ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDeclarator**

```
public java.lang.Object visitDeclarator(CParser.
    DeclaratorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDesignation**

```
public java.lang.Object visitDesignation(CParser.
    DesignationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDesignator**

```
public java.lang.Object visitDesignator(CParser.
    DesignatorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDesignatorList**

```
public java.lang.Object visitDesignatorList(CParser.
    DesignatorListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDirectAbstractDeclarator**

```
public java.lang.Object visitDirectAbstractDeclarator(CParser.  
    DirectAbstractDeclaratorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitDirectDeclarator**

```
public java.lang.Object visitDirectDeclarator(CParser.  
    DirectDeclaratorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitEnumerationConstant**

```
public java.lang.Object visitEnumerationConstant(CParser.  
    EnumerationConstantContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitEnumerator**

```
public java.lang.Object visitEnumerator(CParser.  
    EnumeratorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitEnumeratorList**

```
public java.lang.Object visitEnumeratorList(CParser.  
    EnumeratorListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitEnumSpecifier**

```
public java.lang.Object visitEnumSpecifier(CParser.  
    EnumSpecifierContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitEqualityExpression**

```
public java.lang.Object visitEqualityExpression(CParser.  
    EqualityExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitExclusiveOrExpression**

```
public java.lang.Object visitExclusiveOrExpression(CParser.  
    ExclusiveOrExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitExpression**

```
public java.lang.Object visitExpression(CParser.  
    ExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitExpressionStatement**

```
public java.lang.Object visitExpressionStatement(CParser.  
    ExpressionStatementContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitExternalDeclaration**

```
public java.lang.Object visitExternalDeclaration(CParser.  
    ExternalDeclarationContext ctx)
```



- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitForCondition**

```
public java.lang.Object visitForCondition(CParser.  
    ForConditionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitForDeclaration**

```
public java.lang.Object visitForDeclaration(CParser.  
    ForDeclarationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitForExpression**

```
public java.lang.Object visitForExpression(CParser.  
    ForExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitFunctionDefinition**

```
public java.lang.Object visitFunctionDefinition(CParser.  
    FunctionDefinitionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitFunctionSpecifier**

```
public java.lang.Object visitFunctionSpecifier(CParser.  
    FunctionSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGccAttribute**

```
public java.lang.Object visitGccAttribute(CParser.  
    GccAttributeContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGccAttributeList**

```
public java.lang.Object visitGccAttributeList(CParser.  
    GccAttributeListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGccAttributeSpecifier**

```
public java.lang.Object visitGccAttributeSpecifier(CParser.  
    GccAttributeSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGccDeclaratorExtension**

```
public java.lang.Object visitGccDeclaratorExtension(CParser.  
    GccDeclaratorExtensionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGenericAssociation**

```
public java.lang.Object visitGenericAssociation(CParser.  
    GenericAssociationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitGenericAssocList**

```
public java.lang.Object visitGenericAssocList(CParser.  
    GenericAssocListContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitGenericSelection**

```
public java.lang.Object visitGenericSelection(CParser.  
    GenericSelectionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitIdentifierList**

```
public java.lang.Object visitIdentifierList(CParser.  
    IdentifierListContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitInclusiveOrExpression**

```
public java.lang.Object visitInclusiveOrExpression(CParser.  
    InclusiveOrExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitInitDeclarator**

```
public java.lang.Object visitInitDeclarator(CParser.  
    InitDeclaratorContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitInitDeclaratorList**

```
public java.lang.Object visitInitDeclaratorList(CParser.  
    InitDeclaratorListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitInitializer**

```
public java.lang.Object visitInitializer(CParser.  
   _INITIALIZER_CONTEXT ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitInitializerList**

```
public java.lang.Object visitInitializerList(CParser.  
   _INITIALIZER_LIST_CONTEXT ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitIterationStatement**

```
public java.lang.Object visitIterationStatement(CParser.  
   _ITERATION_STATEMENT_CONTEXT ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitJumpStatement**

```
public java.lang.Object visitJumpStatement(CParser.  
   _JUMP_STATEMENT_CONTEXT ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitLabeledStatement**

```
public java.lang.Object visitLabeledStatement(CParser.  
   _LABELLED_STATEMENT_CONTEXT ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitLogicalAndExpression**

```
public java.lang.Object visitLogicalAndExpression(CParser.  
    LogicalAndExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitLogicalOrExpression**

```
public java.lang.Object visitLogicalOrExpression(CParser.  
    LogicalOrExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitMultiplicativeExpression**

```
public java.lang.Object visitMultiplicativeExpression(CParser.  
    MultiplicativeExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitNestedParenthesesBlock**

```
public java.lang.Object visitNestedParenthesesBlock(CParser.  
    NestedParenthesesBlockContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitParameterDeclaration**

```
public java.lang.Object visitParameterDeclaration(CParser.  
    ParameterDeclarationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitParameterList**

```
public java.lang.Object visitParameterList(CParser.  
    ParameterListContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitParameterTypeList**

```
public java.lang.Object visitParameterTypeList(CParser.  
    ParameterTypeListContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitPointer**

```
public java.lang.Object visitPointer(CParser.PointerContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitPostfixExpression**

```
public java.lang.Object visitPostfixExpression(CParser.  
    PostfixExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitPrimaryExpression**

```
public java.lang.Object visitPrimaryExpression(CParser.  
    PrimaryExpressionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitRelationalExpression**

```
public java.lang.Object visitRelationalExpression(CParser.  
    RelationalExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitSelectionStatement**

```
public java.lang.Object visitSelectionStatement(CParser.
    SelectionStatementContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitShiftExpression**

```
public java.lang.Object visitShiftExpression(CParser.
    ShiftExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitSpecifierQualifierList**

```
public java.lang.Object visitSpecifierQualifierList(CParser.
    SpecifierQualifierListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStatement**

```
public java.lang.Object visitStatement(CParser.StatementContext
    ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStaticAssertDeclaration**

```
public java.lang.Object visitStaticAssertDeclaration(CParser.
    StaticAssertDeclarationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStorageClassSpecifier**

```
public java.lang.Object visitStorageClassSpecifier(CParser.  
    StorageClassSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStructDeclaration**

```
public java.lang.Object visitStructDeclaration(CParser.  
    StructDeclarationContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStructDeclarationList**

```
public java.lang.Object visitStructDeclarationList(CParser.  
    StructDeclarationListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStructDeclarator**

```
public java.lang.Object visitStructDeclarator(CParser.  
    StructDeclaratorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStructDeclaratorList**

```
public java.lang.Object visitStructDeclaratorList(CParser.  
    StructDeclaratorListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitStructOrUnion**



```
public java.lang.Object visitStructOrUnion(CParser.  
    StructOrUnionContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitStructOrUnionSpecifier**

```
public java.lang.Object visitStructOrUnionSpecifier(CParser.  
    StructOrUnionSpecifierContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitTranslationUnit**

```
public java.lang.Object visitTranslationUnit(CParser.  
    TranslationUnitContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitTypedefName**

```
public java.lang.Object visitTypedefName(CParser.  
    TypedefNameContext ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitTypeName**

```
public java.lang.Object visitTypeName(CParser.TypeNameContext  
    ctx)
```

– **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

• **visitTypeQualifier**

```
public java.lang.Object visitTypeQualifier(CParser.  
    TypeQualifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitTypeQualifierList**

```
public java.lang.Object visitTypeQualifierList(CParser.  
    TypeQualifierListContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitTypeSpecifier**

```
public java.lang.Object visitTypeSpecifier(CParser.  
    TypeSpecifierContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitUnaryExpression**

```
public java.lang.Object visitUnaryExpression(CParser.  
    UnaryExpressionContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

- **visitUnaryOperator**

```
public java.lang.Object visitUnaryOperator(CParser.  
    UnaryOperatorContext ctx)
```

- **Description**

The default implementation returns the result of calling `CBaseVisitor` on `ctx`.

## 2.5 Class CLexer

### 2.5.1 Declaration

```
public class CLexer  
    extends Lexer
```

### 2.5.2 Field summary

`_ATN`  
`_decisionToDFA`  
`_serializedATN`  
`_sharedContextCache`  
`Alignas`  
`Alignof`  
`And`  
`AndAnd`  
`AndAssign`  
`Arrow`  
`AsmBlock`  
`Assign`  
`Atomic`  
`Auto`  
`BlockComment`  
`Bool`  
`Break`  
`Caret`  
`Case`  
`Char`  
`Colon`  
`Comma`  
`Complex`  
`ComplexDefine`  
`Const`  
`Constant`  
`Continue`  
`Default`  
`DigitSequence`  
`Div`  
`DivAssign`  
`Do`  
`Dot`  
`Double`  
`Ellipsis`  
`Else`  
`Enum`  
`Equal`  
`Extern`  
`Float`  
`For`  
`Generic`  
`Goto`  
`Greater`  
`GreaterEqual`

Identifier  
If  
Imaginary  
Include  
Inline  
Int  
LeftBrace  
LeftBracket  
LeftParen  
LeftShift  
LeftShiftAssign  
Less  
LessEqual  
LineAfterPreprocessing  
LineComment  
LineDirective  
Long  
Minus  
MinusAssign  
MinusMinus  
Mod  
ModAssign  
modeNames  
Newline  
Noreturn  
Not  
NotEqual  
Or  
OrAssign  
OrOr  
Plus  
PlusAssign  
PlusPlus  
PragmaDirective  
Question  
Register  
Restrict  
Return  
RightBrace  
RightBracket  
RightParen  
RightShift  
RightShiftAssign  
ruleNames  
Semi  
Short

Signed  
Sizeof  
Star  
StarAssign  
Static  
StaticAssert  
StringLiteral  
Struct  
Switch  
T\_\_0  
T\_\_1  
T\_\_10  
T\_\_11  
T\_\_12  
T\_\_13  
T\_\_2  
T\_\_3  
T\_\_4  
T\_\_5  
T\_\_6  
T\_\_7  
T\_\_8  
T\_\_9  
ThreadLocal  
Tilde  
tokenNames  
Typedef  
Union  
Unsigned  
VOCABULARY  
Void  
Volatile  
While  
Whitespace  
XorAssign

### 2.5.3 Constructor summary

CLexer(CharStream)

### 2.5.4 Method summary

getATN()  
getGrammarFileName()  
getModeNames()  
getRuleNames()  
getSerializedATN()

```

getTokenNames()
getVocabulary()

```

### 2.5.5 Fields

- protected static final DFA[] **\_decisionToDFA**
- protected static final PredictionContextCache **\_sharedContextCache**
- public static final int **T\_\_0**
- public static final int **T\_\_1**
- public static final int **T\_\_2**
- public static final int **T\_\_3**
- public static final int **T\_\_4**
- public static final int **T\_\_5**
- public static final int **T\_\_6**
- public static final int **T\_\_7**
- public static final int **T\_\_8**
- public static final int **T\_\_9**
- public static final int **T\_\_10**
- public static final int **T\_\_11**
- public static final int **T\_\_12**
- public static final int **T\_\_13**
- public static final int **Auto**
- public static final int **Break**
- public static final int **Case**
- public static final int **Char**
- public static final int **Const**
- public static final int **Continue**
- public static final int **Default**
- public static final int **Do**
- public static final int **Double**
- public static final int **Else**

- public static final int **Enum**
- public static final int **Extern**
- public static final int **Float**
- public static final int **For**
- public static final int **Goto**
- public static final int **If**
- public static final int **Inline**
- public static final int **Int**
- public static final int **Long**
- public static final int **Register**
- public static final int **Restrict**
- public static final int **Return**
- public static final int **Short**
- public static final int **Signed**
- public static final int **Sizeof**
- public static final int **Static**
- public static final int **Struct**
- public static final int **Switch**
- public static final int **Typedef**
- public static final int **Union**
- public static final int **Unsigned**
- public static final int **Void**
- public static final int **Volatile**
- public static final int **While**
- public static final int **Alignas**
- public static final int **Alignof**
- public static final int **Atomic**
- public static final int **Bool**

- `public static final int Complex`
- `public static final int Generic`
- `public static final int Imaginary`
- `public static final int Noreturn`
- `public static final int StaticAssert`
- `public static final int ThreadLocal`
- `public static final int LeftParen`
- `public static final int RightParen`
- `public static final int LeftBracket`
- `public static final int RightBracket`
- `public static final int LeftBrace`
- `public static final int RightBrace`
- `public static final int Less`
- `public static final int LessEqual`
- `public static final int Greater`
- `public static final int GreaterEqual`
- `public static final int LeftShift`
- `public static final int RightShift`
- `public static final int Plus`
- `public static final int PlusPlus`
- `public static final int Minus`
- `public static final int MinusMinus`
- `public static final int Star`
- `public static final int Div`
- `public static final int Mod`
- `public static final int And`
- `public static final int Or`
- `public static final int AndAnd`



- `public static final int OrOr`
- `public static final int Caret`
- `public static final int Not`
- `public static final int Tilde`
- `public static final int Question`
- `public static final int Colon`
- `public static final int Semi`
- `public static final int Comma`
- `public static final int Assign`
- `public static final int StarAssign`
- `public static final int DivAssign`
- `public static final int ModAssign`
- `public static final int PlusAssign`
- `public static final int MinusAssign`
- `public static final int LeftShiftAssign`
- `public static final int RightShiftAssign`
- `public static final int AndAssign`
- `public static final int XorAssign`
- `public static final int OrAssign`
- `public static final int Equal`
- `public static final int NotEqual`
- `public static final int Arrow`
- `public static final int Dot`
- `public static final int Ellipsis`
- `public static final int Identifier`
- `public static final int Constant`
- `public static final int DigitSequence`
- `public static final int StringLiteral`

- `public static final int ComplexDefine`
- `public static final int AsmBlock`
- `public static final int LineAfterPreprocessing`
- `public static final int Include`
- `public static final int LineDirective`
- `public static final int PragmaDirective`
- `public static final int Whitespace`
- `public static final int Newline`
- `public static final int BlockComment`
- `public static final int LineComment`
- `public static java.lang.String[] modeNames`
- `public static final java.lang.String[] ruleNames`
- `public static final Vocabulary VOCABULARY`
- `public static final java.lang.String[] tokenNames`
- `public static final java.lang.String _serializedATN`
- `public static final ATN _ATN`

### 2.5.6 Constructors

- **CLexer**

```
public CLexer(CharStream input)
```

### 2.5.7 Methods

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getModeNames**

```
public java.lang.String [] getModeNames()
```

- **getRuleNames**

```
public java.lang.String [] getRuleNames()
```

- **getSerializedATN**

```
public java.lang.String getSerializedATN()
```

- **getTokenNames**

```
public java.lang.String [] getTokenNames()
```

- **getVocabulary**

```
public Vocabulary getVocabulary()
```

## 2.6 Class CParser

### 2.6.1 Declaration

```
public class CParser
    extends Parser
```

### 2.6.2 Field summary

```
_ATN
_decisionToDFA
_serializedATN
_sharedContextCache
Alignas
Alignof
And
AndAnd
AndAssign
Arrow
AsmBlock
Assign
Atomic
Auto
BlockComment
Bool
```

Break  
Caret  
Case  
Char  
Colon  
Comma  
Complex  
ComplexDefine  
Const  
Constant  
Continue  
Default  
DigitSequence  
Div  
DivAssign  
Do  
Dot  
Double  
Ellipsis  
Else  
Enum  
Equal  
Extern  
Float  
For  
Generic  
Goto  
Greater  
GreaterEqual  
Identifier  
If  
Imaginary  
Include  
Inline  
Int  
LeftBrace  
LeftBracket  
LeftParen  
LeftShift  
LeftShiftAssign  
Less  
LessEqual  
LineAfterPreprocessing  
LineComment  
LineDirective  
Long

Minus  
MinusAssign  
MinusMinus  
Mod  
ModAssign  
Newline  
Noreturn  
Not  
NotEqual  
Or  
OrAssign  
OrOr  
Plus  
PlusAssign  
PlusPlus  
PragmaDirective  
Question  
Register  
Restrict  
Return  
RightBrace  
RightBracket  
RightParen  
RightShift  
RightShiftAssign  
RULE\_abstractDeclarator  
RULE\_additiveExpression  
RULE\_alignmentSpecifier  
RULE\_andExpression  
RULE\_argumentExpressionList  
RULE\_assignmentExpression  
RULE\_assignmentOperator  
RULE\_atomicTypeSpecifier  
RULE\_blockItem  
RULE\_blockItemList  
RULE\_castExpression  
RULE\_compilationUnit  
RULE\_compoundStatement  
RULE\_conditionalExpression  
RULE\_constantExpression  
RULE\_declaration  
RULE\_declarationList  
RULE\_declarationSpecifier  
RULE\_declarationSpecifiers  
RULE\_declarationSpecifiers2  
RULE\_declarator

