

# graph-serializer

0.0.0

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# Chapter 1

## Namespace Index

### 1.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

[common::opt](#)

Options for graph This enumeration represents options that graph supports and that alter its API calls behaviour . . . . .

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## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

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# Chapter 4

## File Index

### 4.1 File List

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## Chapter 5

# Namespace Documentation

### 5.1 common::opt Namespace Reference

Options for graph This enumeration represents options that graph supports and that alter its API calls behaviour.

#### Variables

- constexpr std::uint8\_t **drc** = 0x01  
*is graph directional?*
- constexpr std::uint8\_t **wgh** = 0x02  
*is graph weighted?*

#### 5.1.1 Detailed Description

Options for graph This enumeration represents options that graph supports and that alter its API calls behaviour.



## Chapter 6

# Class Documentation

### 6.1 common::ActionQueue Class Reference

Queue for actions Stores actions and then allows to dump them when needed.

```
#include <action-queue.hpp>
```

#### Public Member Functions

- void **dumpAllActions** ()  
*Dump all actions till queue is empty.*
- void **dumpAction** ()  
*Dump single action from queue.*
- void **query** (std::shared\_ptr< [IAction](#) > action)  
*Add action to queue.*

#### 6.1.1 Detailed Description

Queue for actions Stores actions and then allows to dump them when needed.

#### 6.1.2 Member Function Documentation

##### 6.1.2.1 query()

```
void ActionQueue::query (  
    std::shared_ptr< IAction > action )
```

Add action to queue.

#### Parameters

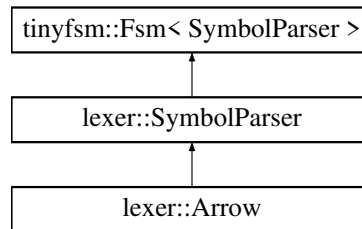
<i>action</i>	action to add
---------------	---------------

The documentation for this class was generated from the following files:

- src/common/action-queue.hpp
- src/common/action-queue.cpp

## 6.2 lexer::Arrow Class Reference

Inheritance diagram for lexer::Arrow:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

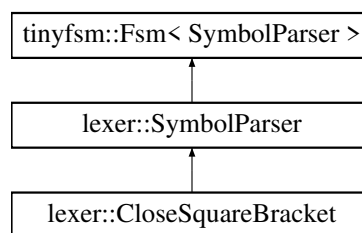
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.3 lexer::CloseSquareBracket Class Reference

Inheritance diagram for lexer::CloseSquareBracket:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
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- virtual void **react** ([InputGraph\\_h](#) const &)
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- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)

- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.4 common::Connection Struct Reference

Edge Represents edge without source node.

```
#include <common.hpp>
```

### Public Member Functions

- **Connection** (std::string peer, std::optional< int > weight=std::nullopt) noexcept
- bool **operator==** (const [Connection](#) &other) const

### Public Attributes

- std::optional< int > **weight**
- std::string **peer**

### 6.4.1 Detailed Description

Edge Represents edge without source node.

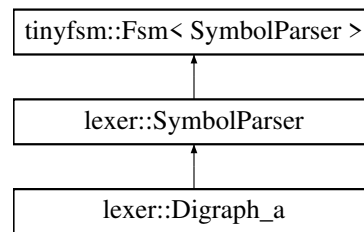
The documentation for this struct was generated from the following files:

- [src/common/common.hpp](#)
- [src/common/common.cpp](#)



## 6.5 lexer::Digraph\_a Class Reference

Inheritance diagram for lexer::Digraph\_a:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

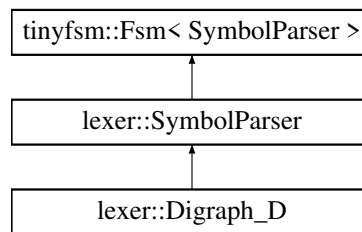
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.6 [lexer::Digraph\\_D](#) Class Reference

Inheritance diagram for [lexer::Digraph\\_D](#):



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_I](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

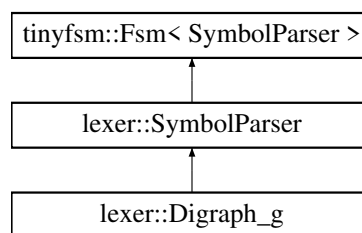
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.7 lexer::Digraph\_g Class Reference

Inheritance diagram for `lexer::Digraph_g`:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)

- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

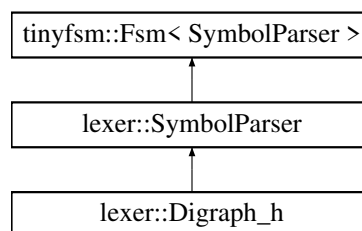
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.8 [lexer::Digraph\\_h](#) Class Reference

Inheritance diagram for [lexer::Digraph\\_h](#):



## Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

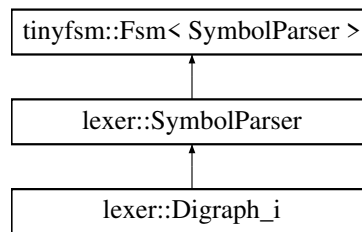
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.9 lexer::Digraph\_i Class Reference

Inheritance diagram for lexer::Digraph\_i:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

**Static Public Attributes inherited from [lexer::SymbolParser](#)**

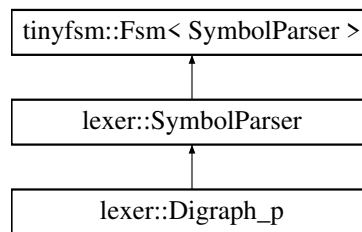
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

**6.10 lexer::Digraph\_p Class Reference**

Inheritance diagram for lexer::Digraph\_p:

**Additional Inherited Members****Public Member Functions inherited from [lexer::SymbolParser](#)**

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

## Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

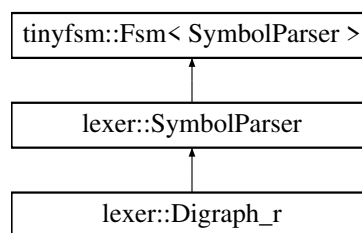
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.11 [lexer::Digraph\\_r](#) Class Reference

Inheritance diagram for [lexer::Digraph\\_r](#):



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)



- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

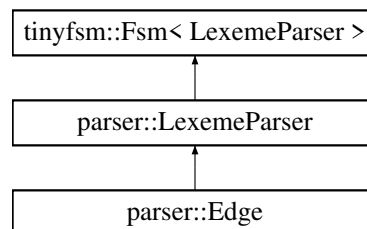
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.12 parser::Edge Class Reference

Inheritance diagram for parser::Edge:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

### Static Protected Attributes inherited from [parser::LexemeParser](#)

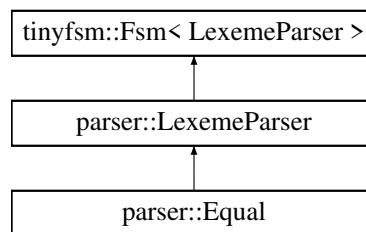
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.13 [parser::Equal](#) Class Reference

Inheritance diagram for [parser::Equal](#):



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

## Static Protected Attributes inherited from [parser::LexemeParser](#)

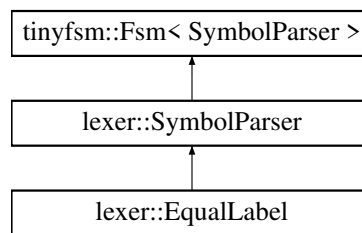
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.14 lexer::EqualLabel Class Reference

Inheritance diagram for lexer::EqualLabel:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_I](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

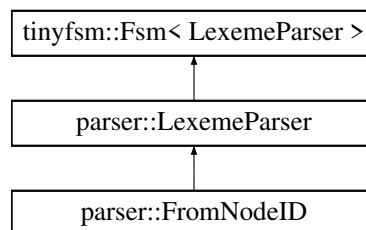
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.15 [parser::FromNodeID](#) Class Reference

Inheritance diagram for [parser::FromNodeID](#):



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

## Static Protected Attributes inherited from [parser::LexemeParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.16 common::Graph Class Reference