RULE\_designation  
RULE\_designator  
RULE\_designatorList  
RULE\_directAbstractDeclarator  
RULE\_directDeclarator  
RULE\_enumerationConstant  
RULE\_enumerator  
RULE\_enumeratorList  
RULE\_enumSpecifier  
RULE\_equalityExpression  
RULE\_exclusiveOrExpression  
RULE\_expression  
RULE\_expressionStatement  
RULE\_externalDeclaration  
RULE\_forCondition  
RULE\_forDeclaration  
RULE\_forExpression  
RULE\_functionDefinition  
RULE\_functionSpecifier  
RULE\_gccAttribute  
RULE\_gccAttributeList  
RULE\_gccAttributeSpecifier  
RULE\_gccDeclaratorExtension  
RULE\_genericAssociation  
RULE\_genericAssocList  
RULE\_genericSelection  
RULE\_identifierList  
RULE\_inclusiveOrExpression  
RULE\_initDeclarator  
RULE\_initDeclaratorList  
RULE\_initializer  
RULE\_initializerList  
RULE\_iterationStatement  
RULE\_jumpStatement  
RULE\_labeledStatement  
RULE\_logicalAndExpression  
RULE\_logicalOrExpression  
RULE\_multiplicativeExpression  
RULE\_nestedParenthesesBlock  
RULE\_parameterDeclaration  
RULE\_parameterList  
RULE\_parameterTypeList  
RULE\_pointer  
RULE\_postfixExpression  
RULE\_primaryExpression  
RULE\_relationalExpression

**RULE\_selectionStatement**  
**RULE\_shiftExpression**  
**RULE\_specifierQualifierList**  
**RULE\_statement**  
**RULE\_staticAssertDeclaration**  
**RULE\_storageClassSpecifier**  
**RULE\_structDeclaration**  
**RULE\_structDeclarationList**  
**RULE\_structDeclarator**  
**RULE\_structDeclaratorList**  
**RULE\_structOrUnion**  
**RULE\_structOrUnionSpecifier**  
**RULE\_translationUnit**  
**RULE\_typedefName**  
**RULE\_typeName**  
**RULE\_typeQualifier**  
**RULE\_typeQualifierList**  
**RULE\_typeSpecifier**  
**RULE\_unaryExpression**  
**RULE\_unaryOperator**  
**ruleNames**  
**Semi**  
**Short**  
**Signed**  
**Sizeof**  
**Star**  
**StarAssign**  
**Static**  
**StaticAssert**  
**StringLiteral**  
**Struct**  
**Switch**  
**T\_\_0**  
**T\_\_1**  
**T\_\_10**  
**T\_\_11**  
**T\_\_12**  
**T\_\_13**  
**T\_\_2**  
**T\_\_3**  
**T\_\_4**  
**T\_\_5**  
**T\_\_6**  
**T\_\_7**  
**T\_\_8**  
**T\_\_9**

ThreadLocal  
Tilde  
tokenNames  
Typedef  
Union  
Unsigned  
VOCABULARY  
Void  
Volatile  
While  
Whitespace  
XorAssign

### 2.6.3 Constructor summary

CParser(TokenStream)

### 2.6.4 Method summary

abstractDeclarator()  
additiveExpression()  
alignmentSpecifier()  
andExpression()  
argumentExpressionList()  
assignmentExpression()  
assignmentOperator()  
atomicTypeSpecifier()  
blockItem()  
blockItemList()  
castExpression()  
compilationUnit()  
compoundStatement()  
conditionalExpression()  
constantExpression()  
declaration()  
declarationList()  
declarationSpecifier()  
declarationSpecifiers()  
declarationSpecifiers2()  
declarator()  
designation()  
designator()  
designatorList()  
directAbstractDeclarator()  
directDeclarator()  
enumerationConstant()  
enumerator()



enumeratorList()  
enumSpecifier()  
equalityExpression()  
exclusiveOrExpression()  
expression()  
expressionStatement()  
externalDeclaration()  
forCondition()  
forDeclaration()  
forExpression()  
functionDefinition()  
functionSpecifier()  
gccAttribute()  
gccAttributeList()  
gccAttributeSpecifier()  
gccDeclaratorExtension()  
genericAssociation()  
genericAssocList()  
genericSelection()  
getATN()  
getGrammarFileName()  
getRuleNames()  
getSerializedATN()  
getTokenNames()  
getVocabulary()  
identifierList()  
inclusiveOrExpression()  
initDeclarator()  
initDeclaratorList()  
initializer()  
initializerList()  
iterationStatement()  
jumpStatement()  
labeledStatement()  
logicalAndExpression()  
logicalOrExpression()  
multiplicativeExpression()  
nestedParenthesesBlock()  
parameterDeclaration()  
parameterList()  
parameterTypeList()  
pointer()  
postfixExpression()  
primaryExpression()  
relationalExpression()  
selectionStatement()

```

sempred(RuleContext, int, int)
shiftExpression()
specifierQualifierList()
statement()
staticAssertDeclaration()
storageClassSpecifier()
structDeclaration()
structDeclarationList()
structDeclarator()
structDeclaratorList()
structOrUnion()
structOrUnionSpecifier()
translationUnit()
typedefName()
typeName()
typeQualifier()
typeQualifierList()
typeSpecifier()
unaryExpression()
unaryOperator()

```

### 2.6.5 Fields

- protected static final DFA[] \_decisionToDFA
- protected static final PredictionContextCache \_sharedContextCache
- public static final int T\_\_0
- public static final int T\_\_1
- public static final int T\_\_2
- public static final int T\_\_3
- public static final int T\_\_4
- public static final int T\_\_5
- public static final int T\_\_6
- public static final int T\_\_7
- public static final int T\_\_8
- public static final int T\_\_9
- public static final int T\_\_10
- public static final int T\_\_11
- public static final int T\_\_12

- `public static final int T__13`
- `public static final int Auto`
- `public static final int Break`
- `public static final int Case`
- `public static final int Char`
- `public static final int Const`
- `public static final int Continue`
- `public static final int Default`
- `public static final int Do`
- `public static final int Double`
- `public static final int Else`
- `public static final int Enum`
- `public static final int Extern`
- `public static final int Float`
- `public static final int For`
- `public static final int Goto`
- `public static final int If`
- `public static final int Inline`
- `public static final int Int`
- `public static final int Long`
- `public static final int Register`
- `public static final int Restrict`
- `public static final int Return`
- `public static final int Short`
- `public static final int Signed`
- `public static final int Sizeof`
- `public static final int Static`
- `public static final int Struct`

- `public static final int Switch`
- `public static final int Typedef`
- `public static final int Union`
- `public static final int Unsigned`
- `public static final int Void`
- `public static final int Volatile`
- `public static final int While`
- `public static final int Alignas`
- `public static final int Alignof`
- `public static final int Atomic`
- `public static final int Bool`
- `public static final int Complex`
- `public static final int Generic`
- `public static final int Imaginary`
- `public static final int Noreturn`
- `public static final int StaticAssert`
- `public static final int ThreadLocal`
- `public static final int LeftParen`
- `public static final int RightParen`
- `public static final int LeftBracket`
- `public static final int RightBracket`
- `public static final int LeftBrace`
- `public static final int RightBrace`
- `public static final int Less`
- `public static final int LessEqual`
- `public static final int Greater`
- `public static final int GreaterEqual`
- `public static final int LeftShift`

- `public static final int RightShift`
- `public static final int Plus`
- `public static final int PlusPlus`
- `public static final int Minus`
- `public static final int MinusMinus`
- `public static final int Star`
- `public static final int Div`
- `public static final int Mod`
- `public static final int And`
- `public static final int Or`
- `public static final int AndAnd`
- `public static final int OrOr`
- `public static final int Caret`
- `public static final int Not`
- `public static final int Tilde`
- `public static final int Question`
- `public static final int Colon`
- `public static final int Semi`
- `public static final int Comma`
- `public static final int Assign`
- `public static final int StarAssign`
- `public static final int DivAssign`
- `public static final int ModAssign`
- `public static final int PlusAssign`
- `public static final int MinusAssign`
- `public static final int LeftShiftAssign`
- `public static final int RightShiftAssign`
- `public static final int AndAssign`

- `public static final int XorAssign`
- `public static final int OrAssign`
- `public static final int Equal`
- `public static final int NotEqual`
- `public static final int Arrow`
- `public static final int Dot`
- `public static final int Ellipsis`
- `public static final int Identifier`
- `public static final int Constant`
- `public static final int DigitSequence`
- `public static final int StringLiteral`
- `public static final int ComplexDefine`
- `public static final int AsmBlock`
- `public static final int LineAfterPreprocessing`
- `public static final int Include`
- `public static final int LineDirective`
- `public static final int PragmaDirective`
- `public static final int Whitespace`
- `public static final int Newline`
- `public static final int BlockComment`
- `public static final int LineComment`
- `public static final int RULE_primaryExpression`
- `public static final int RULE_genericSelection`
- `public static final int RULE_genericAssocList`
- `public static final int RULE_genericAssociation`
- `public static final int RULE_postfixExpression`
- `public static final int RULE_argumentExpressionList`
- `public static final int RULE_unaryExpression`

- public static final int **RULE\_unaryOperator**
- public static final int **RULE\_castExpression**
- public static final int **RULE\_multiplicativeExpression**
- public static final int **RULE\_additiveExpression**
- public static final int **RULE\_shiftExpression**
- public static final int **RULE\_relationalExpression**
- public static final int **RULE\_equalityExpression**
- public static final int **RULE\_andExpression**
- public static final int **RULE\_exclusiveOrExpression**
- public static final int **RULE\_inclusiveOrExpression**
- public static final int **RULE\_logicalAndExpression**
- public static final int **RULE\_logicalOrExpression**
- public static final int **RULE\_conditionalExpression**
- public static final int **RULE\_assignmentExpression**
- public static final int **RULE\_assignmentOperator**
- public static final int **RULE\_expression**
- public static final int **RULE\_constantExpression**
- public static final int **RULE\_declaration**
- public static final int **RULE\_declarationSpecifiers**
- public static final int **RULE\_declarationSpecifiers2**
- public static final int **RULE\_declarationSpecifier**
- public static final int **RULE\_initDeclaratorList**
- public static final int **RULE\_initDeclarator**
- public static final int **RULE\_storageClassSpecifier**
- public static final int **RULE\_typeSpecifier**
- public static final int **RULE\_structOrUnionSpecifier**
- public static final int **RULE\_structOrUnion**
- public static final int **RULE\_structDeclarationList**

- public static final int **RULE\_structDeclaration**
- public static final int **RULE\_specifierQualifierList**
- public static final int **RULE\_structDeclaratorList**
- public static final int **RULE\_structDeclarator**
- public static final int **RULE\_enumSpecifier**
- public static final int **RULE\_enumeratorList**
- public static final int **RULE\_enumerator**
- public static final int **RULE\_enumerationConstant**
- public static final int **RULE\_atomicTypeSpecifier**
- public static final int **RULE\_typeQualifier**
- public static final int **RULE\_functionSpecifier**
- public static final int **RULE\_alignmentSpecifier**
- public static final int **RULE\_declarator**
- public static final int **RULE\_directDeclarator**
- public static final int **RULE\_gccDeclaratorExtension**
- public static final int **RULE\_gccAttributeSpecifier**
- public static final int **RULE\_gccAttributeList**
- public static final int **RULE\_gccAttribute**
- public static final int **RULE\_nestedParenthesesBlock**
- public static final int **RULE\_pointer**
- public static final int **RULE\_typeQualifierList**
- public static final int **RULE\_parameterTypeList**
- public static final int **RULE\_parameterList**
- public static final int **RULE\_parameterDeclaration**
- public static final int **RULE\_identifierList**
- public static final int **RULE\_typeName**
- public static final int **RULE\_abstractDeclarator**
- public static final int **RULE\_directAbstractDeclarator**



- public static final int **RULE\_typedefName**
- public static final int **RULE\_initializer**
- public static final int **RULE\_initializerList**
- public static final int **RULE\_designation**
- public static final int **RULE\_designatorList**
- public static final int **RULE\_designator**
- public static final int **RULE\_staticAssertDeclaration**
- public static final int **RULE\_statement**
- public static final int **RULE\_labeledStatement**
- public static final int **RULE\_compoundStatement**
- public static final int **RULE\_blockItemList**
- public static final int **RULE\_blockItem**
- public static final int **RULE\_expressionStatement**
- public static final int **RULE\_selectionStatement**
- public static final int **RULE\_iterationStatement**
- public static final int **RULE\_forCondition**
- public static final int **RULE\_forDeclaration**
- public static final int **RULE\_forExpression**
- public static final int **RULE\_jumpStatement**
- public static final int **RULE\_compilationUnit**
- public static final int **RULE\_translationUnit**
- public static final int **RULE\_externalDeclaration**
- public static final int **RULE\_functionDefinition**
- public static final int **RULE\_declarationList**
- public static final java.lang.String[] **ruleNames**
- public static final Vocabulary **VOCABULARY**
- public static final java.lang.String[] **tokenNames**
- public static final java.lang.String **\_serializedATN**
- public static final ATN **\_ATN**

### 2.6.6 Constructors

- **CParser**

```
public CParser(TokenStream input)
```

### 2.6.7 Methods

- **abstractDeclarator**

```
public final CParser.AbstractDeclaratorContext  
    abstractDeclarator() throws RecognitionException
```

- **additiveExpression**

```
public final CParser.AdditiveExpressionContext  
    additiveExpression() throws RecognitionException
```

- **alignmentSpecifier**

```
public final CParser.AlignmentSpecifierContext  
    alignmentSpecifier() throws RecognitionException
```

- **andExpression**

```
public final CParser.AndExpressionContext andExpression() throws  
    RecognitionException
```

- **argumentExpressionList**

```
public final CParser.ArgumentExpressionListContext  
    argumentExpressionList() throws RecognitionException
```

- **assignmentExpression**

```
public final CParser.AssignmentExpressionContext  
    assignmentExpression() throws RecognitionException
```

- **assignmentOperator**

```
public final CParser.AssignmentOperatorContext  
    assignmentOperator() throws RecognitionException
```

- **atomicTypeSpecifier**

```
public final CParser.AtomicTypeSpecifierContext  
    atomicTypeSpecifier() throws RecognitionException
```

- **blockItem**

```
public final CParser.BlockItemContext blockItem() throws  
    RecognitionException
```

- **blockItemList**

```
public final CParser.BlockItemListContext blockItemList() throws  
    RecognitionException
```

- **castExpression**

```
public final CParser.CastExpressionContext castExpression()  
    throws RecognitionException
```

- **compilationUnit**

```
public final CParser.CompilationUnitContext compilationUnit()  
    throws RecognitionException
```

- **compoundStatement**

```
public final CParser.CompoundStatementContext compoundStatement  
    () throws RecognitionException
```

- **conditionalExpression**

```
public final CParser.ConditionalExpressionContext  
    conditionalExpression() throws RecognitionException
```

- **constantExpression**

```
public final CParser.ConstantExpressionContext  
    constantExpression() throws RecognitionException
```

- **declaration**

```
public final CParser.DeclarationContext declaration() throws  
    RecognitionException
```

- **declarationList**

```
public final CParser.DeclarationListContext declarationList()  
    throws RecognitionException
```

- **declarationSpecifier**

```
public final CParser.DeclarationSpecifierContext  
    declarationSpecifier() throws RecognitionException
```

- **declarationSpecifiers**

```
public final CParser.DeclarationSpecifiersContext  
    declarationSpecifiers() throws RecognitionException
```

- **declarationSpecifiers2**

```
public final CParser.DeclarationSpecifiers2Context  
    declarationSpecifiers2() throws RecognitionException
```

- **declarator**

```
public final CParser.DeclaratorContext declarator() throws  
    RecognitionException
```

- **designation**

```
public final CParser.DesignationContext designation() throws  
    RecognitionException
```

- **designator**

```
public final CParser.DesignatorContext designator() throws  
    RecognitionException
```

- **designatorList**

```
public final CParser.DesignatorListContext designatorList()  
    throws RecognitionException
```

- **directAbstractDeclarator**

```
public final CParser.DirectAbstractDeclaratorContext  
    directAbstractDeclarator() throws RecognitionException
```

- **directDeclarator**

```
public final CParser.DirectDeclaratorContext directDeclarator()  
    throws RecognitionException
```

- **enumerationConstant**

```
public final CParser.EnumerationConstantContext  
    enumerationConstant() throws RecognitionException
```

- **enumerator**

```
public final CParser.EnumeratorContext enumerator() throws  
    RecognitionException
```

- **enumeratorList**

```
public final CParser.EnumeratorListContext enumeratorList()  
    throws RecognitionException
```

- **enumSpecifier**

```
public final CParser.EnumSpecifierContext enumSpecifier() throws  
    RecognitionException
```

- **equalityExpression**

```
public final CParser.EqualityExpressionContext  
    equalityExpression() throws RecognitionException
```

- **exclusiveOrExpression**

```
public final CParser.ExclusiveOrExpressionContext  
    exclusiveOrExpression() throws RecognitionException
```

- **expression**

```
public final CParser.ExpressionContext expression() throws  
    RecognitionException
```

- **expressionStatement**

```
public final CParser.ExpressionStatementContext  
    expressionStatement() throws RecognitionException
```

- **externalDeclaration**

```
public final CParser.ExternalDeclarationContext  
    externalDeclaration() throws RecognitionException
```

- **forCondition**

```
public final CParser.ForConditionContext forCondition() throws  
    RecognitionException
```

- **forDeclaration**

```
public final CParser.ForDeclarationContext forDeclaration()  
    throws RecognitionException
```

- **forExpression**

```
public final CParser.ForExpressionContext forExpression() throws  
    RecognitionException
```

- **functionDefinition**

```
public final CParser.FunctionDefinitionContext  
    functionDefinition() throws RecognitionException
```

- **functionSpecifier**

```
public final CParser.FunctionSpecifierContext functionSpecifier  
    () throws RecognitionException
```

- **gccAttribute**

```
public final CParser.GccAttributeContext gccAttribute() throws  
    RecognitionException
```

- **gccAttributeList**

```
public final CParser.GccAttributeListContext gccAttributeList()  
    throws RecognitionException
```

- **gccAttributeSpecifier**

```
public final CParser.GccAttributeSpecifierContext  
    gccAttributeSpecifier() throws RecognitionException
```

- **gccDeclaratorExtension**

```
public final CParser.GccDeclaratorExtensionContext  
    gccDeclaratorExtension() throws RecognitionException
```

- **genericAssociation**

```
public final CParser.GenericAssociationContext  
    genericAssociation() throws RecognitionException
```

- **genericAssocList**

```
public final CParser.GenericAssocListContext genericAssocList()  
    throws RecognitionException
```

- **genericSelection**

```
public final CParser.GenericSelectionContext genericSelection()  
    throws RecognitionException
```

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getRuleNames**

```
public java.lang.String[] getRuleNames()
```

- **getSerializedATN**

```
public java.lang.String getSerializedATN()
```

- **getTokenNames**

```
public java.lang.String[] getTokenNames()
```

- **getVocabulary**

```
public Vocabulary getVocabulary()
```

- **identifierList**

```
public final CParser.IdentifierListContext identifierList()  
    throws RecognitionException
```

- **inclusiveOrExpression**

```
public final CParser.InclusiveOrExpressionContext  
    inclusiveOrExpression() throws RecognitionException
```

- **initDeclarator**

```
public final CParser.InitDeclaratorContext initDeclarator()  
    throws RecognitionException
```

- **initDeclaratorList**

```
public final CParser.InitDeclaratorListContext  
    initDeclaratorList() throws RecognitionException
```

- **initializer**

```
public final CParser.InitializerContext initializer() throws  
    RecognitionException
```

- **initializerList**

```
public final CParser.InitializerListContext initializerList()  
    throws RecognitionException
```



- **iterationStatement**

```
public final CParser.IterationStatementContext  
    iterationStatement() throws RecognitionException
```

- **jumpStatement**

```
public final CParser.JumpStatementContext jumpStatement() throws  
    RecognitionException
```

- **labeledStatement**

```
public final CParser.LabeledStatementContext labeledStatement()  
    throws RecognitionException
```

- **logicalAndExpression**

```
public final CParser.LogicalAndExpressionContext  
    logicalAndExpression() throws RecognitionException
```

- **logicalOrExpression**

```
public final CParser.LogicalOrExpressionContext  
    logicalOrExpression() throws RecognitionException
```

- **multiplicativeExpression**

```
public final CParser.MultiplicativeExpressionContext  
    multiplicativeExpression() throws RecognitionException
```

- **nestedParenthesesBlock**

```
public final CParser.NestedParenthesesBlockContext  
    nestedParenthesesBlock() throws RecognitionException
```

- **parameterDeclaration**

```
public final CParser.ParameterDeclarationContext  
    parameterDeclaration() throws RecognitionException
```

- **parameterList**

```
public final CParser.ParameterListContext parameterList() throws
    RecognitionException
```

- **parameterTypeList**

```
public final CParser.ParameterTypeListContext parameterTypeList
    () throws RecognitionException
```

- **pointer**

```
public final CParser.PointerContext pointer() throws
    RecognitionException
```

- **postfixExpression**

```
public final CParser.PostfixExpressionContext postfixExpression
    () throws RecognitionException
```

- **primaryExpression**

```
public final CParser.PrimaryExpressionContext primaryExpression
    () throws RecognitionException
```

- **relationalExpression**

```
public final CParser.RelationalExpressionContext
    relationalExpression() throws RecognitionException
```

- **selectionStatement**

```
public final CParser.SelectionStatementContext
    selectionStatement() throws RecognitionException
```

- **sempred**

```
public boolean sempred(RuleContext _localctx, int ruleIndex, int
    predIndex)
```

- **shiftExpression**

```
public final CParser.ShiftExpressionContext shiftExpression()
    throws RecognitionException
```

- **specifierQualifierList**

```
public final CParser.SpecifierQualifierListContext  
    specifierQualifierList() throws RecognitionException
```

- **statement**

```
public final CParser.StatementContext statement() throws  
    RecognitionException
```

- **staticAssertDeclaration**

```
public final CParser.StaticAssertDeclarationContext  
    staticAssertDeclaration() throws RecognitionException
```

- **storageClassSpecifier**

```
public final CParser.StorageClassSpecifierContext  
    storageClassSpecifier() throws RecognitionException
```

- **structDeclaration**

```
public final CParser.StructDeclarationContext structDeclaration  
    () throws RecognitionException
```

- **structDeclarationList**

```
public final CParser.StructDeclarationListContext  
    structDeclarationList() throws RecognitionException
```

- **structDeclarator**

```
public final CParser.StructDeclaratorContext structDeclarator()  
    throws RecognitionException
```

- **structDeclaratorList**

```
public final CParser.StructDeclaratorListContext  
    structDeclaratorList() throws RecognitionException
```

- **structOrUnion**

```
public final CParser.StructOrUnionContext structOrUnion() throws
    RecognitionException
```

- **structOrUnionSpecifier**

```
public final CParser.StructOrUnionSpecifierContext
    structOrUnionSpecifier() throws RecognitionException
```

- **translationUnit**

```
public final CParser.TranslationUnitContext translationUnit()
    throws RecognitionException
```

- **typedefName**

```
public final CParser.TypedefNameContext typedefName() throws
    RecognitionException
```

- **typeName**

```
public final CParser.TypeNameContext typeName() throws
    RecognitionException
```

- **typeQualifier**

```
public final CParser.TypeQualifierContext typeQualifier() throws
    RecognitionException
```

- **typeQualifierList**

```
public final CParser.TypeQualifierListContext typeQualifierList
    () throws RecognitionException
```

- **typeSpecifier**

```
public final CParser.TypeSpecifierContext typeSpecifier() throws
    RecognitionException
```

- **unaryExpression**

```
public final CParser.UnaryExpressionContext unaryExpression()
    throws RecognitionException
```

- unaryOperator

```
public final CParser.UnaryOperatorContext unaryOperator() throws
    RecognitionException
```

## 2.7 Class CParser.AbstractDeclaratorContext

### 2.7.1 Declaration

```
public static class CParser.AbstractDeclaratorContext
    extends ParserRuleContext
```

### 2.7.2 Constructor summary

```
AbstractDeclaratorContext(ParserRuleContext, int)
```

### 2.7.3 Method summary

```
accept()
directAbstractDeclarator()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
gccDeclaratorExtension()
gccDeclaratorExtension(int)
getRuleIndex()
pointer()
```

### 2.7.4 Constructors

- AbstractDeclaratorContext

```
public AbstractDeclaratorContext(ParserRuleContext parent, int
    invokingState)
```

### 2.7.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- directAbstractDeclarator

```
public CParser.DirectAbstractDeclaratorContext
    directAbstractDeclarator()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **gccDeclaratorExtension**

```
public java.util.List gccDeclaratorExtension()
```

- **gccDeclaratorExtension**

```
public CParser.GccDeclaratorExtensionContext  
    gccDeclaratorExtension(int i)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **pointer**

```
public CParser.PointerContext pointer()
```

## 2.8 Class CParser.AdditiveExpressionContext

### 2.8.1 Declaration

```
public static class CParser.AdditiveExpressionContext  
    extends ParserRuleContext
```

### 2.8.2 Constructor summary

```
AdditiveExpressionContext(ParserRuleContext, int)
```

### 2.8.3 Method summary

```
accept()  
additiveExpression()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
multiplicativeExpression()
```

### 2.8.4 Constructors

- **AdditiveExpressionContext**

```
public AdditiveExpressionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.8.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **additiveExpression**

```
public CParser.AdditiveExpressionContext additiveExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **multiplicativeExpression**

```
public CParser.MultiplicativeExpressionContext  
    multiplicativeExpression()
```

## 2.9 Class CParser.AlignmentSpecifierContext

### 2.9.1 Declaration

```
public static class CParser.AlignmentSpecifierContext  
    extends ParserRuleContext
```

## 2.9.2 Constructor summary

**AlignmentSpecifierContext(ParserRuleContext, int)**

## 2.9.3 Method summary

**accept()**  
**constantExpression()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**  
**typeName()**

## 2.9.4 Constructors

- **AlignmentSpecifierContext**

```
public AlignmentSpecifierContext(ParserRuleContext parent, int
    invokingState)
```

## 2.9.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **constantExpression**

```
public CParser.ConstantExpressionContext constantExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```



## 2.10 Class CParser.AndExpressionContext

### 2.10.1 Declaration

```
public static class CParser.AndExpressionContext
    extends ParserRuleContext
```

### 2.10.2 Constructor summary

```
AndExpressionContext(ParserRuleContext, int)
```

### 2.10.3 Method summary

```
accept()
andExpression()
enterRule(ParseTreeListener)
equalityExpression()
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.10.4 Constructors

- **AndExpressionContext**

```
public AndExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.10.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **andExpression**

```
public CParser.AndExpressionContext andExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **equalityExpression**

```
public CParser.EqualityExpressionContext equalityExpression()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.11 Class CParser.ArgumentExpressionListContext

### 2.11.1 Declaration

```
public static class CParser.ArgumentExpressionListContext
    extends ParserRuleContext
```

### 2.11.2 Constructor summary

```
ArgumentExpressionListContext(ParserRuleContext, int)
```

### 2.11.3 Method summary

```
accept()
argumentExpressionList()
assignmentExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.11.4 Constructors

- **ArgumentExpressionListContext**

```
public ArgumentExpressionListContext(ParserRuleContext parent,
    int invokingState)
```

### 2.11.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **argumentExpressionList**

```
public CParser.ArgumentExpressionListContext
    argumentExpressionList()
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression
    ()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.12 Class CParser.AssignmentExpressionContext

### 2.12.1 Declaration

```
public static class CParser.AssignmentExpressionContext
    extends ParserRuleContext
```

### 2.12.2 Constructor summary

```
AssignmentExpressionContext(ParserRuleContext, int)
```

### 2.12.3 Method summary

```
accept()
assignmentExpression()
assignmentOperator()
conditionalExpression()
DigitSequence()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
unaryExpression()
```

### 2.12.4 Constructors

- **AssignmentExpressionContext**

```
public AssignmentExpressionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.12.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression  
    ()
```

- **assignmentOperator**

```
public CParser.AssignmentOperatorContext assignmentOperator()
```

- **conditionalExpression**

```
public CParser.ConditionalExpressionContext  
    conditionalExpression()
```

- **DigitSequence**

```
public TerminalNode DigitSequence()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- unaryExpression

```
public CParser.UnaryExpressionContext unaryExpression()
```

## 2.13 Class CParser.AssignmentOperatorContext

### 2.13.1 Declaration

```
public static class CParser.AssignmentOperatorContext  
    extends ParserRuleContext
```

### 2.13.2 Constructor summary

```
AssignmentOperatorContext(ParserRuleContext, int)
```

### 2.13.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.13.4 Constructors

- AssignmentOperatorContext

```
public AssignmentOperatorContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.13.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- `getRuleIndex`

```
public int getRuleIndex()
```

## 2.14 Class `CParser.AtomicTypeSpecifierContext`

### 2.14.1 Declaration

```
public static class CParser.AtomicTypeSpecifierContext  
    extends ParserRuleContext
```

### 2.14.2 Constructor summary

```
AtomicTypeSpecifierContext(ParserRuleContext, int)
```

### 2.14.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
typeName()
```

### 2.14.4 Constructors

- `AtomicTypeSpecifierContext`

```
public AtomicTypeSpecifierContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.14.5 Methods

- `accept`

```
public java.lang.Object accept(<any> visitor)
```

- `enterRule`

```
public void enterRule(ParseTreeListener listener)
```

- `exitRule`

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

## 2.15 Class CParser.BlockItemContext

### 2.15.1 Declaration

```
public static class CParser.BlockItemContext  
    extends ParserRuleContext
```

### 2.15.2 Constructor summary

```
BlockItemContext(ParserRuleContext, int)
```

### 2.15.3 Method summary

```
accept()  
declaration()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
statement()
```

### 2.15.4 Constructors

- **BlockItemContext**

```
public BlockItemContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.15.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declaration**

```
public CParser.DeclarationContext declaration()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **statement**

```
public CParser.StatementContext statement()
```

## 2.16 Class CParser.BlockItemListContext

### 2.16.1 Declaration

```
public static class CParser.BlockItemListContext
    extends ParserRuleContext
```

### 2.16.2 Constructor summary

```
BlockItemListContext(ParserRuleContext, int)
```

### 2.16.3 Method summary

```
accept()
blockItem()
blockItemList()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.16.4 Constructors

- **BlockItemListContext**

```
public BlockItemListContext(ParserRuleContext parent, int
    invokingState)
```



### 2.16.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **blockItem**

```
public CParser.BlockItemContext blockItem()
```

- **blockItemList**

```
public CParser.BlockItemListContext blockItemList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.17 Class CParser.CastExpressionContext

### 2.17.1 Declaration

```
public static class CParser.CastExpressionContext  
    extends ParserRuleContext
```

### 2.17.2 Constructor summary

```
CastExpressionContext(ParserRuleContext, int)
```

### 2.17.3 Method summary

```
accept()  
castExpression()  
DigitSequence()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
typeName()  
unaryExpression()
```

### 2.17.4 Constructors

- **CastExpressionContext**

```
public CastExpressionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.17.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **castExpression**

```
public CParser.CastExpressionContext castExpression()
```

- **DigitSequence**

```
public TerminalNode DigitSequence()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

- **unaryExpression**

```
public CParser.UnaryExpressionContext unaryExpression()
```

## 2.18 Class CParser.CompilationUnitContext

### 2.18.1 Declaration

```
public static class CParser.CompilationUnitContext  
    extends ParserRuleContext
```

### 2.18.2 Constructor summary

```
CompilationUnitContext(ParserRuleContext, int)
```

### 2.18.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
EOF()  
exitRule(ParseTreeListener)  
getRuleIndex()  
translationUnit()
```

### 2.18.4 Constructors

- **CompilationUnitContext**

```
public CompilationUnitContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.18.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **EOF**

```
public TerminalNode EOF()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **translationUnit**

```
public CParser.TranslationUnitContext translationUnit()
```

## 2.19 Class CParser.CompoundStatementContext

### 2.19.1 Declaration

```
public static class CParser.CompoundStatementContext
    extends ParserRuleContext
```

### 2.19.2 Constructor summary

```
CompoundStatementContext(ParserRuleContext, int)
```

### 2.19.3 Method summary

```
accept()
blockItemList()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.19.4 Constructors

- **CompoundStatementContext**

```
public CompoundStatementContext(ParserRuleContext parent, int
    invokingState)
```

### 2.19.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **blockItemList**