[Graph](#) Represents graph object as lists of connections. Supports some API calls to make life easier.

```
#include <common.hpp>
```

### Public Types

- using **graph\_flags\_t** = std::uint8\_t
- using **connections\_t** = std::vector<[Connection](#)>
- using **label\_container\_t** = std::unordered\_map<std::string, std::string>
- using **container\_t** = std::unordered\_map<std::string, connections\_t>
- using **container\_value\_t** = std::pair<std::string, connections\_t>

### Public Member Functions

- **Graph** () noexcept  
*Construct a new [Graph](#) object Constructs object and puts it into non-initialized state.*
- void **init** (graph\_flags\_t flags=0x0) noexcept  
*Init's graph object Sets flags and puts object into active mode.*
- bool **isDirectional** () const noexcept  
*Checks for drc flag.*
- bool **isWeighted** () const noexcept  
*Checks for wgh flag.*
- void **pushNode** (std::string name)  
*Adds new node to graph.*
- void **pushEdge** (std::string source, [Connection](#) edge)  
*Adds new edge to graph.*
- void **setLabel** (std::string source, std::string label)  
*Sets label for node.*
- bool **areConnected** (std::string\_view source, std::string\_view target)  
*Checks for connection between nodes.*
- std::optional< int > **getWeight** (std::string\_view source, std::string\_view target)  
*Gets weight of edge.*
- std::optional< std::string > **getLabel** (std::string source) const  
*Gets label of node.*
- std::string **dumpGraphState** () const  
*Dump graph state to a string.*

## Public Attributes

- friend **GraphDumpingFactory**

## Friends

- `std::ostream & operator<< (std::ostream &os, const Graph &graph)`

### 6.16.1 Detailed Description

[Graph](#) Represents graph object as lists of connections. Supports some API calls to make life easier.

### 6.16.2 Member Function Documentation

#### 6.16.2.1 areConnected()

```
bool Graph::areConnected (
    std::string_view source,
    std::string_view target )
```

Checks for connection between nodes.

#### Parameters

<i>source</i>	first node ID
<i>target</i>	second node ID

#### Returns

true if connection exists  
false otherwise

#### 6.16.2.2 dumpGraphState()

```
std::string Graph::dumpGraphState ( ) const
```

Dump graph state to a string.

#### Returns

`std::string` graph state

#### 6.16.2.3 getLabel()

```
std::optional< std::string > Graph::getLabel (
    std::string source ) const
```

Gets label of node.

## Parameters

<i>source</i>	node ID
---------------	---------

## Returns

std::optional<std::string> label if exists

**6.16.2.4 getWeight()**

```
std::optional< int > Graph::getWeight (
    std::string_view source,
    std::string_view target )
```

Gets weight of edge.

## Parameters

<i>source</i>	first node ID
<i>target</i>	second node ID

## Returns

std::optional<int> weight if exists

**6.16.2.5 init()**

```
void Graph::init (
    graph_flags_t flags = 0x0 ) [noexcept]
```

Init's graph object Sets flags and puts object into active mode.

## Parameters

<i>flags</i>	flags to set
--------------	--------------

**6.16.2.6 isDirectional()**

```
bool Graph::isDirectional ( ) const [noexcept]
```

Checks for drc flag.

## Returns

true if graph is directional  
false otherwise

### 6.16.2.7 isWeighted()

```
bool Graph::isWeighted ( ) const [noexcept]
```

Checks for wgh flag.

#### Returns

true if graph is weighted  
false otherwise

### 6.16.2.8 pushEdge()

```
void Graph::pushEdge (
    std::string source,
    Connection edge )
```

Adds new edge to graph.

#### Parameters

<i>source</i>	source node ID
<i>edge</i>	edge to add

### 6.16.2.9 pushNode()

```
void Graph::pushNode (
    std::string name )
```

Adds new node to graph.

#### Parameters

<i>name</i>	node ID
-------------	---------

### 6.16.2.10 setLabel()

```
void Graph::setLabel (
    std::string source,
    std::string label )
```

Sets label for node.

#### Parameters

<i>source</i>	node ID
<i>label</i>	label string

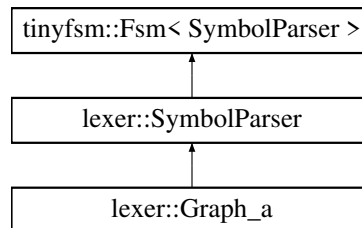


The documentation for this class was generated from the following files:

- src/common/common.hpp
- src/common/common.cpp

## 6.17 lexer::Graph\_a Class Reference

Inheritance diagram for lexer::Graph\_a:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

## Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

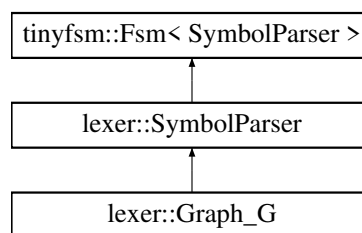
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.18 [lexer::Graph\\_G](#) Class Reference

Inheritance diagram for [lexer::Graph\\_G](#):



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)

- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

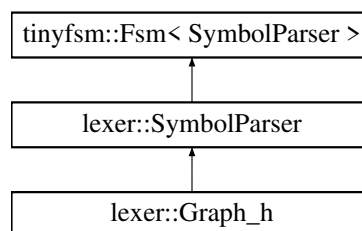
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.19 `lexer::Graph_h` Class Reference

Inheritance diagram for `lexer::Graph_h`:



## Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

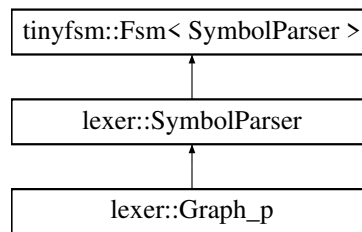
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.20 lexer::Graph\_p Class Reference

Inheritance diagram for lexer::Graph\_p:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from `lexer::SymbolParser`

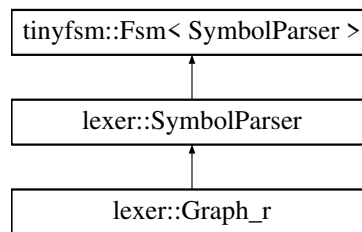
- static `SharedState` `shared` {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.21 `lexer::Graph_r` Class Reference

Inheritance diagram for `lexer::Graph_r`:



### Additional Inherited Members

## Public Member Functions inherited from `lexer::SymbolParser`

- virtual void **react** (`InputDigraph_D` const &)
- virtual void **react** (`InputDigraph_i` const &)
- virtual void **react** (`InputDigraph_g` const &)
- virtual void **react** (`InputDigraph_r` const &)
- virtual void **react** (`InputDigraph_a` const &)
- virtual void **react** (`InputDigraph_p` const &)
- virtual void **react** (`InputDigraph_h` const &)
- virtual void **react** (`InputGraph_G` const &)
- virtual void **react** (`InputGraph_r` const &)
- virtual void **react** (`InputGraph_p` const &)
- virtual void **react** (`InputGraph_h` const &)
- virtual void **react** (`InputOpenCurlyBracket` const &)
- virtual void **react** (`InputCloseCurlyBracket` const &)
- virtual void **react** (`InputNodeId` const &)
- virtual void **react** (`InputNodeIdSecond` const &)
- virtual void **react** (`InputSpace` const &)
- virtual void **react** (`InputNewLine` const &)
- virtual void **react** (`InputOpenSquareBracket` const &)
- virtual void **react** (`InputCloseSquareBracket` const &)
- virtual void **react** (`InputHyphenFirst` const &)
- virtual void **react** (`InputHyphenSecond` const &)
- virtual void **react** (`InputArrow` const &)
- virtual void **react** (`InputLabel_L` const &)
- virtual void **react** (`InputLabel_a` const &)
- virtual void **react** (`InputLabel_b` const &)
- virtual void **react** (`InputLabel_e` const &)
- virtual void **react** (`InputLabel_l` const &)
- virtual void **react** (`InputEqualLabel` const &)
- virtual void **react** (`InputStringValue` const &)
- virtual void **react** (`InputIntValue` const &)
- void **entry** ()
- void **exit** ()

**Static Public Member Functions inherited from [lexer::SymbolParser](#)**

- static void **reset** ()

**Static Public Attributes inherited from [lexer::SymbolParser](#)**

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.22 common::GraphDumpingFactory Class Reference

**Classes**

- struct [Settings](#)

**Public Member Functions**

- [GraphDumpingFactory](#) ([Settings](#) settings) noexcept  
*Construct a new graph dumping factory.*
- **GraphDumpingFactory** ([GraphDumpingFactory](#) &&) noexcept=default
- **GraphDumpingFactory** (const [GraphDumpingFactory](#) &)=delete
- void [dumpOne](#) (const [Graph](#) &one, std::string\_view filename)  
*Dumps single graph to a file.*

### 6.22.1 Constructor & Destructor Documentation

#### 6.22.1.1 GraphDumpingFactory()

```
GraphDumpingFactory::GraphDumpingFactory (
    Settings settings ) [noexcept]
```

Construct a new graph dumping factory.