```
public CParser.BlockItemListContext blockItemList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.20 Class CParser.ConditionalExpressionContext

### 2.20.1 Declaration

```
public static class CParser.ConditionalExpressionContext  
    extends ParserRuleContext
```

### 2.20.2 Constructor summary

```
ConditionalExpressionContext(ParserRuleContext, int)
```

### 2.20.3 Method summary

```
accept()  
conditionalExpression()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
expression()  
getRuleIndex()  
logicalOrExpression()
```

### 2.20.4 Constructors

- **ConditionalExpressionContext**

```
public ConditionalExpressionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.20.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **conditionalExpression**

```
public CParser.ConditionalExpressionContext  
    conditionalExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **logicalOrExpression**

```
public CParser.LogicalOrExpressionContext logicalOrExpression()
```

## 2.21 Class CParser.ConstantExpressionContext

### 2.21.1 Declaration

```
public static class CParser.ConstantExpressionContext  
    extends ParserRuleContext
```

### 2.21.2 Constructor summary

**ConstantExpressionContext(ParserRuleContext, int)**

### 2.21.3 Method summary

**accept()**  
**conditionalExpression()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**

### 2.21.4 Constructors

- **ConstantExpressionContext**

```
public ConstantExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.21.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **conditionalExpression**

```
public CParser.ConditionalExpressionContext
    conditionalExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.22 Class CParser.DeclarationContext

### 2.22.1 Declaration

```
public static class CParser.DeclarationContext
    extends ParserRuleContext
```

### 2.22.2 Constructor summary

```
DeclarationContext(ParserRuleContext, int)
```

### 2.22.3 Method summary

```
accept()
declarationSpecifiers()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
initDeclaratorList()
staticAssertDeclaration()
```

### 2.22.4 Constructors

- DeclarationContext

```
public DeclarationContext(ParserRuleContext parent, int
    invokingState)
```

### 2.22.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- declarationSpecifiers

```
public CParser.DeclarationSpecifiersContext
    declarationSpecifiers()
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule



```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **initDeclaratorList**

```
public CParser.InitDeclaratorListContext initDeclaratorList()
```

- **staticAssertDeclaration**

```
public CParser.StaticAssertDeclarationContext  
    staticAssertDeclaration()
```

## 2.23 Class CParser.DeclarationListContext

### 2.23.1 Declaration

```
public static class CParser.DeclarationListContext  
    extends ParserRuleContext
```

### 2.23.2 Constructor summary

```
DeclarationListContext(ParserRuleContext, int)
```

### 2.23.3 Method summary

```
accept()  
declaration()  
declarationList()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.23.4 Constructors

- **DeclarationListContext**

```
public DeclarationListContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.23.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declaration**

```
public CParser.DeclarationContext declaration()
```

- **declarationList**

```
public CParser.DeclarationListContext declarationList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.24 Class CParser.DeclarationSpecifierContext

### 2.24.1 Declaration

```
public static class CParser.DeclarationSpecifierContext  
    extends ParserRuleContext
```

### 2.24.2 Constructor summary

```
DeclarationSpecifierContext(ParserRuleContext, int)
```

### 2.24.3 Method summary

```

accept()
alignmentSpecifier()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
functionSpecifier()
getRuleIndex()
storageClassSpecifier()
typeQualifier()
typeSpecifier()

```

### 2.24.4 Constructors

- **DeclarationSpecifierContext**

```

public DeclarationSpecifierContext(ParserRuleContext parent, int
    invokingState)

```

### 2.24.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **alignmentSpecifier**

```

public CParser.AlignmentSpecifierContext alignmentSpecifier()

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **functionSpecifier**

```

public CParser.FunctionSpecifierContext functionSpecifier()

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **storageClassSpecifier**

```
public CParser.StorageClassSpecifierContext  
    storageClassSpecifier()
```

- **typeQualifier**

```
public CParser.TypeQualifierContext typeQualifier()
```

- **typeSpecifier**

```
public CParser.TypeSpecifierContext typeSpecifier()
```

## 2.25 Class CParser.DeclarationSpecifiers2Context

### 2.25.1 Declaration

```
public static class CParser.DeclarationSpecifiers2Context  
    extends ParserRuleContext
```

### 2.25.2 Constructor summary

```
DeclarationSpecifiers2Context(ParserRuleContext, int)
```

### 2.25.3 Method summary

```
accept()  
declarationSpecifier()  
declarationSpecifier(int)  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.25.4 Constructors

- **DeclarationSpecifiers2Context**

```
public DeclarationSpecifiers2Context(ParserRuleContext parent,  
    int invokingState)
```

### 2.25.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declarationSpecifier**

```
public java.util.List declarationSpecifier()
```

- **declarationSpecifier**

```
public CParser.DeclarationSpecifierContext declarationSpecifier(
    int i)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.26 Class CParser.DeclarationSpecifiersContext

### 2.26.1 Declaration

```
public static class CParser.DeclarationSpecifiersContext
    extends ParserRuleContext
```

### 2.26.2 Constructor summary

```
DeclarationSpecifiersContext(ParserRuleContext, int)
```

### 2.26.3 Method summary

```
accept()
declarationSpecifier()
declarationSpecifier(int)
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.26.4 Constructors

- **DeclarationSpecifiersContext**

```
public DeclarationSpecifiersContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.26.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declarationSpecifier**

```
public java.util.List declarationSpecifier()
```

- **declarationSpecifier**

```
public CParser.DeclarationSpecifierContext declarationSpecifier(  
    int i)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.27 Class CParser.DeclaratorContext

### 2.27.1 Declaration

```
public static class CParser.DeclaratorContext  
    extends ParserRuleContext
```

### 2.27.2 Constructor summary

**DeclaratorContext(ParserRuleContext, int)**

### 2.27.3 Method summary

**accept()**  
**directDeclarator()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**gccDeclaratorExtension()**  
**gccDeclaratorExtension(int)**  
**getRuleIndex()**  
**pointer()**

### 2.27.4 Constructors

- **DeclaratorContext**

```
public DeclaratorContext(ParserRuleContext parent, int
    invokingState)
```

### 2.27.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **directDeclarator**

```
public CParser.DirectDeclaratorContext directDeclarator()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **gccDeclaratorExtension**

```
public java.util.List gccDeclaratorExtension()
```

- **gccDeclaratorExtension**

```
public CParser.GccDeclaratorExtensionContext
    gccDeclaratorExtension(int i)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **pointer**

```
public CParser.PointerContext pointer()
```

## 2.28 Class CParser.DesignationContext

### 2.28.1 Declaration

```
public static class CParser.DesignationContext
    extends ParserRuleContext
```

### 2.28.2 Constructor summary

```
DesignationContext(ParserRuleContext, int)
```

### 2.28.3 Method summary

```
accept()
designatorList()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.28.4 Constructors

- **DesignationContext**

```
public DesignationContext(ParserRuleContext parent, int
    invokingState)
```



### 2.28.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **designatorList**

```
public CParser.DesignatorListContext designatorList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.29 Class CParser.DesignatorContext

### 2.29.1 Declaration

```
public static class CParser.DesignatorContext  
    extends ParserRuleContext
```

### 2.29.2 Constructor summary

```
DesignatorContext(ParserRuleContext, int)
```

### 2.29.3 Method summary

```
accept()  
constantExpression()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
Identifier()
```

### 2.29.4 Constructors

- **DesignatorContext**

```
public DesignatorContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.29.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **constantExpression**

```
public CParser.ConstantExpressionContext constantExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

## 2.30 Class CParser.DesignatorListContext

### 2.30.1 Declaration

```
public static class CParser.DesignatorListContext  
    extends ParserRuleContext
```

### 2.30.2 Constructor summary

```
DesignatorListContext(ParserRuleContext, int)
```

### 2.30.3 Method summary

```
accept()  
designator()  
designatorList()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.30.4 Constructors

- **DesignatorListContext**

```
public DesignatorListContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.30.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **designator**

```
public CParser.DesignatorContext designator()
```

- **designatorList**

```
public CParser.DesignatorListContext designatorList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.31 Class CParser.DirectAbstractDeclaratorContext

### 2.31.1 Declaration

```
public static class CParser.DirectAbstractDeclaratorContext
    extends ParserRuleContext
```

### 2.31.2 Constructor summary

```
DirectAbstractDeclaratorContext(ParserRuleContext, int)
```

### 2.31.3 Method summary

```
abstractDeclarator()
accept()
assignmentExpression()
directAbstractDeclarator()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
gccDeclaratorExtension()
gccDeclaratorExtension(int)
getRuleIndex()
parameterTypeList()
typeQualifierList()
```

### 2.31.4 Constructors

- **DirectAbstractDeclaratorContext**

```
public DirectAbstractDeclaratorContext(ParserRuleContext parent,
    int invokingState)
```

### 2.31.5 Methods

- **abstractDeclarator**

```
public CParser.AbstractDeclaratorContext abstractDeclarator()
```

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression
    ()
```

- **directAbstractDeclarator**

```
public CParser.DirectAbstractDeclaratorContext
    directAbstractDeclarator ()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **gccDeclaratorExtension**

```
public java.util.List gccDeclaratorExtension ()
```

- **gccDeclaratorExtension**

```
public CParser.GccDeclaratorExtensionContext
    gccDeclaratorExtension(int i)
```

- **getRuleIndex**

```
public int getRuleIndex ()
```

- **parameterTypeList**

```
public CParser.ParameterTypeListContext parameterTypeList ()
```

- **typeQualifierList**

```
public CParser.TypeQualifierListContext typeQualifierList ()
```

## 2.32 Class CParser.DirectDeclaratorContext

### 2.32.1 Declaration

```
public static class CParser.DirectDeclaratorContext
    extends ParserRuleContext
```

### 2.32.2 Constructor summary

**DirectDeclaratorContext(ParserRuleContext, int)**

### 2.32.3 Method summary

**accept()**  
**assignmentExpression()**  
**declarator()**  
**DigitSequence()**  
**directDeclarator()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**  
**Identifier()**  
**identifierList()**  
**parameterTypeList()**  
**pointer()**  
**typeQualifierList()**  
**typeSpecifier()**

### 2.32.4 Constructors

- **DirectDeclaratorContext**

```

public DirectDeclaratorContext ( ParserRuleContext parent , int
    invokingState )

```

### 2.32.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **assignmentExpression**

```

public CParser.AssignmentExpressionContext assignmentExpression
    ()

```

- **declarator**

```

public CParser.DeclaratorContext declarator()

```

- **DigitSequence**

```
public TerminalNode DigitSequence()
```

- **directDeclarator**

```
public CParser.DirectDeclaratorContext directDeclarator()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **identifierList**

```
public CParser.IdentifierListContext identifierList()
```

- **parameterTypeList**

```
public CParser.ParameterTypeListContext parameterTypeList()
```

- **pointer**

```
public CParser.PointerContext pointer()
```

- **typeQualifierList**

```
public CParser.TypeQualifierListContext typeQualifierList()
```

- **typeSpecifier**

```
public CParser.TypeSpecifierContext typeSpecifier()
```

## 2.33 Class CParser.EnumerationConstantContext

### 2.33.1 Declaration

```
public static class CParser.EnumerationConstantContext
    extends ParserRuleContext
```

### 2.33.2 Constructor summary

```
EnumerationConstantContext(ParserRuleContext, int)
```

### 2.33.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
Identifier()
```

### 2.33.4 Constructors

- EnumerationConstantContext

```
public EnumerationConstantContext(ParserRuleContext parent, int
    invokingState)
```

### 2.33.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- getRuleIndex

```
public int getRuleIndex()
```



- Identifier

```
public TerminalNode Identifier()
```

## 2.34 Class CParser.EnumeratorContext

### 2.34.1 Declaration

```
public static class CParser.EnumeratorContext
    extends ParserRuleContext
```

### 2.34.2 Constructor summary

```
EnumeratorContext(ParserRuleContext, int)
```

### 2.34.3 Method summary

```
accept()
constantExpression()
enterRule(ParseTreeListener)
enumerationConstant()
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.34.4 Constructors

- EnumeratorContext

```
public EnumeratorContext(ParserRuleContext parent, int
    invokingState)
```

### 2.34.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- constantExpression

```
public CParser.ConstantExpressionContext constantExpression()
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- **enumerationConstant**

```
public CParser.EnumerationConstantContext enumerationConstant()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.35 Class CParser.EnumeratorListContext

### 2.35.1 Declaration

```
public static class CParser.EnumeratorListContext  
    extends ParserRuleContext
```

### 2.35.2 Constructor summary

```
EnumeratorListContext(ParserRuleContext, int)
```

### 2.35.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
enumerator()  
enumeratorList()  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.35.4 Constructors

- **EnumeratorListContext**

```
public EnumeratorListContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.35.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **enumerator**

```
public CParser.EnumeratorContext enumerator()
```

- **enumeratorList**

```
public CParser.EnumeratorListContext enumeratorList()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.36 Class CParser.EnumSpecifierContext

### 2.36.1 Declaration

```
public static class CParser.EnumSpecifierContext  
    extends ParserRuleContext
```

### 2.36.2 Constructor summary

```
EnumSpecifierContext(ParserRuleContext, int)
```

### 2.36.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
enumeratorList()  
exitRule(ParseTreeListener)  
getRuleIndex()  
Identifier()
```

### 2.36.4 Constructors

- **EnumSpecifierContext**

```
public EnumSpecifierContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.36.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **enumeratorList**

```
public CParser.EnumeratorListContext enumeratorList()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

## 2.37 Class CParser.EqualityExpressionContext

### 2.37.1 Declaration

```
public static class CParser.EqualityExpressionContext  
    extends ParserRuleContext
```

### 2.37.2 Constructor summary

```
EqualityExpressionContext(ParserRuleContext, int)
```

### 2.37.3 Method summary

```

accept()
enterRule(ParseTreeListener)
equalityExpression()
exitRule(ParseTreeListener)
getRuleIndex()
relationalExpression()

```

### 2.37.4 Constructors

- EqualityExpressionContext

```

public EqualityExpressionContext(ParserRuleContext parent, int
    invokingState)

```

### 2.37.5 Methods

- accept

```

public java.lang.Object accept(<any> visitor)

```

- enterRule

```

public void enterRule(ParseTreeListener listener)

```

- equalityExpression

```

public CParser.EqualityExpressionContext equalityExpression()

```

- exitRule

```

public void exitRule(ParseTreeListener listener)

```

- getRuleIndex

```

public int getRuleIndex()

```

- relationalExpression

```

public CParser.RelationalExpressionContext relationalExpression
    ()

```

## 2.38 Class CParser.ExclusiveOrExpressionContext

### 2.38.1 Declaration

```
public static class CParser.ExclusiveOrExpressionContext
extends ParserRuleContext
```

### 2.38.2 Constructor summary

```
ExclusiveOrExpressionContext(ParserRuleContext, int)
```

### 2.38.3 Method summary

```
accept()
andExpression()
enterRule(ParseTreeListener)
exclusiveOrExpression()
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.38.4 Constructors

- **ExclusiveOrExpressionContext**

```
public ExclusiveOrExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.38.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **andExpression**

```
public CParser.AndExpressionContext andExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exclusiveOrExpression**

```
public CParser.ExclusiveOrExpressionContext
    exclusiveOrExpression()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.39 Class CParser.ExpressionContext

### 2.39.1 Declaration

```
public static class CParser.ExpressionContext  
    extends ParserRuleContext
```

### 2.39.2 Constructor summary

```
ExpressionContext(ParserRuleContext, int)
```

### 2.39.3 Method summary

```
accept()  
assignmentExpression()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
expression()  
getRuleIndex()
```

### 2.39.4 Constructors

- **ExpressionContext**

```
public ExpressionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.39.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression
    ()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.40 Class CParser.ExpressionStatementContext

### 2.40.1 Declaration

```
public static class CParser.ExpressionStatementContext
    extends ParserRuleContext
```

### 2.40.2 Constructor summary

```
ExpressionStatementContext(ParserRuleContext, int)
```

### 2.40.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
expression()
getRuleIndex()
```

### 2.40.4 Constructors

- **ExpressionStatementContext**

```
public ExpressionStatementContext(ParserRuleContext parent, int
    invokingState)
```



### 2.40.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.41 Class CParser.ExternalDeclarationContext

### 2.41.1 Declaration

```
public static class CParser.ExternalDeclarationContext  
    extends ParserRuleContext
```

### 2.41.2 Constructor summary

```
ExternalDeclarationContext(ParserRuleContext, int)
```

### 2.41.3 Method summary

```
accept()  
declaration()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
functionDefinition()  
getRuleIndex()
```

### 2.41.4 Constructors

- **ExternalDeclarationContext**

```
public ExternalDeclarationContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.41.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declaration**

```
public CParser.DeclarationContext declaration()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **functionDefinition**

```
public CParser.FunctionDefinitionContext functionDefinition()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.42 Class CParser.ForConditionContext

### 2.42.1 Declaration

```
public static class CParser.ForConditionContext  
    extends ParserRuleContext
```

### 2.42.2 Constructor summary

```
ForConditionContext(ParserRuleContext, int)
```

### 2.42.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
expression()  
forDeclaration()  
forExpression()  
forExpression(int)  
getRuleIndex()
```

### 2.42.4 Constructors

- **ForConditionContext**

```
public ForConditionContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.42.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **forDeclaration**

```
public CParser.ForDeclarationContext forDeclaration()
```

- **forExpression**

```
public java.util.List forExpression()
```

- **forExpression**

```
public CParser.ForExpressionContext forExpression(int i)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.43 Class CParser.ForDeclarationContext

### 2.43.1 Declaration

```
public static class CParser.ForDeclarationContext
    extends ParserRuleContext
```

### 2.43.2 Constructor summary

```
ForDeclarationContext(ParserRuleContext, int)
```

### 2.43.3 Method summary

```
accept()
declarationSpecifiers()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
initDeclaratorList()
```

### 2.43.4 Constructors

- **ForDeclarationContext**

```
public ForDeclarationContext(ParserRuleContext parent, int
    invokingState)
```

### 2.43.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declarationSpecifiers**

```
public CParser.DeclarationSpecifiersContext
    declarationSpecifiers()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **initDeclaratorList**

```
public CParser.InitDeclaratorListContext initDeclaratorList()
```

## 2.44 Class CParser.ForExpressionContext

### 2.44.1 Declaration

```
public static class CParser.ForExpressionContext
    extends ParserRuleContext
```

### 2.44.2 Constructor summary

```
ForExpressionContext(ParserRuleContext, int)
```

### 2.44.3 Method summary

```
accept()
assignmentExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
forExpression()
getRuleIndex()
```

### 2.44.4 Constructors

- **ForExpressionContext**

```
public ForExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.44.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression()  
()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **forExpression**

```
public CParser.ForExpressionContext forExpression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.45 Class CParser.FunctionDefinitionContext

### 2.45.1 Declaration

```
public static class CParser.FunctionDefinitionContext  
extends ParserRuleContext
```

### 2.45.2 Constructor summary

```
FunctionDefinitionContext(ParserRuleContext, int)
```

### 2.45.3 Method summary

```

accept()
compoundStatement()
declarationList()
declarationSpecifiers()
declarator()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()

```

### 2.45.4 Constructors

- **FunctionDefinitionContext**

```

public FunctionDefinitionContext (ParserRuleContext parent , int
    invokingState)

```

### 2.45.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **compoundStatement**

```

public CParser.CompoundStatementContext compoundStatement()

```

- **declarationList**

```

public CParser.DeclarationListContext declarationList()

```

- **declarationSpecifiers**

```

public CParser.DeclarationSpecifiersContext
    declarationSpecifiers()

```

- **declarator**

```

public CParser.DeclaratorContext declarator()

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.46 Class CParser.FunctionSpecifierContext

### 2.46.1 Declaration

```
public static class CParser.FunctionSpecifierContext  
    extends ParserRuleContext
```

### 2.46.2 Constructor summary

```
FunctionSpecifierContext(ParserRuleContext, int)
```

### 2.46.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
gccAttributeSpecifier()  
getRuleIndex()  
Identifier()
```

### 2.46.4 Constructors

- **FunctionSpecifierContext**

```
public FunctionSpecifierContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.46.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```



- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **gccAttributeSpecifier**

```
public CParser.GccAttributeSpecifierContext  
    gccAttributeSpecifier()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

## 2.47 Class CParser.GccAttributeContext

### 2.47.1 Declaration

```
public static class CParser.GccAttributeContext  
    extends ParserRuleContext
```

### 2.47.2 Constructor summary

```
GccAttributeContext(ParserRuleContext, int)
```

### 2.47.3 Method summary

```
accept()  
argumentExpressionList()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.47.4 Constructors

- **GccAttributeContext**

```
public GccAttributeContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.47.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **argumentExpressionList**

```
public CParser.ArgumentExpressionListContext  
    argumentExpressionList()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.48 Class CParser.GccAttributeListContext

### 2.48.1 Declaration

```
public static class CParser.GccAttributeListContext  
    extends ParserRuleContext
```

### 2.48.2 Constructor summary

```
GccAttributeListContext(ParserRuleContext, int)
```

### 2.48.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
gccAttribute()  
gccAttribute(int)  
getRuleIndex()
```

#### 2.48.4 Constructors

- **GccAttributeListContext**

```
public GccAttributeListContext (ParserRuleContext parent , int
    invokingState)
```

#### 2.48.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule (ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule (ParseTreeListener listener)
```

- **gccAttribute**

```
public java.util.List gccAttribute()
```

- **gccAttribute**

```
public CParser.GccAttributeContext gccAttribute(int i)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

### 2.49 Class CParser.GccAttributeSpecifierContext

#### 2.49.1 Declaration

```
public static class CParser.GccAttributeSpecifierContext
    extends ParserRuleContext
```

#### 2.49.2 Constructor summary

```
GccAttributeSpecifierContext(ParserRuleContext, int)
```

### 2.49.3 Method summary

```

accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
gccAttributeList()
getRuleIndex()

```

### 2.49.4 Constructors

- **GccAttributeSpecifierContext**

```

public GccAttributeSpecifierContext(ParserRuleContext parent, int
    invokingState)

```

### 2.49.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **gccAttributeList**

```

public CParser.GccAttributeListContext gccAttributeList()

```

- **getRuleIndex**

```

public int getRuleIndex()

```

## 2.50 Class CParser.GccDeclaratorExtensionContext

### 2.50.1 Declaration

```

public static class CParser.GccDeclaratorExtensionContext
    extends ParserRuleContext

```

### 2.50.2 Constructor summary

**GccDeclaratorExtensionContext(ParserRuleContext, int)**

### 2.50.3 Method summary

**accept()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**gccAttributeSpecifier()**  
**getRuleIndex()**  
**StringLiteral()**  
**StringLiteral(int)**

### 2.50.4 Constructors

- **GccDeclaratorExtensionContext**

```

public GccDeclaratorExtensionContext (ParserRuleContext parent ,
    int invokingState )

```

### 2.50.5 Methods

- **accept**

```

public java.lang.Object accept (<any> visitor )

```

- **enterRule**

```

public void enterRule (ParseTreeListener listener )

```

- **exitRule**

```

public void exitRule (ParseTreeListener listener )

```

- **gccAttributeSpecifier**

```

public CParser.GccAttributeSpecifierContext
    gccAttributeSpecifier ()

```

- **getRuleIndex**

```

public int getRuleIndex ()

```

- **StringLiteral**

```
public java.util.List StringLiteral()
```

- **StringLiteral**

```
public TerminalNode StringLiteral(int i)
```

## 2.51 Class CParser.GenericAssociationContext

### 2.51.1 Declaration

```
public static class CParser.GenericAssociationContext
    extends ParserRuleContext
```

### 2.51.2 Constructor summary

```
GenericAssociationContext(ParserRuleContext, int)
```

### 2.51.3 Method summary

```
accept()
assignmentExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
typeName()
```

### 2.51.4 Constructors

- **GenericAssociationContext**

```
public GenericAssociationContext(ParserRuleContext parent, int
    invokingState)
```

### 2.51.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression
    ()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

## 2.52 Class CParser.GenericAssocListContext

### 2.52.1 Declaration

```
public static class CParser.GenericAssocListContext
    extends ParserRuleContext
```

### 2.52.2 Constructor summary

```
GenericAssocListContext(ParserRuleContext, int)
```

### 2.52.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
genericAssociation()
genericAssocList()
getRuleIndex()
```

### 2.52.4 Constructors

- **GenericAssocListContext**

```
public GenericAssocListContext(ParserRuleContext parent, int
    invokingState)
```

### 2.52.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **genericAssociation**

```
public CParser.GenericAssociationContext genericAssociation()
```

- **genericAssocList**

```
public CParser.GenericAssocListContext genericAssocList()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.53 Class CParser.GenericSelectionContext

### 2.53.1 Declaration

```
public static class CParser.GenericSelectionContext
    extends ParserRuleContext
```

### 2.53.2 Constructor summary

```
GenericSelectionContext(ParserRuleContext, int)
```

### 2.53.3 Method summary

```
accept()
assignmentExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
genericAssocList()
getRuleIndex()
```



### 2.53.4 Constructors

- **GenericSelectionContext**

```
public GenericSelectionContext (ParserRuleContext parent, int  
    invokingState)
```

### 2.53.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **assignmentExpression**

```
public CParser.AssignmentExpressionContext assignmentExpression  
    ()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **genericAssocList**

```
public CParser.GenericAssocListContext genericAssocList()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.54 Class CParser.IdentifierListContext

### 2.54.1 Declaration

```
public static class CParser.IdentifierListContext  
    extends ParserRuleContext
```

### 2.54.2 Constructor summary

**IdentifierListContext(ParserRuleContext, int)**

### 2.54.3 Method summary

**accept()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**  
**Identifier()**  
**identifierList()**

### 2.54.4 Constructors

- **IdentifierListContext**

```

public IdentifierListContext(ParserRuleContext parent, int
    invokingState)

```

### 2.54.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **Identifier**

```

public TerminalNode Identifier()

```

- **identifierList**

```

public CParser.IdentifierListContext identifierList()

```

## 2.55 Class CParser.InclusiveOrExpressionContext

### 2.55.1 Declaration

```
public static class CParser.InclusiveOrExpressionContext
extends ParserRuleContext
```

### 2.55.2 Constructor summary

```
InclusiveOrExpressionContext(ParserRuleContext, int)
```

### 2.55.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exclusiveOrExpression()
exitRule(ParseTreeListener)
getRuleIndex()
inclusiveOrExpression()
```

### 2.55.4 Constructors

- InclusiveOrExpressionContext

```
public InclusiveOrExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.55.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exclusiveOrExpression

```
public CParser.ExclusiveOrExpressionContext
    exclusiveOrExpression()
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **inclusiveOrExpression**

```
public CParser.InclusiveOrExpressionContext  
    inclusiveOrExpression()
```

## 2.56 Class CParser.InitDeclaratorContext

### 2.56.1 Declaration

```
public static class CParser.InitDeclaratorContext  
    extends ParserRuleContext
```

### 2.56.2 Constructor summary

```
InitDeclaratorContext(ParserRuleContext, int)
```

### 2.56.3 Method summary

```
accept()  
declarator()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
initializer()
```

### 2.56.4 Constructors

- **InitDeclaratorContext**

```
public InitDeclaratorContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.56.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **declarator**

```
public CParser.DeclaratorContext declarator()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **initializer**

```
public CParser.InitializerContext initializer()
```

## 2.57 Class CParser.InitDeclaratorListContext

### 2.57.1 Declaration

```
public static class CParser.InitDeclaratorListContext  
    extends ParserRuleContext
```

### 2.57.2 Constructor summary

```
InitDeclaratorListContext(ParserRuleContext, int)
```

### 2.57.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
initDeclarator()  
initDeclaratorList()
```

### 2.57.4 Constructors

- **InitDeclaratorListContext**

```
public InitDeclaratorListContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.57.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **initDeclarator**

```
public CParser.InitDeclaratorContext initDeclarator()
```

- **initDeclaratorList**

```
public CParser.InitDeclaratorListContext initDeclaratorList()
```

## 2.58 Class CParser.InitializerContext

### 2.58.1 Declaration

```
public static class CParser.InitializerContext  
    extends ParserRuleContext
```

### 2.58.2 Constructor summary

```
InitializerContext(ParserRuleContext, int)
```

### 2.58.3 Method summary

```

accept()
assignmentExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
initializerList()

```

### 2.58.4 Constructors

- **InitializerContext**

```

public InitializerContext(ParserRuleContext parent, int
    invokingState)

```

### 2.58.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **assignmentExpression**

```

public CParser.AssignmentExpressionContext assignmentExpression
    ()

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **initializerList**

```

public CParser.InitializerListContext initializerList()

```

## 2.59 Class CParser.InitializerListContext

### 2.59.1 Declaration

```
public static class CParser.InitializerListContext
extends ParserRuleContext
```

### 2.59.2 Constructor summary

```
InitializerListContext(ParserRuleContext, int)
```

### 2.59.3 Method summary

```
accept()
designation()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
initializer()
initializerList()
```

### 2.59.4 Constructors

- InitializerListContext

```
public InitializerListContext(ParserRuleContext parent, int
    invokingState)
```

### 2.59.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- designation

```
public CParser.DesignationContext designation()
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule



```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **initializer**

```
public CParser.InitializerContext initializer()
```

- **initializerList**

```
public CParser.InitializerListContext initializerList()
```

## 2.60 Class CParser.IterationStatementContext

### 2.60.1 Declaration

```
public static class CParser.IterationStatementContext
    extends ParserRuleContext
```

### 2.60.2 Constructor summary

```
IterationStatementContext(ParserRuleContext, int)
```

### 2.60.3 Method summary

```
accept()
Do()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
expression()
For()
forCondition()
getRuleIndex()
statement()
While()
```

### 2.60.4 Constructors

- **IterationStatementContext**

```
public IterationStatementContext(ParserRuleContext parent, int
    invokingState)
```

### 2.60.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **Do**

```
public TerminalNode Do()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **For**

```
public TerminalNode For()
```

- **forCondition**

```
public CParser.ForConditionContext forCondition()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **statement**

```
public CParser.StatementContext statement()
```

- **While**

```
public TerminalNode While()
```

## 2.61 Class CParser.JumpStatementContext

### 2.61.1 Declaration

```
public static class CParser.JumpStatementContext
    extends ParserRuleContext
```

### 2.61.2 Constructor summary

```
JumpStatementContext(ParserRuleContext, int)
```

### 2.61.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
expression()
getRuleIndex()
Identifier()
unaryExpression()
```

### 2.61.4 Constructors

- **JumpStatementContext**

```
public JumpStatementContext(ParserRuleContext parent, int
    invokingState)
```

### 2.61.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **unaryExpression**

```
public CParser.UnaryExpressionContext unaryExpression()
```

## 2.62 Class CParser.LabeledStatementContext

### 2.62.1 Declaration

```
public static class CParser.LabeledStatementContext
    extends ParserRuleContext
```

### 2.62.2 Constructor summary

```
LabeledStatementContext(ParserRuleContext, int)
```

### 2.62.3 Method summary

```
accept()
constantExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
Identifier()
statement()
```

### 2.62.4 Constructors

- **LabeledStatementContext**

```
public LabeledStatementContext(ParserRuleContext parent, int
    invokingState)
```

### 2.62.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **constantExpression**

```
public CParser.ConstantExpressionContext constantExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **statement**

```
public CParser.StatementContext statement()
```

## 2.63 Class CParser.LogicalAndExpressionContext

### 2.63.1 Declaration

```
public static class CParser.LogicalAndExpressionContext  
    extends ParserRuleContext
```

### 2.63.2 Constructor summary

```
LogicalAndExpressionContext(ParserRuleContext, int)
```

### 2.63.3 Method summary

```

accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
inclusiveOrExpression()
logicalAndExpression()

```

### 2.63.4 Constructors

- **LogicalAndExpressionContext**

```

public LogicalAndExpressionContext(ParserRuleContext parent, int
    invokingState)

```

### 2.63.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **inclusiveOrExpression**

```

public CParser.InclusiveOrExpressionContext
    inclusiveOrExpression()

```

- **logicalAndExpression**

```

public CParser.LogicalAndExpressionContext logicalAndExpression
    ()

```

## 2.64 Class CParser.LogicalOrExpressionContext

### 2.64.1 Declaration

```
public static class CParser.LogicalOrExpressionContext
    extends ParserRuleContext
```

### 2.64.2 Constructor summary

```
LogicalOrExpressionContext(ParserRuleContext, int)
```

### 2.64.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
logicalAndExpression()
logicalOrExpression()
```

### 2.64.4 Constructors

- LogicalOrExpressionContext

```
public LogicalOrExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.64.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- getRuleIndex

```
public int getRuleIndex()
```

- **logicalAndExpression**

```
public CParser.LogicalAndExpressionContext logicalAndExpression
    ()
```