**Parameters**

<i>settings</i>	settings for this factory
-----------------	---------------------------

## 6.22.2 Member Function Documentation

### 6.22.2.1 dumpOne()

```
void GraphDumpingFactory::dumpOne (
    const Graph & one,
    std::string_view filename )
```

Dumps single graph to a file.

#### Parameters

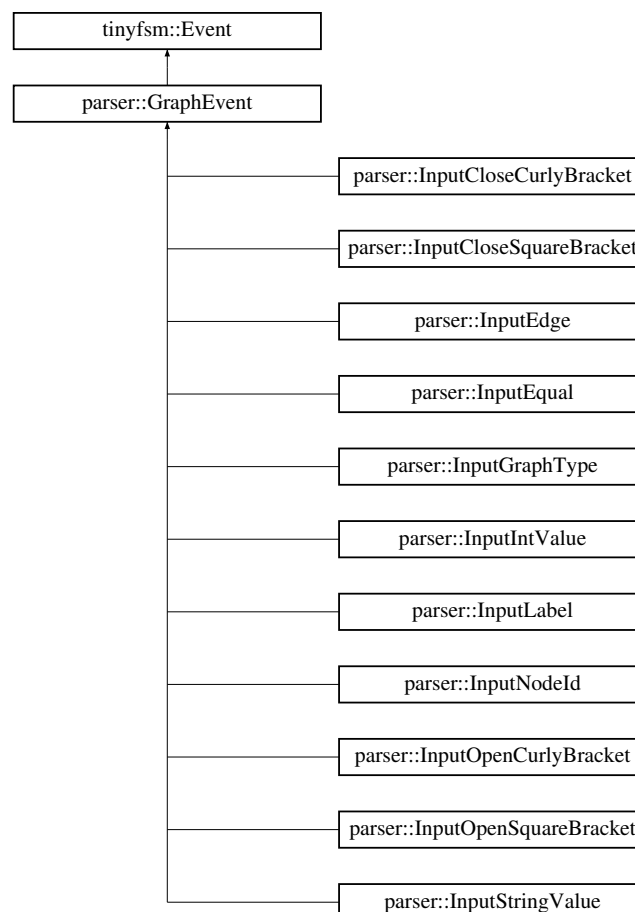
<i>one</i>	target graph object
<i>filename</i>	file to dump to

The documentation for this class was generated from the following files:

- `src/common/reverted.hpp`
- `src/common/reverted.cpp`

## 6.23 parser::GraphEvent Struct Reference

Inheritance diagram for `parser::GraphEvent`:



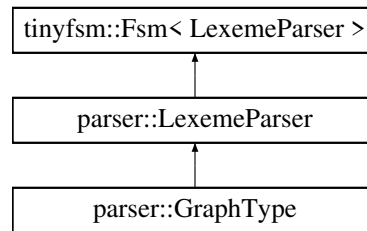


The documentation for this struct was generated from the following file:

- `src/parser/parser.hpp`

## 6.24 parser::GraphType Class Reference

Inheritance diagram for `parser::GraphType`:



### Additional Inherited Members

#### Public Member Functions inherited from `parser::LexemeParser`

- virtual void **react** (`InputGraphType` const &)
- virtual void **react** (`InputCloseCurlyBracket` const &)
- virtual void **react** (`InputNodeId` const &)
- virtual void **react** (`InputOpenSquareBracket` const &)
- virtual void **react** (`InputCloseSquareBracket` const &)
- virtual void **react** (`InputEdge` const &)
- virtual void **react** (`InputLabel` const &)
- virtual void **react** (`InputEqual` const &)
- virtual void **react** (`InputStringValue` const &)
- virtual void **react** (`InputIntValue` const &)
- void **entry** ()
- void **exit** ()

#### Static Public Member Functions inherited from `parser::LexemeParser`

- static void **reset** ()

#### Static Protected Attributes inherited from `parser::LexemeParser`

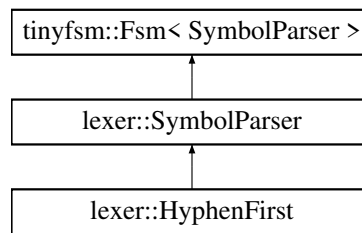
- static `SharedState` **shared** {}

The documentation for this class was generated from the following files:

- `src/parser/parser.hpp`
- `src/parser/parser.cpp`

## 6.25 lexer::HyphenFirst Class Reference

Inheritance diagram for lexer::HyphenFirst:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

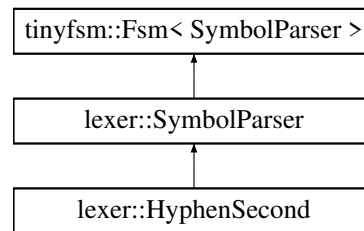
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.26 lexer::HyphenSecond Class Reference

Inheritance diagram for `lexer::HyphenSecond`:



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_I](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

## Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

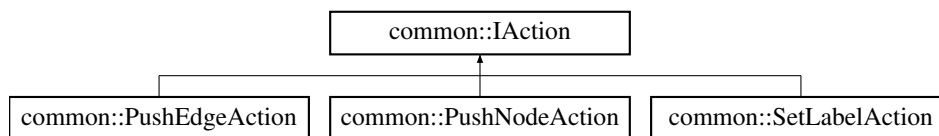
- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.27 common::IAction Class Reference

Callback Interface.

```
#include <action-queue.hpp>
```

Inheritance diagram for `common::IAction`:



### Public Member Functions

- virtual void [make](#) ()=0  
*call to action*

### 6.27.1 Detailed Description

Callback Interface.

### 6.27.2 Member Function Documentation

#### 6.27.2.1 [make\(\)](#)

```
virtual void common::IAction::make ( ) [pure virtual]
```

call to action

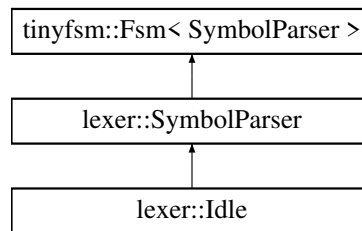
Implemented in [common::PushNodeAction](#), [common::SetLabelAction](#), and [common::PushEdgeAction](#).