- **logicalOrExpression**

```
public CParser.LogicalOrExpressionContext logicalOrExpression()
```

## 2.65 Class CParser.MultiplicativeExpressionContext

### 2.65.1 Declaration

```
public static class CParser.MultiplicativeExpressionContext
    extends ParserRuleContext
```

### 2.65.2 Constructor summary

```
MultiplicativeExpressionContext(ParserRuleContext, int)
```

### 2.65.3 Method summary

```
accept()
castExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
multiplicativeExpression()
```

### 2.65.4 Constructors

- **MultiplicativeExpressionContext**

```
public MultiplicativeExpressionContext(ParserRuleContext parent,
    int invokingState)
```

### 2.65.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **castExpression**



```

    public CParser.CastExpressionContext castExpression()

    • enterRule

    public void enterRule(ParseTreeListener listener)

    • exitRule

    public void exitRule(ParseTreeListener listener)

    • getRuleIndex

    public int getRuleIndex()

    • multiplicativeExpression

    public CParser.MultiplicativeExpressionContext
        multiplicativeExpression()

```

## 2.66 Class CParser.NestedParenthesesBlockContext

### 2.66.1 Declaration

```

public static class CParser.NestedParenthesesBlockContext
    extends ParserRuleContext

```

### 2.66.2 Constructor summary

```

    NestedParenthesesBlockContext(ParserRuleContext, int)

```

### 2.66.3 Method summary

```

    accept()
    enterRule(ParseTreeListener)
    exitRule(ParseTreeListener)
    getRuleIndex()
    nestedParenthesesBlock()
    nestedParenthesesBlock(int)

```

### 2.66.4 Constructors

- **NestedParenthesesBlockContext**

```

    public NestedParenthesesBlockContext(ParserRuleContext parent,
        int invokingState)

```

### 2.66.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **nestedParenthesesBlock**

```
public java.util.List nestedParenthesesBlock()
```

- **nestedParenthesesBlock**

```
public CParser.NestedParenthesesBlockContext  
    nestedParenthesesBlock(int i)
```

## 2.67 Class CParser.ParameterDeclarationContext

### 2.67.1 Declaration

```
public static class CParser.ParameterDeclarationContext  
    extends ParserRuleContext
```

### 2.67.2 Constructor summary

```
ParameterDeclarationContext(ParserRuleContext, int)
```

### 2.67.3 Method summary

```

abstractDeclarator()
accept()
declarationSpecifiers()
declarationSpecifiers2()
declarator()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()

```

### 2.67.4 Constructors

- **ParameterDeclarationContext**

```

public ParameterDeclarationContext (ParserRuleContext parent, int
    invokingState)

```

### 2.67.5 Methods

- **abstractDeclarator**

```

public CParser.AbstractDeclaratorContext abstractDeclarator ()

```

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **declarationSpecifiers**

```

public CParser.DeclarationSpecifiersContext
    declarationSpecifiers ()

```

- **declarationSpecifiers2**

```

public CParser.DeclarationSpecifiers2Context
    declarationSpecifiers2 ()

```

- **declarator**

```

public CParser.DeclaratorContext declarator ()

```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.68 Class CParser.ParameterListContext

### 2.68.1 Declaration

```
public static class CParser.ParameterListContext
    extends ParserRuleContext
```

### 2.68.2 Constructor summary

```
ParameterListContext(ParserRuleContext, int)
```

### 2.68.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
parameterDeclaration()
parameterList()
```

### 2.68.4 Constructors

- **ParameterListContext**

```
public ParameterListContext(ParserRuleContext parent, int
    invokingState)
```

### 2.68.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **parameterDeclaration**

```
public CParser.ParameterDeclarationContext parameterDeclaration()  
()
```

- **parameterList**

```
public CParser.ParameterListContext parameterList()
```

## 2.69 Class CParser.ParameterTypeListContext

### 2.69.1 Declaration

```
public static class CParser.ParameterTypeListContext  
extends ParserRuleContext
```

### 2.69.2 Constructor summary

```
ParameterTypeListContext(ParserRuleContext, int)
```

### 2.69.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
parameterList()
```

#### 2.69.4 Constructors

- **ParameterTypeListContext**

```
public ParameterTypeListContext(ParserRuleContext parent, int  
    invokingState)
```

#### 2.69.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **parameterList**

```
public CParser.ParameterListContext parameterList()
```

### 2.70 Class CParser.PointerContext

#### 2.70.1 Declaration

```
public static class CParser.PointerContext  
    extends ParserRuleContext
```

#### 2.70.2 Constructor summary

```
PointerContext(ParserRuleContext, int)
```

### 2.70.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
pointer()  
typeQualifierList()
```

### 2.70.4 Constructors

- **PointerContext**

```
public PointerContext(ParserRuleContext parent, int invokingState  
    )
```

### 2.70.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **pointer**

```
public CParser.PointerContext pointer()
```

- **typeQualifierList**

```
public CParser.TypeQualifierListContext typeQualifierList()
```

## 2.71 Class CParser.PostfixExpressionContext

### 2.71.1 Declaration

```
public static class CParser.PostfixExpressionContext
extends ParserRuleContext
```

### 2.71.2 Constructor summary

```
PostfixExpressionContext(ParserRuleContext, int)
```

### 2.71.3 Method summary

```
accept()
argumentExpressionList()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
expression()
getRuleIndex()
Identifier()
initializerList()
postfixExpression()
primaryExpression()
typeName()
```

### 2.71.4 Constructors

- **PostfixExpressionContext**

```
public PostfixExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.71.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **argumentExpressionList**

```
public CParser.ArgumentExpressionListContext
    argumentExpressionList()
```

- **enterRule**



```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **initializerList**

```
public CParser.InitializerListContext initializerList()
```

- **postfixExpression**

```
public CParser.PostfixExpressionContext postfixExpression()
```

- **primaryExpression**

```
public CParser.PrimaryExpressionContext primaryExpression()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

## 2.72 Class CParser.PrimaryExpressionContext

### 2.72.1 Declaration

```
public static class CParser.PrimaryExpressionContext  
extends ParserRuleContext
```

**2.72.2 Constructor summary**

**PrimaryExpressionContext(ParserRuleContext, int)**

**2.72.3 Method summary**

**accept()**  
**compoundStatement()**  
**Constant()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**expression()**  
**genericSelection()**  
**getRuleIndex()**  
**Identifier()**  
**StringLiteral()**  
**StringLiteral(int)**  
**typeName()**  
**unaryExpression()**

**2.72.4 Constructors**

- **PrimaryExpressionContext**

```
public PrimaryExpressionContext (ParserRuleContext parent , int
    invokingState)
```

**2.72.5 Methods**

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **compoundStatement**

```
public CParser.CompoundStatementContext compoundStatement()
```

- **Constant**

```
public TerminalNode Constant()
```

- **enterRule**

```
public void enterRule (ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expression**

```
public CParser.ExpressionContext expression()
```

- **genericSelection**

```
public CParser.GenericSelectionContext genericSelection()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **StringLiteral**

```
public java.util.List StringLiteral()
```

- **StringLiteral**

```
public TerminalNode StringLiteral(int i)
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

- **unaryExpression**

```
public CParser.UnaryExpressionContext unaryExpression()
```

## 2.73 Class CParser.RelationalExpressionContext

### 2.73.1 Declaration

```
public static class CParser.RelationalExpressionContext
    extends ParserRuleContext
```

### 2.73.2 Constructor summary

**RelationalExpressionContext(ParserRuleContext, int)**

### 2.73.3 Method summary

```

accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
relationalExpression()
shiftExpression()

```

### 2.73.4 Constructors

- **RelationalExpressionContext**

```

public RelationalExpressionContext(ParserRuleContext parent, int
    invokingState)

```

### 2.73.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **relationalExpression**

```

public CParser.RelationalExpressionContext relationalExpression
    ()

```

- **shiftExpression**

```

public CParser.ShiftExpressionContext shiftExpression()

```

## 2.74 Class CParser.SelectionStatementContext

### 2.74.1 Declaration

```
public static class CParser.SelectionStatementContext
    extends ParserRuleContext
```

### 2.74.2 Constructor summary

```
SelectionStatementContext(ParserRuleContext, int)
```

### 2.74.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
expression()
getRuleIndex()
statement()
statement(int)
```

### 2.74.4 Constructors

- SelectionStatementContext

```
public SelectionStatementContext(ParserRuleContext parent, int
    invokingState)
```

### 2.74.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- expression

```
public CParser.ExpressionContext expression()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **statement**

```
public java.util.List statement()
```

- **statement**

```
public CParser.StatementContext statement(int i)
```

## 2.75 Class CParser.ShiftExpressionContext

### 2.75.1 Declaration

```
public static class CParser.ShiftExpressionContext
    extends ParserRuleContext
```

### 2.75.2 Constructor summary

```
ShiftExpressionContext(ParserRuleContext, int)
```

### 2.75.3 Method summary

```
accept()
additiveExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
shiftExpression()
```

### 2.75.4 Constructors

- **ShiftExpressionContext**

```
public ShiftExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.75.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **additiveExpression**

```
public CParser.AdditiveExpressionContext additiveExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **shiftExpression**

```
public CParser.ShiftExpressionContext shiftExpression()
```

## 2.76 Class CParser.SpecifierQualifierListContext

### 2.76.1 Declaration

```
public static class CParser.SpecifierQualifierListContext
    extends ParserRuleContext
```

### 2.76.2 Constructor summary

```
SpecifierQualifierListContext(ParserRuleContext, int)
```

### 2.76.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
specifierQualifierList()
typeQualifier()
typeSpecifier()
```

### 2.76.4 Constructors

- **SpecifierQualifierListContext**

```
public SpecifierQualifierListContext(ParserRuleContext parent,
    int invokingState)
```

### 2.76.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **specifierQualifierList**

```
public CParser.SpecifierQualifierListContext
    specifierQualifierList()
```

- **typeQualifier**

```
public CParser.TypeQualifierContext typeQualifier()
```

- **typeSpecifier**

```
public CParser.TypeSpecifierContext typeSpecifier()
```

## 2.77 Class CParser.StatementContext

### 2.77.1 Declaration

```
public static class CParser.StatementContext
    extends ParserRuleContext
```



**2.77.2 Constructor summary**

**StatementContext(ParserRuleContext, int)**

**2.77.3 Method summary**

**accept()**  
**compoundStatement()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**expressionStatement()**  
**getRuleIndex()**  
**iterationStatement()**  
**jumpStatement()**  
**labeledStatement()**  
**logicalOrExpression()**  
**logicalOrExpression(int)**  
**selectionStatement()**

**2.77.4 Constructors**

- **StatementContext**

```
public StatementContext(ParserRuleContext parent, int
    invokingState)
```

**2.77.5 Methods**

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **compoundStatement**

```
public CParser.CompoundStatementContext compoundStatement()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **expressionStatement**

```
public CParser.ExpressionStatementContext expressionStatement()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **iterationStatement**

```
public CParser.IterationStatementContext iterationStatement()
```

- **jumpStatement**

```
public CParser.JumpStatementContext jumpStatement()
```

- **labeledStatement**

```
public CParser.LabeledStatementContext labeledStatement()
```

- **logicalOrExpression**

```
public java.util.List logicalOrExpression()
```

- **logicalOrExpression**

```
public CParser.LogicalOrExpressionContext logicalOrExpression(
    int i)
```

- **selectionStatement**

```
public CParser.SelectionStatementContext selectionStatement()
```

## 2.78 Class CParser.StaticAssertDeclarationContext

### 2.78.1 Declaration

```
public static class CParser.StaticAssertDeclarationContext
    extends ParserRuleContext
```

### 2.78.2 Constructor summary

**StaticAssertDeclarationContext(ParserRuleContext, int)**

### 2.78.3 Method summary

**accept()**  
**constantExpression()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**  
**StringLiteral()**  
**StringLiteral(int)**

### 2.78.4 Constructors

- **StaticAssertDeclarationContext**

```

public StaticAssertDeclarationContext(ParserRuleContext parent,
    int invokingState)

```

### 2.78.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **constantExpression**

```

public CParser.ConstantExpressionContext constantExpression()

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **StringLiteral**

```
public java.util.List StringLiteral()
```

- **StringLiteral**

```
public TerminalNode StringLiteral(int i)
```

## 2.79 Class CParser.StorageClassSpecifierContext

### 2.79.1 Declaration

```
public static class CParser.StorageClassSpecifierContext
    extends ParserRuleContext
```

### 2.79.2 Constructor summary

```
StorageClassSpecifierContext(ParserRuleContext, int)
```

### 2.79.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.79.4 Constructors

- **StorageClassSpecifierContext**

```
public StorageClassSpecifierContext(ParserRuleContext parent, int
    invokingState)
```

### 2.79.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.80 Class CParser.StructDeclarationContext

### 2.80.1 Declaration

```
public static class CParser.StructDeclarationContext
    extends ParserRuleContext
```

### 2.80.2 Constructor summary

```
StructDeclarationContext(ParserRuleContext, int)
```

### 2.80.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
specifierQualifierList()
staticAssertDeclaration()
structDeclaratorList()
```

### 2.80.4 Constructors

- **StructDeclarationContext**

```
public StructDeclarationContext(ParserRuleContext parent, int
    invokingState)
```

### 2.80.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **specifierQualifierList**

```
public CParser.SpecifierQualifierListContext  
    specifierQualifierList()
```

- **staticAssertDeclaration**

```
public CParser.StaticAssertDeclarationContext  
    staticAssertDeclaration()
```

- **structDeclaratorList**

```
public CParser.StructDeclaratorListContext structDeclaratorList  
    ()
```

## 2.81 Class CParser.StructDeclarationListContext

### 2.81.1 Declaration

```
public static class CParser.StructDeclarationListContext  
    extends ParserRuleContext
```

### 2.81.2 Constructor summary

```
StructDeclarationListContext(ParserRuleContext, int)
```

### 2.81.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
structDeclaration()  
structDeclarationList()
```

### 2.81.4 Constructors

- **StructDeclarationListContext**

```
public StructDeclarationListContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.81.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **structDeclaration**

```
public CParser.StructDeclarationContext structDeclaration()
```

- **structDeclarationList**

```
public CParser.StructDeclarationListContext  
    structDeclarationList()
```

## 2.82 Class CParser.StructDeclaratorContext

### 2.82.1 Declaration

```
public static class CParser.StructDeclaratorContext  
    extends ParserRuleContext
```

### 2.82.2 Constructor summary

**StructDeclaratorContext(ParserRuleContext, int)**

### 2.82.3 Method summary

**accept()**  
**constantExpression()**  
**declarator()**  
**enterRule(ParseTreeListener)**  
**exitRule(ParseTreeListener)**  
**getRuleIndex()**

### 2.82.4 Constructors

- **StructDeclaratorContext**

```

public StructDeclaratorContext (ParserRuleContext parent ,int
    invokingState)

```

### 2.82.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **constantExpression**

```

public CParser.ConstantExpressionContext constantExpression()

```

- **declarator**

```

public CParser.DeclaratorContext declarator()

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```



## 2.83 Class CParser.StructDeclaratorListContext

### 2.83.1 Declaration

```
public static class CParser.StructDeclaratorListContext
    extends ParserRuleContext
```

### 2.83.2 Constructor summary

```
StructDeclaratorListContext(ParserRuleContext, int)
```

### 2.83.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
structDeclarator()
structDeclaratorList()
```

### 2.83.4 Constructors

- **StructDeclaratorListContext**

```
public StructDeclaratorListContext(ParserRuleContext parent, int
    invokingState)
```

### 2.83.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **structDeclarator**

```
public CParser.StructDeclaratorContext structDeclarator()
```

- **structDeclaratorList**

```
public CParser.StructDeclaratorListContext structDeclaratorList  
()
```

## 2.84 Class CParser.StructOrUnionContext

### 2.84.1 Declaration

```
public static class CParser.StructOrUnionContext  
extends ParserRuleContext
```

### 2.84.2 Constructor summary

```
StructOrUnionContext(ParserRuleContext, int)
```

### 2.84.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.84.4 Constructors

- **StructOrUnionContext**

```
public StructOrUnionContext(ParserRuleContext parent, int  
invokingState)
```

### 2.84.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## 2.85 Class CParser.StructOrUnionSpecifierContext

### 2.85.1 Declaration

```
public static class CParser.StructOrUnionSpecifierContext  
    extends ParserRuleContext
```

### 2.85.2 Constructor summary

```
StructOrUnionSpecifierContext(ParserRuleContext, int)
```

### 2.85.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()  
Identifier()  
structDeclarationList()  
structOrUnion()
```

### 2.85.4 Constructors

- **StructOrUnionSpecifierContext**