The documentation for this class was generated from the following file:

- `src/common/action-queue.hpp`

## 6.28 lexer::Idle Class Reference

Inheritance diagram for lexer::Idle:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

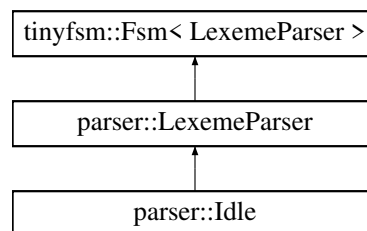
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.29 parser::Idle Class Reference

Inheritance diagram for parser::Idle:



### Additional Inherited Members

## Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

## Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

## Static Protected Attributes inherited from [parser::LexemeParser](#)

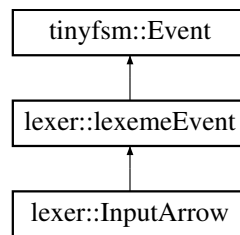
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.30 `lexer::InputArrow` Struct Reference

Inheritance diagram for `lexer::InputArrow`:

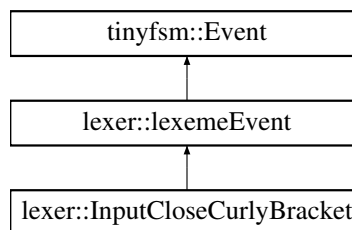


The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.31 `lexer::InputCloseCurlyBracket` Struct Reference

Inheritance diagram for `lexer::InputCloseCurlyBracket`:

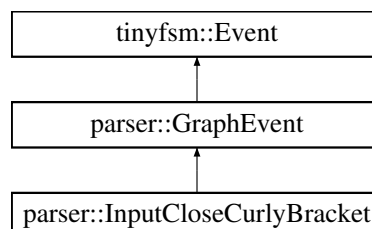


The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.32 `parser::InputCloseCurlyBracket` Struct Reference

Inheritance diagram for `parser::InputCloseCurlyBracket`:

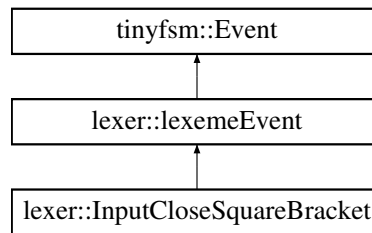


The documentation for this struct was generated from the following file:

- `src/parser/parser.hpp`

### 6.33 lexer::InputCloseSquareBracket Struct Reference

Inheritance diagram for lexer::InputCloseSquareBracket:

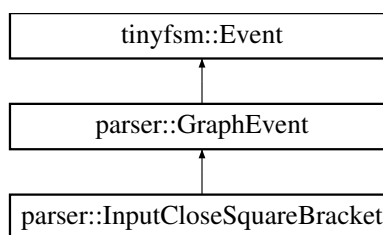


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

### 6.34 parser::InputCloseSquareBracket Struct Reference

Inheritance diagram for parser::InputCloseSquareBracket:

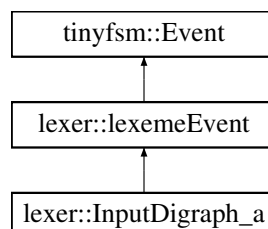


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

### 6.35 lexer::InputDigraph\_a Struct Reference

Inheritance diagram for lexer::InputDigraph\_a:



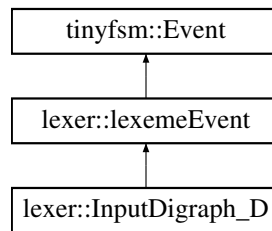
The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp



## 6.36 lexer::InputDigraph\_D Struct Reference

Inheritance diagram for lexer::InputDigraph\_D:

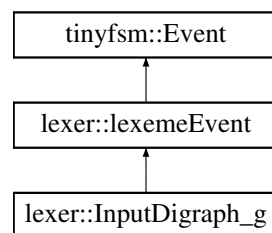


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.37 lexer::InputDigraph\_g Struct Reference

Inheritance diagram for lexer::InputDigraph\_g:

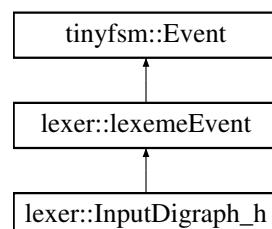


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.38 lexer::InputDigraph\_h Struct Reference

Inheritance diagram for lexer::InputDigraph\_h:

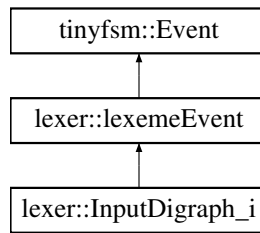


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

### 6.39 lexer::InputDigraph\_i Struct Reference

Inheritance diagram for lexer::InputDigraph\_i:

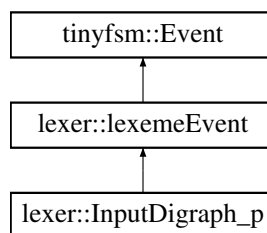


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

### 6.40 lexer::InputDigraph\_p Struct Reference

Inheritance diagram for lexer::InputDigraph\_p:

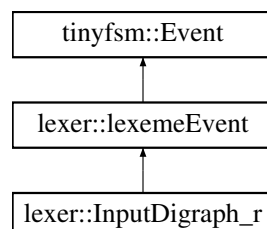


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

### 6.41 lexer::InputDigraph\_r Struct Reference

Inheritance diagram for lexer::InputDigraph\_r:

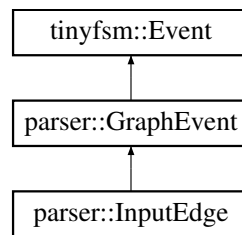


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.42 parser::InputEdge Struct Reference

Inheritance diagram for parser::InputEdge:

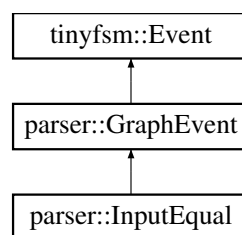


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.43 parser::InputEqual Struct Reference

Inheritance diagram for parser::InputEqual:

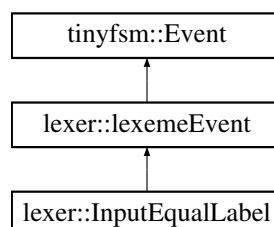


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.44 lexer::InputEqualLabel Struct Reference

Inheritance diagram for lexer::InputEqualLabel:

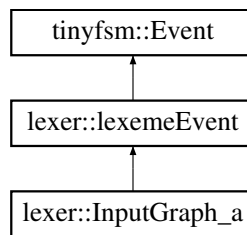


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.45 lexer::InputGraph\_a Struct Reference

Inheritance diagram for lexer::InputGraph\_a:

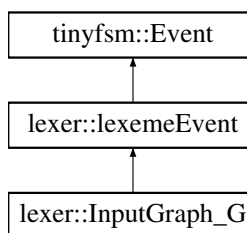


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.46 lexer::InputGraph\_G Struct Reference

Inheritance diagram for lexer::InputGraph\_G:

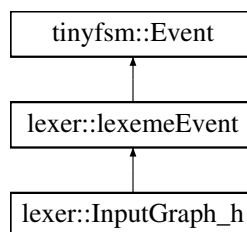


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.47 lexer::InputGraph\_h Struct Reference

Inheritance diagram for lexer::InputGraph\_h:

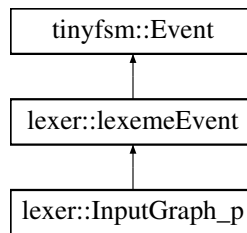


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.48 lexer::InputGraph\_p Struct Reference

Inheritance diagram for lexer::InputGraph\_p:

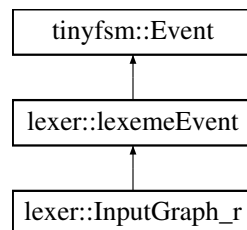


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.49 lexer::InputGraph\_r Struct Reference

Inheritance diagram for lexer::InputGraph\_r:

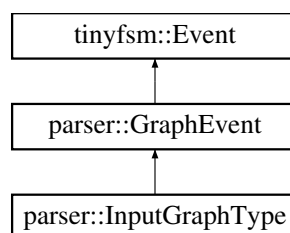


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.50 parser::InputGraphType Struct Reference

Inheritance diagram for parser::InputGraphType:



### Public Attributes

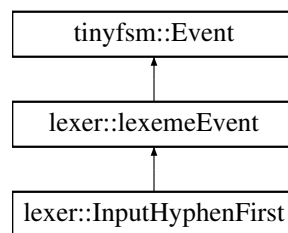
- `std::string graphType`

The documentation for this struct was generated from the following file:

- `src/parser/parser.hpp`

## 6.51 `lexer::InputHyphenFirst` Struct Reference

Inheritance diagram for `lexer::InputHyphenFirst`:

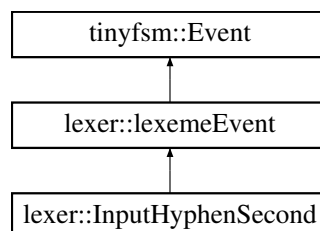


The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.52 `lexer::InputHyphenSecond` Struct Reference

Inheritance diagram for `lexer::InputHyphenSecond`:

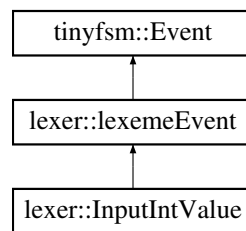


The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.53 lexer::InputIntValue Struct Reference

Inheritance diagram for lexer::InputIntValue:



### Public Attributes

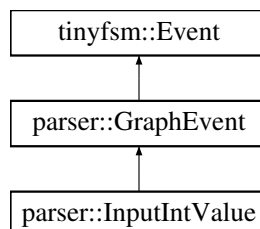
- int **IntValue**

The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.54 parser::InputIntValue Struct Reference

Inheritance diagram for parser::InputIntValue:



### Public Attributes

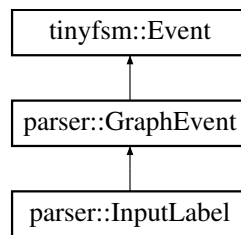
- int **weight**

The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.55 parser::InputLabel Struct Reference

Inheritance diagram for parser::InputLabel:

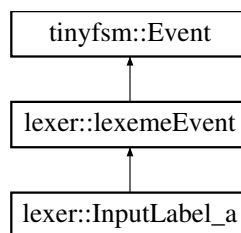


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.56 lexer::InputLabel\_a Struct Reference

Inheritance diagram for lexer::InputLabel\_a:

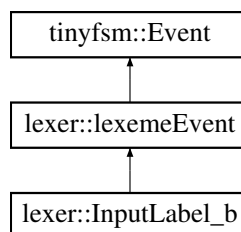


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.57 lexer::InputLabel\_b Struct Reference

Inheritance diagram for lexer::InputLabel\_b:



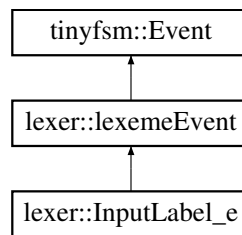
The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp



## 6.58 lexer::InputLabel\_e Struct Reference

Inheritance diagram for lexer::InputLabel\_e:

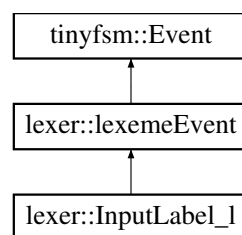


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.59 lexer::InputLabel\_I Struct Reference

Inheritance diagram for lexer::InputLabel\_I:

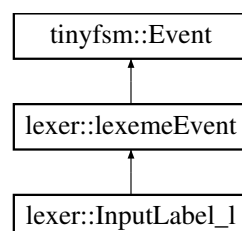


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.60 lexer::InputLabel\_L Struct Reference

Inheritance diagram for lexer::InputLabel\_L:

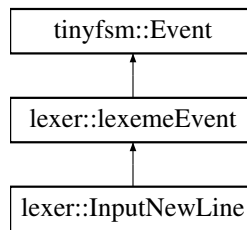


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.61 lexer::InputNewLine Struct Reference

Inheritance diagram for lexer::InputNewLine:

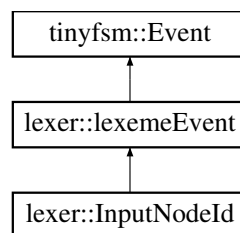


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.62 lexer::InputNodeId Struct Reference

Inheritance diagram for lexer::InputNodeId:



### Public Attributes

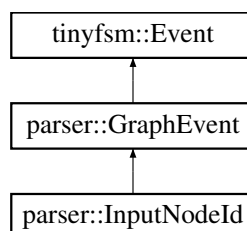
- std::string **NodeId**

The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.63 parser::InputNodeId Struct Reference

Inheritance diagram for parser::InputNodeId:



### Public Attributes

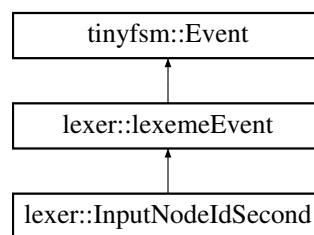
- `std::string NodeID`

The documentation for this struct was generated from the following file:

- `src/parser/parser.hpp`

## 6.64 `lexer::InputNodeIdSecond` Struct Reference

Inheritance diagram for `lexer::InputNodeIdSecond`:



### Public Attributes

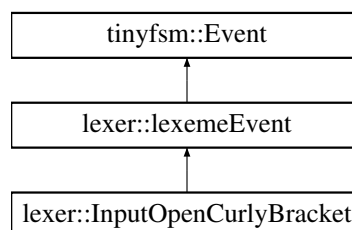
- `std::string NodeIdSecond`

The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.65 `lexer::InputOpenCurlyBracket` Struct Reference

Inheritance diagram for `lexer::InputOpenCurlyBracket`:

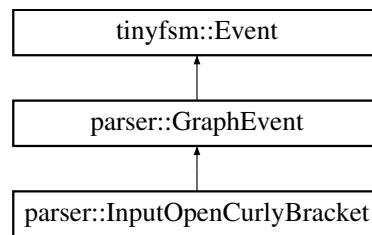


The documentation for this struct was generated from the following file:

- `src/lexer/lexer.hpp`

## 6.66 parser::InputOpenCurlyBracket Struct Reference

Inheritance diagram for parser::InputOpenCurlyBracket:

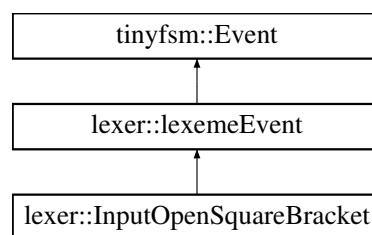


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.67 lexer::InputOpenSquareBracket Struct Reference

Inheritance diagram for lexer::InputOpenSquareBracket:

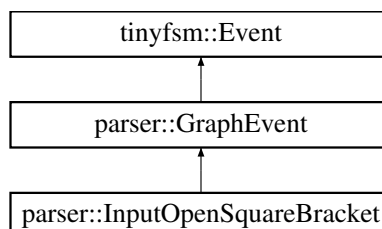


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.68 parser::InputOpenSquareBracket Struct Reference

Inheritance diagram for parser::InputOpenSquareBracket:

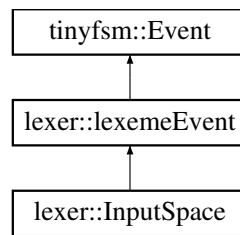


The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.69 lexer::InputSpace Struct Reference

Inheritance diagram for lexer::InputSpace:

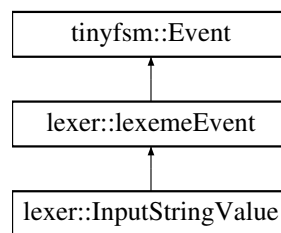


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.70 lexer::InputStringValue Struct Reference

Inheritance diagram for lexer::InputStringValue:



### Public Attributes

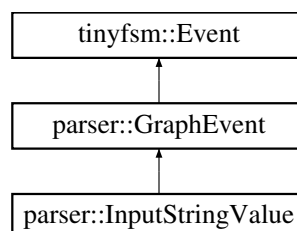
- std::string **StringValue**

The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.71 parser::InputStringValue Struct Reference

Inheritance diagram for parser::InputStringValue:



### Public Attributes

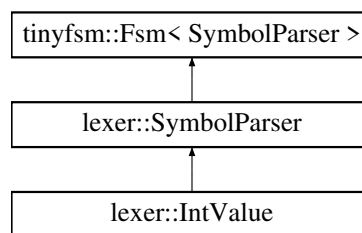
- `std::string label`

The documentation for this struct was generated from the following file:

- `src/parser/parser.hpp`

## 6.72 lexer::IntValue Class Reference

Inheritance diagram for `lexer::IntValue`:



### Additional Inherited Members

#### Public Member Functions inherited from `lexer::SymbolParser`

- virtual void **react** (`InputDigraph_D` const &)
- virtual void **react** (`InputDigraph_i` const &)
- virtual void **react** (`InputDigraph_g` const &)
- virtual void **react** (`InputDigraph_r` const &)
- virtual void **react** (`InputDigraph_a` const &)
- virtual void **react** (`InputDigraph_p` const &)
- virtual void **react** (`InputDigraph_h` const &)
- virtual void **react** (`InputGraph_G` const &)
- virtual void **react** (`InputGraph_r` const &)
- virtual void **react** (`InputGraph_a` const &)
- virtual void **react** (`InputGraph_p` const &)
- virtual void **react** (`InputGraph_h` const &)
- virtual void **react** (`InputOpenCurlyBracket` const &)
- virtual void **react** (`InputCloseCurlyBracket` const &)
- virtual void **react** (`InputNodeId` const &)
- virtual void **react** (`InputNodeIdSecond` const &)
- virtual void **react** (`InputNewLine` const &)
- virtual void **react** (`InputOpenSquareBracket` const &)
- virtual void **react** (`InputHyphenFirst` const &)
- virtual void **react** (`InputHyphenSecond` const &)
- virtual void **react** (`InputArrow` const &)
- virtual void **react** (`InputLabel_L` const &)
- virtual void **react** (`InputLabel_a` const &)
- virtual void **react** (`InputLabel_b` const &)
- virtual void **react** (`InputLabel_e` const &)
- virtual void **react** (`InputLabel_I` const &)
- virtual void **react** (`InputEqualLabel` const &)
- virtual void **react** (`InputStringValue` const &)
- virtual void **react** (`InputIntValue` const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

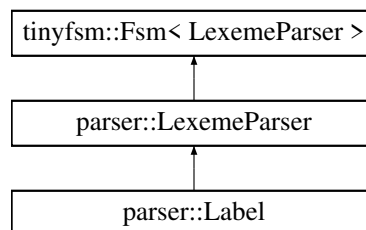
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.73 parser::Label Class Reference

Inheritance diagram for parser::Label:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

## Static Protected Attributes inherited from [parser::LexemeParser](#)

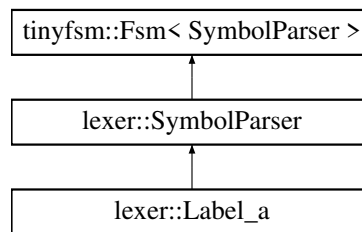
- static [SharedState](#) `shared` {}

The documentation for this class was generated from the following files:

- `src/parser/parser.hpp`
- `src/parser/parser.cpp`

## 6.74 `lexer::Label_a` Class Reference

Inheritance diagram for `lexer::Label_a`:



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()



### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

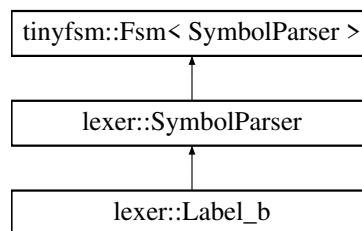
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.75 lexer::Label\_b Class Reference

Inheritance diagram for lexer::Label\_b:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)

- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_I](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

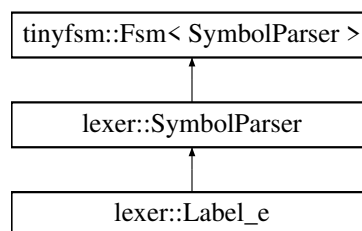
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.76 [lexer::Label\\_e](#) Class Reference

Inheritance diagram for [lexer::Label\\_e](#):



## Additional Inherited Members

### Public Member Functions inherited from `lexer::SymbolParser`

- virtual void **react** (`InputDigraph_D` const &)
- virtual void **react** (`InputDigraph_i` const &)
- virtual void **react** (`InputDigraph_g` const &)
- virtual void **react** (`InputDigraph_r` const &)
- virtual void **react** (`InputDigraph_a` const &)
- virtual void **react** (`InputDigraph_p` const &)
- virtual void **react** (`InputDigraph_h` const &)
- virtual void **react** (`InputGraph_G` const &)
- virtual void **react** (`InputGraph_r` const &)
- virtual void **react** (`InputGraph_a` const &)
- virtual void **react** (`InputGraph_p` const &)
- virtual void **react** (`InputGraph_h` const &)
- virtual void **react** (`InputOpenCurlyBracket` const &)
- virtual void **react** (`InputCloseCurlyBracket` const &)
- virtual void **react** (`InputNodeId` const &)
- virtual void **react** (`InputNodeIdSecond` const &)
- virtual void **react** (`InputSpace` const &)
- virtual void **react** (`InputNewLine` const &)
- virtual void **react** (`InputOpenSquareBracket` const &)
- virtual void **react** (`InputCloseSquareBracket` const &)
- virtual void **react** (`InputHyphenFirst` const &)
- virtual void **react** (`InputHyphenSecond` const &)
- virtual void **react** (`InputArrow` const &)
- virtual void **react** (`InputLabel_L` const &)
- virtual void **react** (`InputLabel_a` const &)
- virtual void **react** (`InputLabel_b` const &)
- virtual void **react** (`InputLabel_e` const &)
- virtual void **react** (`InputEqualLabel` const &)
- virtual void **react** (`InputStringValue` const &)
- virtual void **react** (`InputIntValue` const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from `lexer::SymbolParser`

- static void **reset** ()

### Static Public Attributes inherited from `lexer::SymbolParser`

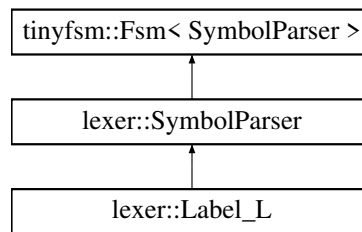
- static `SharedState` **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.77 lexer::Label\_L Class Reference

Inheritance diagram for lexer::Label\_L:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

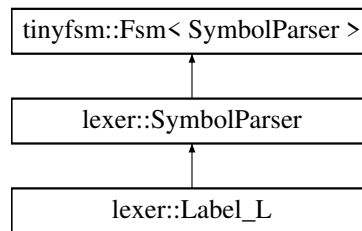
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.78 lexer::Label\_I Class Reference

Inheritance diagram for `lexer::Label_I`:



### Additional Inherited Members

## Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_I](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.79 common::Lexeme Struct Reference

[Lexeme](#) Represents single unit of lexer output.

```
#include <common.hpp>
```

### Public Attributes

- LexemeType **type**
- std::any **value**

### 6.79.1 Detailed Description

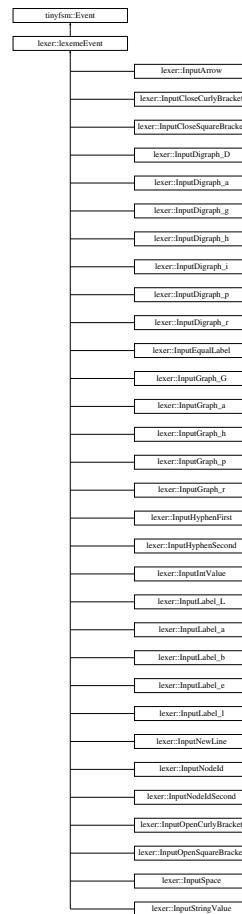
[Lexeme](#) Represents single unit of lexer output.

The documentation for this struct was generated from the following file:

- `src/common/common.hpp`

## 6.80 lexer::lexemeEvent Struct Reference

Inheritance diagram for lexer::lexemeEvent:

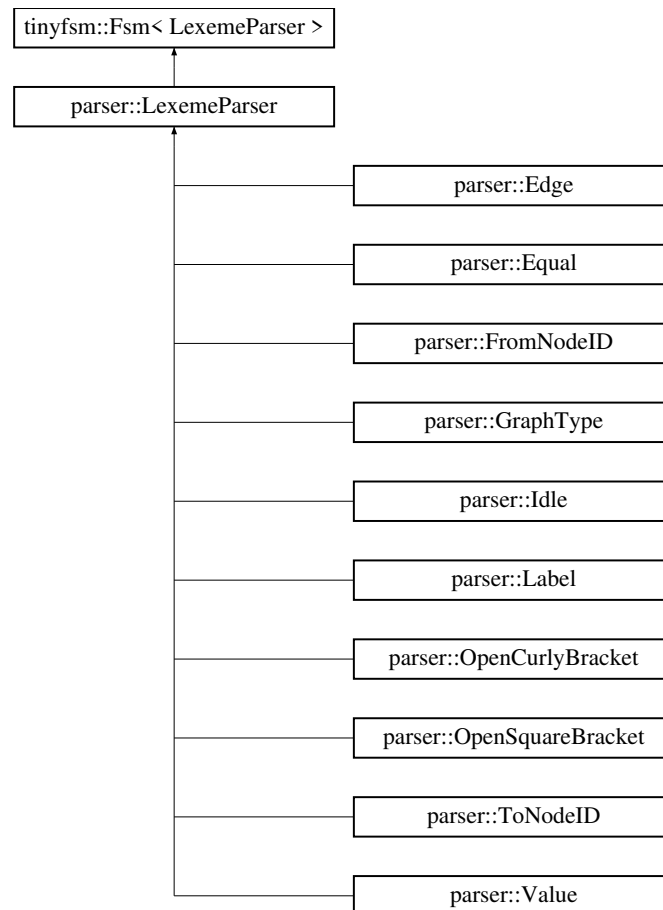


The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.81 parser::LexemeParser Class Reference