```
public StructOrUnionSpecifierContext(ParserRuleContext parent,  
    int invokingState)
```

### 2.85.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **structDeclarationList**

```
public CParser.StructDeclarationListContext  
    structDeclarationList()
```

- **structOrUnion**

```
public CParser.StructOrUnionContext structOrUnion()
```

## 2.86 Class CParser.TranslationUnitContext

### 2.86.1 Declaration

```
public static class CParser.TranslationUnitContext  
    extends ParserRuleContext
```

### 2.86.2 Constructor summary

```
TranslationUnitContext(ParserRuleContext, int)
```

### 2.86.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
externalDeclaration()  
getRuleIndex()  
translationUnit()
```

### 2.86.4 Constructors

- **TranslationUnitContext**

```
public TranslationUnitContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.86.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **externalDeclaration**

```
public CParser.ExternalDeclarationContext externalDeclaration()
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **translationUnit**

```
public CParser.TranslationUnitContext translationUnit()
```

## 2.87 Class CParser.TypedefNameContext

### 2.87.1 Declaration

```
public static class CParser.TypedefNameContext  
    extends ParserRuleContext
```

### 2.87.2 Constructor summary

```
TypedefNameContext(ParserRuleContext, int)
```

### 2.87.3 Method summary

```

accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
Identifier()

```

### 2.87.4 Constructors

- **TypedefNameContext**

```

public TypedefNameContext(ParserRuleContext parent, int
    invokingState)

```

### 2.87.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**

```

public int getRuleIndex()

```

- **Identifier**

```

public TerminalNode Identifier()

```

## 2.88 Class CParser.TypeNameContext

### 2.88.1 Declaration

```

public static class CParser.TypeNameContext
    extends ParserRuleContext

```

### 2.88.2 Constructor summary

```
TypeNameContext(ParserRuleContext, int)
```

### 2.88.3 Method summary

```
abstractDeclarator()
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
specifierQualifierList()
```

### 2.88.4 Constructors

- **TypeNameContext**

```
public TypeNameContext(ParserRuleContext parent, int
    invokingState)
```

### 2.88.5 Methods

- **abstractDeclarator**

```
public CParser.AbstractDeclaratorContext abstractDeclarator()
```

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **specifierQualifierList**

```
public CParser.SpecifierQualifierListContext
    specifierQualifierList()
```

## 2.89 Class CParser.TypeQualifierContext

### 2.89.1 Declaration

```
public static class CParser.TypeQualifierContext
    extends ParserRuleContext
```

### 2.89.2 Constructor summary

```
TypeQualifierContext(ParserRuleContext, int)
```

### 2.89.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
```

### 2.89.4 Constructors

- **TypeQualifierContext**

```
public TypeQualifierContext(ParserRuleContext parent, int
    invokingState)
```

### 2.89.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```



## 2.90 Class CParser.TypeQualifierListContext

### 2.90.1 Declaration

```
public static class CParser.TypeQualifierListContext
    extends ParserRuleContext
```

### 2.90.2 Constructor summary

```
TypeQualifierListContext(ParserRuleContext, int)
```

### 2.90.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
typeQualifier()
typeQualifierList()
```

### 2.90.4 Constructors

- TypeQualifierListContext

```
public TypeQualifierListContext(ParserRuleContext parent, int
    invokingState)
```

### 2.90.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- getRuleIndex

```
public int getRuleIndex()
```

- `typeQualifier`

```
public CParser.TypeQualifierContext typeQualifier()
```

- `typeQualifierList`

```
public CParser.TypeQualifierListContext typeQualifierList()
```

## 2.91 Class `CParser.TypeSpecifierContext`

### 2.91.1 Declaration

```
public static class CParser.TypeSpecifierContext
    extends ParserRuleContext
```

### 2.91.2 Constructor summary

```
TypeSpecifierContext(ParserRuleContext, int)
```

### 2.91.3 Method summary

```
accept()
atomicTypeSpecifier()
constantExpression()
enterRule(ParseTreeListener)
enumSpecifier()
exitRule(ParseTreeListener)
getRuleIndex()
pointer()
structOrUnionSpecifier()
typedefName()
typeSpecifier()
```

### 2.91.4 Constructors

- `TypeSpecifierContext`

```
public TypeSpecifierContext(ParserRuleContext parent, int
    invokingState)
```

### 2.91.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **atomicTypeSpecifier**

```
public CParser.AtomicTypeSpecifierContext atomicTypeSpecifier()
```

- **constantExpression**

```
public CParser.ConstantExpressionContext constantExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **enumSpecifier**

```
public CParser.EnumSpecifierContext enumSpecifier()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **pointer**

```
public CParser.PointerContext pointer()
```

- **structOrUnionSpecifier**

```
public CParser.StructOrUnionSpecifierContext  
    structOrUnionSpecifier()
```

- **typedefName**

```
public CParser.TypedefNameContext typedefName()
```

- **typeSpecifier**

```
public CParser.TypeSpecifierContext typeSpecifier()
```

## 2.92 Class CParser.UnaryExpressionContext

### 2.92.1 Declaration

```
public static class CParser.UnaryExpressionContext
    extends ParserRuleContext
```

### 2.92.2 Constructor summary

```
UnaryExpressionContext(ParserRuleContext, int)
```

### 2.92.3 Method summary

```
accept()
castExpression()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
Identifier()
postfixExpression()
typeName()
unaryExpression()
unaryOperator()
```

### 2.92.4 Constructors

- **UnaryExpressionContext**

```
public UnaryExpressionContext(ParserRuleContext parent, int
    invokingState)
```

### 2.92.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **castExpression**

```
public CParser.CastExpressionContext castExpression()
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **Identifier**

```
public TerminalNode Identifier()
```

- **postfixExpression**

```
public CParser.PostfixExpressionContext postfixExpression()
```

- **typeName**

```
public CParser.TypeNameContext typeName()
```

- **unaryExpression**

```
public CParser.UnaryExpressionContext unaryExpression()
```

- **unaryOperator**

```
public CParser.UnaryOperatorContext unaryOperator()
```

## 2.93 Class CParser.UnaryOperatorContext

### 2.93.1 Declaration

```
public static class CParser.UnaryOperatorContext  
    extends ParserRuleContext
```

### 2.93.2 Constructor summary

```
UnaryOperatorContext(ParserRuleContext, int)
```

### 2.93.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
exitRule(ParseTreeListener)  
getRuleIndex()
```

### 2.93.4 Constructors

- **UnaryOperatorContext**

```
public UnaryOperatorContext(ParserRuleContext parent, int  
    invokingState)
```

### 2.93.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

## Chapter 3

# Package hu.bme.mit.mcmec.c2xta

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Classes	
<b>C2Xta</b> .....	??
The type C 2 xta.	

### 3.1 Class C2Xta

The type C 2 xta.

#### 3.1.1 Declaration

```
public class C2Xta
    extends java.lang.Object
```

#### 3.1.2 Constructor summary

**C2Xta()**

#### 3.1.3 Method summary

**run(File, File)** Run.  
**transform(String, String)** Transform.

#### 3.1.4 Constructors

- **C2Xta**

```
public C2Xta()
```

### 3.1.5 Methods

- **run**

```
public void run(java.io.File source,java.io.File out)
```

- **Description**

Run.

- **Parameters**

- \* **source** – the source

- \* **out** – the out

- **transform**

```
public static void transform(java.lang.String sourceName,java.  
lang.String outName)
```

- **Description**

Transform.

- **Parameters**

- \* **sourceName** – the source name

- \* **outName** – the out name



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hu.bme.mit.mcmec.model2uppaal

Levente Bajcsi

November 2, 2018

# Contents

# Chapter 1

## Package

## hu.bme.mit.mcmec.model2uppaal

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<b>Model2Uppaal</b> ..... ??	
The type Model 2 uppaal.	

### 1.1 Class Model2Uppaal

The type Model 2 uppaal.

#### 1.1.1 Declaration

```
public class Model2Uppaal
    extends java.lang.Object
```

#### 1.1.2 Constructor summary

Model2Uppaal()

#### 1.1.3 Method summary

transform(String, String, String) Transform.

#### 1.1.4 Constructors

- Model2Uppaal

```
public Model2Uppaal()
```

### 1.1.5 Methods

- **transform**

```
public static void transform(java.lang.String xta,java.lang.  
String issues,java.lang.String outName)
```

- **Description**

Transform.

- **Parameters**

- \* **xta** – the xta
- \* **issues** – the issues
- \* **outName** – the out name

## Chapter 2

# Package

## hu.bme.mit.mcmec.model2uppaal.dsl

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The type Issues dsl manager.	
<b>MyIssueVisitor</b> ..... ??	
The type My issue visitor.	

### 2.1 Class IssuesDslManager

The type Issues dsl manager.

#### 2.1.1 Declaration

```
public class IssuesDslManager
    extends java.lang.Object
```

#### 2.1.2 Constructor summary

**IssuesDslManager()**

#### 2.1.3 Method summary

**parseIssues(InputStream)** Parse issues map.

#### 2.1.4 Constructors

- **IssuesDslManager**

```
public IssuesDslManager()
```

### 2.1.5 Methods

- **parseIssues**

```
public static java.util.Map parseIssues(java.io.InputStream
    inputStream)
```

- **Description**

Parse issues map.

- **Parameters**

\* **inputStream** – the input stream

- **Returns** – the map

## 2.2 Class MyIssueVisitor

The type My issue visitor.

### 2.2.1 Declaration

```
public class MyIssueVisitor
    extends hu.bme.mit.mcmecc.model2uppaal.dsl.gen.IssueBaseVisitor
```

### 2.2.2 Method summary

**getIssueList()** Gets issue list.

**visitIssue(IssueParser.IssueContext)** Visit issue object.

### 2.2.3 Methods

- **getIssueList**

```
public java.util.Map getIssueList()
```

- **Description**

Gets issue list.

- **Returns** – the issue list

- **visitIssue**

```
public java.lang.Object visitIssue(gen.IssueParser.IssueContext
    ctx)
```

- **Description**  
Visit issue object.
- **Parameters**
  - \* `ctx` – the `ctx`
- **Returns** – the object

#### 2.2.4 Members inherited from class `IssueBaseVisitor`

```
hu.bme.mit.mcmecc.model2uppaal.dsl.gen.IssueBaseVisitor
• public Object visitIo(IssueParser.IoContext ctx)
• public Object visitIssue(IssueParser.IssueContext ctx)
• public Object visitIssues(IssueParser.IssuesContext ctx)
• public Object visitThread(IssueParser.ThreadContext ctx)
• public Object visitThreads(IssueParser.ThreadsContext ctx)
```

## Chapter 3

### Package

hu.bme.mit.mcmec.model2uppaal.dsl.gen

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This interface defines a complete listener for a parse tree produced by IssueParser .	
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This interface defines a complete generic visitor for a parse tree produced by IssueParser .	
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This class provides an empty implementation of <b>IssueListener</b> , which can be extended to create a listener which only needs to handle a subset of the available methods.	
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<b>IssueParser.Context</b> .....	??
<b>IssueParser.Context</b> .....	??
<b>IssueParser.Context</b> .....	??
<b>IssueParser.Context</b> .....	??
<b>IssueParser.Context</b> .....	??



## 3.1 Interface IssueListener

This interface defines a complete listener for a parse tree produced by `IssueParser`.

### 3.1.1 Declaration

```
public interface IssueListener
```

### 3.1.2 All known subinterfaces

`IssueBaseListener`

### 3.1.3 All classes known to implement interface

`IssueBaseListener`

### 3.1.4 Method summary

```
enterIo(IssueParser.IoContext) Enter a parse tree produced by io() .
enterIssue(IssueParser.IssueContext) Enter a parse tree produced by issue()
.
enterIssues(IssueParser.IssuesContext) Enter a parse tree produced by
  issues() .
enterThread(IssueParser.ThreadContext) Enter a parse tree produced by
  thread() .
enterThreads(IssueParser.ThreadsContext) Enter a parse tree produced by
  threads() .
exitIo(IssueParser.IoContext) Exit a parse tree produced by io() .
exitIssue(IssueParser.IssueContext) Exit a parse tree produced by issue() .
exitIssues(IssueParser.IssuesContext) Exit a parse tree produced by issues()
.
exitThread(IssueParser.ThreadContext) Exit a parse tree produced by
  thread() .
exitThreads(IssueParser.ThreadsContext) Exit a parse tree produced by
  threads() .
```

### 3.1.5 Methods

- **enterIo**

```
void enterIo(IssueParser.IoContext ctx)
```

- **Description**

Enter a parse tree produced by `io()`.

- **Parameters**

\* `ctx` – the parse tree

- **enterIssue**

```
void enterIssue(IssueParser.IssueContext ctx)
```

- **Description**

Enter a parse tree produced by `issue()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterIssues**

```
void enterIssues(IssueParser.IssuesContext ctx)
```

- **Description**

Enter a parse tree produced by `issues()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterThread**

```
void enterThread(IssueParser.ThreadContext ctx)
```

- **Description**

Enter a parse tree produced by `thread()` .

- **Parameters**

\* `ctx` – the parse tree

- **enterThreads**

```
void enterThreads(IssueParser.ThreadsContext ctx)
```

- **Description**

Enter a parse tree produced by `threads()` .

- **Parameters**

\* `ctx` – the parse tree

- **exitIo**

```
void exitIo(IssueParser.IoContext ctx)
```

- **Description**  
Exit a parse tree produced by `io()` .
- **Parameters**  
\* `ctx` – the parse tree

- **exitIssue**

```
void exitIssue (IssueParser.IssueContext ctx)
```

- **Description**  
Exit a parse tree produced by `issue()` .
- **Parameters**  
\* `ctx` – the parse tree

- **exitIssues**

```
void exitIssues (IssueParser.IssuesContext ctx)
```

- **Description**  
Exit a parse tree produced by `issues()` .
- **Parameters**  
\* `ctx` – the parse tree

- **exitThread**

```
void exitThread (IssueParser.ThreadContext ctx)
```

- **Description**  
Exit a parse tree produced by `thread()` .
- **Parameters**  
\* `ctx` – the parse tree

- **exitThreads**

```
void exitThreads (IssueParser.ThreadsContext ctx)
```

- **Description**  
Exit a parse tree produced by `threads()` .
- **Parameters**  
\* `ctx` – the parse tree

## 3.2 Interface IssueVisitor

This interface defines a complete generic visitor for a parse tree produced by `IssueParser` .

### 3.2.1 Declaration

```
public interface IssueVisitor
```

### 3.2.2 All known subinterfaces

`MyIssueVisitor` , `IssueBaseVisitor`

### 3.2.3 All classes known to implement interface

`IssueBaseVisitor`

### 3.2.4 Method summary

```
visitIo(IssueParser.IoContext) Visit a parse tree produced by io() .
visitIssue(IssueParser.IssueContext) Visit a parse tree produced by issue() .
visitIssues(IssueParser.IssuesContext) Visit a parse tree produced by issues()
.
visitThread(IssueParser.ThreadContext) Visit a parse tree produced by
thread() .
visitThreads(IssueParser.ThreadsContext) Visit a parse tree produced by
threads() .
```

### 3.2.5 Methods

- **visitIo**

```
java.lang.Object visitIo(IssueParser.IoContext ctx)
```

- **Description**

Visit a parse tree produced by `io()` .

- **Parameters**

\* `ctx` – the parse tree

- **Returns** – the visitor result

- **visitIssue**

```
java.lang.Object visitIssue(IssueParser.IssueContext ctx)
```

- **Description**

Visit a parse tree produced by `issue()` .

- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitIssues**

```
java.lang.Object visitIssues(IssueParser.IssuesContext ctx)
```

- **Description**
  - Visit a parse tree produced by `issues()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitThread**

```
java.lang.Object visitThread(IssueParser.ThreadContext ctx)
```

- **Description**
  - Visit a parse tree produced by `thread()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

- **visitThreads**

```
java.lang.Object visitThreads(IssueParser.ThreadsContext ctx)
```

- **Description**
  - Visit a parse tree produced by `threads()` .
- **Parameters**
  - \* `ctx` – the parse tree
- **Returns** – the visitor result

### 3.3 Class IssueBaseListener

This class provides an empty implementation of `IssueListener` , which can be extended to create a listener which only needs to handle a subset of the available methods.