Inheritance diagram for parser::LexemeParser:



### Public Member Functions

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions

- static void **reset** ()

### Static Protected Attributes

- static [SharedState](#) **shared** {}



## Friends

- `std::shared_ptr< common::Graph > parse` (`std::vector< common::Lexeme > &input`)  
*Parse lexemes vector into graph object.*

## 6.81.1 Friends And Related Symbol Documentation

### 6.81.1.1 parse

```
std::shared_ptr< common::Graph > parse (
    std::vector< common::Lexeme > & input ) [friend]
```

Parse lexemes vector into graph object.

#### Parameters

<i>input</i>	lexemes
--------------	---------

#### Returns

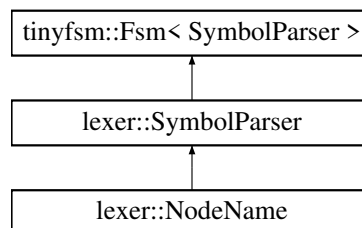
`std::shared_ptr<common::Graph>` output object

The documentation for this class was generated from the following files:

- `src/parser/parser.hpp`
- `src/parser/parser.cpp`

## 6.82 lexer::NodeName Class Reference

Inheritance diagram for `lexer::NodeName`:



#### Additional Inherited Members

#### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)

- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

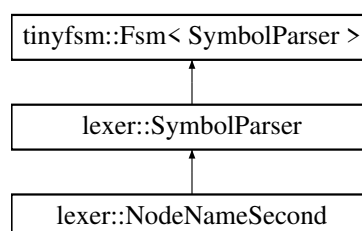
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- [src/lexer/lexer.hpp](#)
- [src/lexer/lexer.cpp](#)

## 6.83 [lexer::NodeNameSecond](#) Class Reference

Inheritance diagram for [lexer::NodeNameSecond](#):



## Additional Inherited Members

### Public Member Functions inherited from `lexer::SymbolParser`

- virtual void **react** (`InputDigraph_D` const &)
- virtual void **react** (`InputDigraph_i` const &)
- virtual void **react** (`InputDigraph_g` const &)
- virtual void **react** (`InputDigraph_r` const &)
- virtual void **react** (`InputDigraph_a` const &)
- virtual void **react** (`InputDigraph_p` const &)
- virtual void **react** (`InputDigraph_h` const &)
- virtual void **react** (`InputGraph_G` const &)
- virtual void **react** (`InputGraph_r` const &)
- virtual void **react** (`InputGraph_a` const &)
- virtual void **react** (`InputGraph_p` const &)
- virtual void **react** (`InputGraph_h` const &)
- virtual void **react** (`InputOpenCurlyBracket` const &)
- virtual void **react** (`InputNodeId` const &)
- virtual void **react** (`InputNodeIdSecond` const &)
- virtual void **react** (`InputCloseSquareBracket` const &)
- virtual void **react** (`InputHyphenFirst` const &)
- virtual void **react** (`InputHyphenSecond` const &)
- virtual void **react** (`InputArrow` const &)
- virtual void **react** (`InputLabel_L` const &)
- virtual void **react** (`InputLabel_a` const &)
- virtual void **react** (`InputLabel_b` const &)
- virtual void **react** (`InputLabel_e` const &)
- virtual void **react** (`InputLabel_l` const &)
- virtual void **react** (`InputEqualLabel` const &)
- virtual void **react** (`InputStringValue` const &)
- virtual void **react** (`InputIntValue` const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from `lexer::SymbolParser`

- static void **reset** ()

### Static Public Attributes inherited from `lexer::SymbolParser`

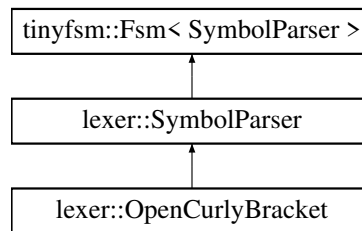
- static `SharedState` **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.84 lexer::OpenCurlyBracket Class Reference

Inheritance diagram for lexer::OpenCurlyBracket:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

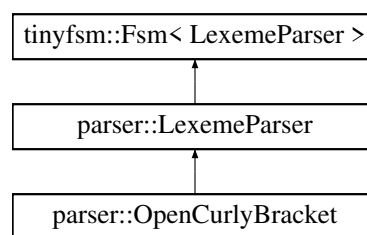
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.85 parser::OpenCurlyBracket Class Reference

Inheritance diagram for parser::OpenCurlyBracket:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

### Static Protected Attributes inherited from [parser::LexemeParser](#)

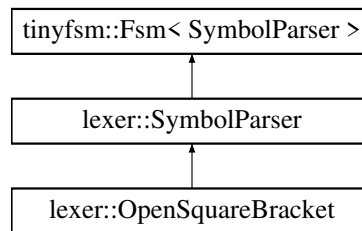
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.86 lexer::OpenSquareBracket Class Reference

Inheritance diagram for lexer::OpenSquareBracket:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

### Static Public Attributes inherited from [lexer::SymbolParser](#)

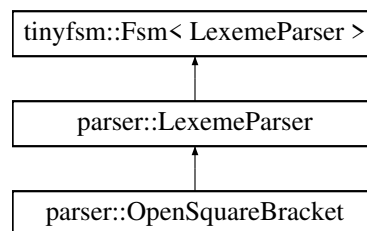
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.87 parser::OpenSquareBracket Class Reference

Inheritance diagram for parser::OpenSquareBracket:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

### Static Protected Attributes inherited from [parser::LexemeParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

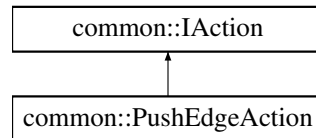
- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.88 common::PushEdgeAction Class Reference

PushEdge action interface implementation.

```
#include <action-queue.hpp>
```

Inheritance diagram for common::PushEdgeAction:



### Public Types

- using **push\_edge\_action** = void (common::Graph::\*)(std::string, [Connection](#))

### Public Member Functions

- **PushEdgeAction** (push\_edge\_action action, [Graph](#) \*instance, std::string name, [Connection](#) edge)
- virtual void **make** () override final  
*call to action*

### 6.88.1 Detailed Description

PushEdge action interface implementation.

### 6.88.2 Member Function Documentation

#### 6.88.2.1 make()

```
void PushEdgeAction::make ( ) [final], [override], [virtual]
```

call to action

Implements [common::IAction](#).

The documentation for this class was generated from the following files:

- src/common/action-queue.hpp
- src/common/action-queue.cpp

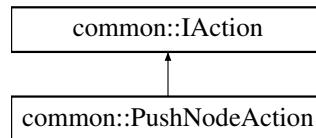


## 6.89 common::PushNodeAction Class Reference

PushNode action interface implementation.

```
#include <action-queue.hpp>
```

Inheritance diagram for common::PushNodeAction:



### Public Types

- using **push\_node\_proto** = void (common::Graph::\*)(std::string)

### Public Member Functions

- **PushNodeAction** (push\_node\_proto action, [Graph](#) \*instance, std::string name)
- virtual void **make** () override final  
*call to action*

### 6.89.1 Detailed Description

PushNode action interface implementation.

### 6.89.2 Member Function Documentation

#### 6.89.2.1 make()

```
void PushNodeAction::make ( ) [final], [override], [virtual]
```

call to action

Implements [common::IAction](#).