### 3.3.1 Declaration

```
public class IssueBaseListener
  extends java.lang.Object implements IssueListener
```

### 3.3.2 Constructor summary

```
IssueBaseListener()
```

### 3.3.3 Method summary

```
enterEveryRule(ParserRuleContext)
enterIo(IssueParser.IoContext)
enterIssue(IssueParser.IssueContext)
enterIssues(IssueParser.IssuesContext)
enterThread(IssueParser.ThreadContext)
enterThreads(IssueParser.ThreadsContext)
exitEveryRule(ParserRuleContext)
exitIo(IssueParser.IoContext)
exitIssue(IssueParser.IssueContext)
exitIssues(IssueParser.IssuesContext)
exitThread(IssueParser.ThreadContext)
exitThreads(IssueParser.ThreadsContext)
visitErrorNode(ErrorNode)
visitTerminal(TerminalNode)
```

### 3.3.4 Constructors

- **IssueBaseListener**

```
public IssueBaseListener()
```

### 3.3.5 Methods

- **enterEveryRule**

```
public void enterEveryRule(ParserRuleContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterIo**

```
public void enterIo(IssueParser.IoContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterIssue**

```
public void enterIssue(IssueParser.IssueContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterIssues**

```
public void enterIssues(IssueParser.IssuesContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterThread**

```
public void enterThread(IssueParser.ThreadContext ctx)
```

- **Description**

The default implementation does nothing.

- **enterThreads**

```
public void enterThreads(IssueParser.ThreadsContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitEveryRule**

```
public void exitEveryRule(ParserRuleContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitIo**

```
public void exitIo(IssueParser.IoContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitIssue**

```
public void exitIssue(IssueParser.IssueContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitIssues**

```
public void exitIssues(IssueParser.IssuesContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitThread**

```
public void exitThread(IssueParser.ThreadContext ctx)
```

- **Description**

The default implementation does nothing.

- **exitThreads**

```
public void exitThreads(IssueParser.ThreadsContext ctx)
```

- **Description**

The default implementation does nothing.

- **visitErrorNode**

```
public void visitErrorNode(ErrorNode node)
```

- **Description**

The default implementation does nothing.

- **visitTerminal**

```
public void visitTerminal(TerminalNode node)
```

- **Description**

The default implementation does nothing.



## 3.4 Class IssueBaseVisitor

This class provides an empty implementation of `IssueVisitor`, which can be extended to create a visitor which only needs to handle a subset of the available methods.

### 3.4.1 Declaration

```
public class IssueBaseVisitor
  extends <any> implements IssueVisitor
```

### 3.4.2 All known subclasses

MyIssueVisitor

### 3.4.3 Constructor summary

`IssueBaseVisitor()`

### 3.4.4 Method summary

```
visitIo(IssueParser.IoContext)
visitIssue(IssueParser.IssueContext)
visitIssues(IssueParser.IssuesContext)
visitThread(IssueParser.ThreadContext)
visitThreads(IssueParser.ThreadsContext)
```

### 3.4.5 Constructors

- `IssueBaseVisitor`

```
public IssueBaseVisitor()
```

### 3.4.6 Methods

- `visitIo`

```
public java.lang.Object visitIo(IssueParser.IoContext ctx)
```

#### – Description

The default implementation returns the result of calling `IssueBaseVisitor` on `ctx`.

- `visitIssue`

```
public java.lang.Object visitIssue(IssueParser.IssueContext ctx)
```

- **Description**

The default implementation returns the result of calling `IssueBaseVisitor` on `ctx`.

- **visitIssues**

```
public java.lang.Object visitIssues(IssueParser.IssuesContext
    ctx)
```

- **Description**

The default implementation returns the result of calling `IssueBaseVisitor` on `ctx`.

- **visitThread**

```
public java.lang.Object visitThread(IssueParser.ThreadContext
    ctx)
```

- **Description**

The default implementation returns the result of calling `IssueBaseVisitor` on `ctx`.

- **visitThreads**

```
public java.lang.Object visitThreads(IssueParser.ThreadsContext
    ctx)
```

- **Description**

The default implementation returns the result of calling `IssueBaseVisitor` on `ctx`.

## 3.5 Class IssueLexer

### 3.5.1 Declaration

```
public class IssueLexer
    extends Lexer
```

### 3.5.2 Field summary

```
_ATN
_decisionToDFA
_serializedATN
_sharedContextCache
ACQ
COLON
FENCE
```

**ISSUE**  
**LCURLY**  
**LOAD**  
modeNames  
**NAME**  
**NEWLINE**  
**RCURLY**  
**RELA**  
**RELE**  
ruleNames  
**SEMICOLON**  
**SEQ**  
**STORE**  
tokenNames  
**VOCABULARY**  
**WHITESPACE**

### 3.5.3 Constructor summary

IssueLexer(CharStream)

### 3.5.4 Method summary

getATN()  
getGrammarFileName()  
getModeNames()  
getRuleNames()  
getSerializedATN()  
getTokenNames()  
getVocabulary()

### 3.5.5 Fields

- protected static final DFA[] \_decisionToDFA
- protected static final PredictionContextCache \_sharedContextCache
- public static final int **LCURLY**
- public static final int **RCURLY**
- public static final int **COLON**
- public static final int **SEMICOLON**
- public static final int **ISSUE**
- public static final int **LOAD**
- public static final int **STORE**

- `public static final int RELA`
- `public static final int ACQ`
- `public static final int SEQ`
- `public static final int RELE`
- `public static final int FENCE`
- `public static final int NAME`
- `public static final int WHITESPACE`
- `public static final int NEWLINE`
- `public static java.lang.String[] modeNames`
- `public static final java.lang.String[] ruleNames`
- `public static final Vocabulary VOCABULARY`
- `public static final java.lang.String[] tokenNames`
- `public static final java.lang.String _serializedATN`
- `public static final ATN _ATN`

### 3.5.6 Constructors

- **IssueLexer**

```
public IssueLexer(CharStream input)
```

### 3.5.7 Methods

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getModeNames**

```
public java.lang.String [] getModeNames()
```

- `getRuleNames`

```
public java.lang.String [] getRuleNames ()
```

- `getSerializedATN`

```
public java.lang.String getSerializedATN ()
```

- `getTokenNames`

```
public java.lang.String [] getTokenNames ()
```

- `getVocabulary`

```
public Vocabulary getVocabulary ()
```

## 3.6 Class IssueParser

### 3.6.1 Declaration

```
public class IssueParser
    extends Parser
```

### 3.6.2 Field summary

```
_ATN
_decisionToDFA
_serializedATN
_sharedContextCache
ACQ
COLON
FENCE
ISSUE
LCURLY
LOAD
NAME
NEWLINE
RCURLY
RELA
RELE
RULE_io
RULE_issue
RULE_issues
```

**RULE\_thread**  
**RULE\_threads**  
**ruleNames**  
**SEMICOLON**  
**SEQ**  
**STORE**  
**tokenNames**  
**VOCABULARY**  
**WHITESPACE**

### 3.6.3 Constructor summary

**IssueParser(TokenStream)**

### 3.6.4 Method summary

**getATN()**  
**getGrammarFileName()**  
**getRuleNames()**  
**getSerializedATN()**  
**getTokenNames()**  
**getVocabulary()**  
**io()**  
**issue()**  
**issues()**  
**thread()**  
**threads()**

### 3.6.5 Fields

- **protected static final DFA[] \_decisionToDFA**
- **protected static final PredictionContextCache \_sharedContextCache**
- **public static final int LCURLY**
- **public static final int RCURLY**
- **public static final int COLON**
- **public static final int SEMICOLON**
- **public static final int ISSUE**
- **public static final int LOAD**
- **public static final int STORE**
- **public static final int RELA**
- **public static final int ACQ**

- `public static final int SEQ`
- `public static final int RELE`
- `public static final int FENCE`
- `public static final int NAME`
- `public static final int WHITESPACE`
- `public static final int NEWLINE`
- `public static final int RULE_issues`
- `public static final int RULE_issue`
- `public static final int RULE_threads`
- `public static final int RULE_thread`
- `public static final int RULE_io`
- `public static final java.lang.String[] ruleNames`
- `public static final Vocabulary VOCABULARY`
- `public static final java.lang.String[] tokenNames`
- `public static final java.lang.String _serializedATN`
- `public static final ATN _ATN`

### 3.6.6 Constructors

- **IssueParser**

```
public IssueParser(TokenStream input)
```

### 3.6.7 Methods

- **getATN**

```
public ATN getATN()
```

- **getGrammarFileName**

```
public java.lang.String getGrammarFileName()
```

- **getRuleNames**

```
public java.lang.String [] getRuleNames()
```

- **getSerializedATN**

```
public java.lang.String getSerializedATN()
```

- **getTokenNames**

```
public java.lang.String [] getTokenNames()
```

- **getVocabulary**

```
public Vocabulary getVocabulary()
```

- **io**

```
public final IssueParser.IoContext io() throws  
RecognitionException
```

- **issue**

```
public final IssueParser.IssueContext issue() throws  
RecognitionException
```

- **issues**

```
public final IssueParser.IssuesContext issues() throws  
RecognitionException
```

- **thread**

```
public final IssueParser.ThreadContext thread() throws  
RecognitionException
```

- **threads**

```
public final IssueParser.ThreadsContext threads() throws  
RecognitionException
```



## 3.7 Class IssueParser.IoContext

### 3.7.1 Declaration

```
public static class IssueParser.IoContext
  extends ParserRuleContext
```

### 3.7.2 Constructor summary

```
IoContext(ParserRuleContext, int)
```

### 3.7.3 Method summary

```
accept()
ACQ()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
LOAD()
RELA()
RELE()
SEQ()
STORE()
WHITESPACE()
```

### 3.7.4 Constructors

- IoContext

```
public IoContext(ParserRuleContext parent, int invokingState)
```

### 3.7.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- ACQ

```
public TerminalNode ACQ()
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **LOAD**

```
public TerminalNode LOAD()
```

- **RELA**

```
public TerminalNode RELA()
```

- **RELE**

```
public TerminalNode RELE()
```

- **SEQ**

```
public TerminalNode SEQ()
```

- **STORE**

```
public TerminalNode STORE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE()
```

## 3.8 Class IssueParser.IssueContext

### 3.8.1 Declaration

```
public static class IssueParser.IssueContext  
    extends ParserRuleContext
```

### 3.8.2 Constructor summary

```
IssueContext(ParserRuleContext, int)
```

### 3.8.3 Method summary

```

accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
ISSUE()
LCURLY()
NAME()
NEWLINE()
RCURLY()
threads()
WHITESPACE()
WHITESPACE(int)

```

### 3.8.4 Constructors

- IssueContext

```

public IssueContext(ParserRuleContext parent, int invokingState)

```

### 3.8.5 Methods

- accept

```

public java.lang.Object accept(<any> visitor)

```

- enterRule

```

public void enterRule(ParseTreeListener listener)

```

- exitRule

```

public void exitRule(ParseTreeListener listener)

```

- getRuleIndex

```

public int getRuleIndex()

```

- ISSUE

```

public TerminalNode ISSUE()

```

- LCURLY

```
public TerminalNode LCURLY()
```

- **NAME**

```
public TerminalNode NAME()
```

- **NEWLINE**

```
public TerminalNode NEWLINE()
```

- **RCURLY**

```
public TerminalNode RCURLY()
```

- **threads**

```
public IssueParser.ThreadsContext threads()
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

### 3.9 Class IssueParser.IssuesContext

#### 3.9.1 Declaration

```
public static class IssueParser.IssuesContext
    extends ParserRuleContext
```

#### 3.9.2 Constructor summary

```
IssuesContext(ParserRuleContext, int)
```

### 3.9.3 Method summary

```
accept()  
enterRule(ParseTreeListener)  
EOF()  
exitRule(ParseTreeListener)  
getRuleIndex()  
issue()  
issue(int)
```

### 3.9.4 Constructors

- **IssuesContext**

```
public IssuesContext(ParserRuleContext parent, int invokingState)
```

### 3.9.5 Methods

- **accept**

```
public java.lang.Object accept(<any> visitor)
```

- **enterRule**

```
public void enterRule(ParseTreeListener listener)
```

- **EOF**

```
public TerminalNode EOF()
```

- **exitRule**

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **issue**

```
public java.util.List issue()
```

- **issue**

```
public IssueParser.IssueContext issue(int i)
```

## 3.10 Class IssueParser.ThreadContext

### 3.10.1 Declaration

```
public static class IssueParser.ThreadContext
extends ParserRuleContext
```

### 3.10.2 Constructor summary

```
ThreadContext(ParserRuleContext, int)
```

### 3.10.3 Method summary

```
accept()
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
io()
io(int)
SEMICOLON()
SEMICOLON(int)
WHITESPACE()
WHITESPACE(int)
```

### 3.10.4 Constructors

- ThreadContext

```
public ThreadContext(ParserRuleContext parent, int invokingState)
```

### 3.10.5 Methods

- accept

```
public java.lang.Object accept(<any> visitor)
```

- enterRule

```
public void enterRule(ParseTreeListener listener)
```

- exitRule

```
public void exitRule(ParseTreeListener listener)
```

- **getRuleIndex**

```
public int getRuleIndex()
```

- **io**

```
public java.util.List io()
```

- **io**

```
public IssueParser.IoContext io(int i)
```

- **SEMICOLON**

```
public java.util.List SEMICOLON()
```

- **SEMICOLON**

```
public TerminalNode SEMICOLON(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

## 3.11 Class IssueParser.ThreadsContext

### 3.11.1 Declaration

```
public static class IssueParser.ThreadsContext
    extends ParserRuleContext
```

### 3.11.2 Constructor summary

```
ThreadsContext(ParserRuleContext, int)
```

### 3.11.3 Method summary

```

accept()
COLON()
COLON(int)
enterRule(ParseTreeListener)
exitRule(ParseTreeListener)
getRuleIndex()
thread()
thread(int)
WHITESPACE()
WHITESPACE(int)

```

### 3.11.4 Constructors

- **ThreadsContext**

```

public ThreadsContext(ParserRuleContext parent, int invokingState
)

```

### 3.11.5 Methods

- **accept**

```

public java.lang.Object accept(<any> visitor)

```

- **COLON**

```

public java.util.List COLON()

```

- **COLON**

```

public TerminalNode COLON(int i)

```

- **enterRule**

```

public void enterRule(ParseTreeListener listener)

```

- **exitRule**

```

public void exitRule(ParseTreeListener listener)

```

- **getRuleIndex**



```
public int getRuleIndex()
```

- **thread**

```
public java.util.List thread()
```

- **thread**

```
public IssueParser.ThreadContext thread(int i)
```

- **WHITESPACE**

```
public java.util.List WHITESPACE()
```

- **WHITESPACE**

```
public TerminalNode WHITESPACE(int i)
```

# MCMEC Javadoc Documentation - module hu.bme.mit.mcmec.verifier

Levente Bajczi

November 2, 2018

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# Chapter 1

## Package hu.bme.mit.mcmec.verifier

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The type Verifier.	

### 1.1 Class Verifier

The type Verifier.

#### 1.1.1 Declaration

```
public class Verifier
    extends java.lang.Object
```

#### 1.1.2 Constructor summary

Verifier()

#### 1.1.3 Method summary

verify(String, String, String) Verify string.

#### 1.1.4 Constructors

- Verifier

```
public Verifier()
```

### 1.1.5 Methods

- **verify**

```
public static java.lang.String verify(java.lang.String  
    uppaalHome, java.lang.String xtaFilename, java.lang.String  
    queryFileName)
```

- **Description**

Verify string.

- **Parameters**

- \* `uppaalHome` – the uppaal home
- \* `xtaFilename` – the xta filename
- \* `queryFileName` – the query file name

- **Returns** – the string

MCMEC Javadoc Documentation - module  
hu.bme.mit.mcmec.mitigationgenerator

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November 2, 2018

# Contents

# Chapter 1

## Package

## hu.bme.mit.mcmec.mitigationgenerator

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The type Mitigation generator.	

### 1.1 Class MitigationGenerator

The type Mitigation generator.

#### 1.1.1 Declaration

```
public class MitigationGenerator
    extends java.lang.Object
```

#### 1.1.2 Method summary

**generateMitigation(String, String, String, String, String)** Generate mitigation.

#### 1.1.3 Methods

- **generateMitigation**

```
public static void generateMitigation(java.lang.String
    uppaalHome, java.lang.String xtaFile, java.lang.String issues,
    java.lang.String sourceCode, java.lang.String queryFile)
```

#### – Description

Generate mitigation.



– **Parameters**

- \* `uppaalHome` – the uppaal home
- \* `xtaFile` – the xta file
- \* `issues` – the issues
- \* `sourceCode` – the source code
- \* `queryFile` – the query file