The documentation for this class was generated from the following files:

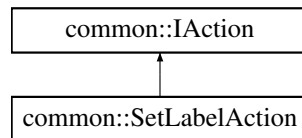
- src/common/action-queue.hpp
- src/common/action-queue.cpp

## 6.90 common::SetLabelAction Class Reference

SetLabel action interface implementation.

```
#include <action-queue.hpp>
```

Inheritance diagram for common::SetLabelAction:



### Public Types

- using **set\_node\_label** = void (common::Graph::\*)(std::string, std::string)

### Public Member Functions

- **SetLabelAction** (set\_node\_label action, [Graph](#) \*instance, std::string name, std::string label)
- virtual void **make** () override final  
*call to action*

### 6.90.1 Detailed Description

SetLabel action interface implementation.

### 6.90.2 Member Function Documentation

#### 6.90.2.1 make()

```
void SetLabelAction::make ( ) [final], [override], [virtual]
```

call to action

Implements [common::IAction](#).

The documentation for this class was generated from the following files:

- src/common/action-queue.hpp
- src/common/action-queue.cpp

## 6.91 common::GraphDumpingFactory::Settings Struct Reference

### Public Attributes

- bool **verboseWrite** = false

The documentation for this struct was generated from the following file:

- src/common/reverted.hpp

## 6.92 lexer::SharedState Struct Reference

### Public Attributes

- std::vector< [common::Lexeme](#) > **tokens**
- std::string **token**
- int **flag\_label** = 0
- int **flag\_curly** = 0
- int **flag\_square** = 0
- int **flag\_hyphen** = 0
- int **flag\_label\_l** = 0
- int **quotes\_count** = 0

The documentation for this struct was generated from the following file:

- src/lexer/lexer.hpp

## 6.93 parser::SharedState Struct Reference

### Public Attributes

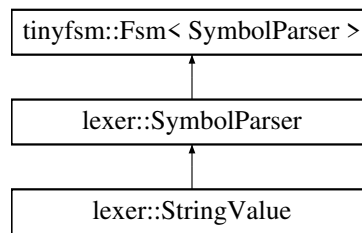
- std::shared\_ptr< [common::Graph](#) > **graph**
- [common::ActionQueue](#) **backoffQueue**
- [common::ActionQueue](#) **actionQueue**
- std::string **fromNodeId**
- std::string **toNodeId**
- std::string **label**
- std::string **expectedValue**
- std::uint8\_t **flags** = 0x0
- int **weight** = -1

The documentation for this struct was generated from the following file:

- src/parser/parser.hpp

## 6.94 lexer::StringValue Class Reference

Inheritance diagram for lexer::StringValue:



### Additional Inherited Members

### Public Member Functions inherited from [lexer::SymbolParser](#)

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)
- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [lexer::SymbolParser](#)

- static void **reset** ()

## Static Public Attributes inherited from [lexer::SymbolParser](#)

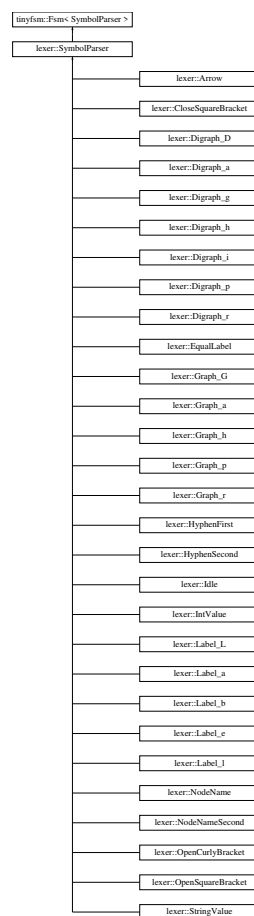
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- `src/lexer/lexer.hpp`
- `src/lexer/lexer.cpp`

## 6.95 lexer::SymbolParser Class Reference

Inheritance diagram for `lexer::SymbolParser`:



## Public Member Functions

- virtual void **react** ([InputDigraph\\_D](#) const &)
- virtual void **react** ([InputDigraph\\_i](#) const &)
- virtual void **react** ([InputDigraph\\_g](#) const &)
- virtual void **react** ([InputDigraph\\_r](#) const &)
- virtual void **react** ([InputDigraph\\_a](#) const &)
- virtual void **react** ([InputDigraph\\_p](#) const &)
- virtual void **react** ([InputDigraph\\_h](#) const &)

- virtual void **react** ([InputGraph\\_G](#) const &)
- virtual void **react** ([InputGraph\\_r](#) const &)
- virtual void **react** ([InputGraph\\_a](#) const &)
- virtual void **react** ([InputGraph\\_p](#) const &)
- virtual void **react** ([InputGraph\\_h](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputNodeIdSecond](#) const &)
- virtual void **react** ([InputSpace](#) const &)
- virtual void **react** ([InputNewLine](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputHyphenFirst](#) const &)
- virtual void **react** ([InputHyphenSecond](#) const &)
- virtual void **react** ([InputArrow](#) const &)
- virtual void **react** ([InputLabel\\_L](#) const &)
- virtual void **react** ([InputLabel\\_a](#) const &)
- virtual void **react** ([InputLabel\\_b](#) const &)
- virtual void **react** ([InputLabel\\_e](#) const &)
- virtual void **react** ([InputLabel\\_l](#) const &)
- virtual void **react** ([InputEqualLabel](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions

- static void **reset** ()

### Static Public Attributes

- static [SharedState](#) **shared** {}

### Friends

- `std::vector< common::Lexeme > lex` (const std::string &input)  
*Lex string.*

## 6.95.1 Friends And Related Symbol Documentation

### 6.95.1.1 lex

```
std::vector< common::Lexeme > lex (
    const std::string & input ) [friend]
```

Lex string.

## Parameters

<i>input</i>	string to lex
--------------	---------------

## Returns

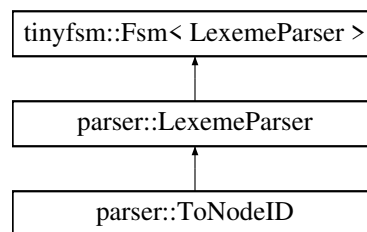
std::vector<common::Lexeme> output lexemes

The documentation for this class was generated from the following files:

- src/lexer/lexer.hpp
- src/lexer/lexer.cpp

## 6.96 parser::ToNodeID Class Reference

Inheritance diagram for parser::ToNodeID:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

### Static Protected Attributes inherited from [parser::LexemeParser](#)

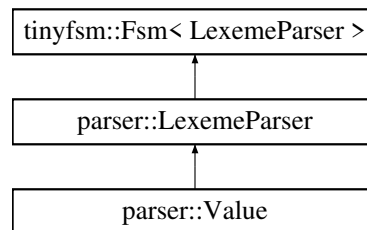
- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp

## 6.97 parser::Value Class Reference

Inheritance diagram for parser::Value:



### Additional Inherited Members

### Public Member Functions inherited from [parser::LexemeParser](#)

- virtual void **react** ([InputGraphType](#) const &)
- virtual void **react** ([InputOpenCurlyBracket](#) const &)
- virtual void **react** ([InputCloseCurlyBracket](#) const &)
- virtual void **react** ([InputNodeId](#) const &)
- virtual void **react** ([InputOpenSquareBracket](#) const &)
- virtual void **react** ([InputEdge](#) const &)
- virtual void **react** ([InputLabel](#) const &)
- virtual void **react** ([InputEqual](#) const &)
- virtual void **react** ([InputStringValue](#) const &)
- virtual void **react** ([InputIntValue](#) const &)
- void **entry** ()
- void **exit** ()

### Static Public Member Functions inherited from [parser::LexemeParser](#)

- static void **reset** ()

### Static Protected Attributes inherited from [parser::LexemeParser](#)

- static [SharedState](#) **shared** {}

The documentation for this class was generated from the following files:

- src/parser/parser.hpp
- src/parser/parser.cpp



# Chapter 7

## File Documentation

### 7.1 action-queue.hpp

```
00001 #pragma once
00002
00003 // standard
00004 #include <memory>
00005 #include <string>
00006 #include <queue>
00007
00008 // local
00009 #include "common.hpp"
00010
00011 namespace common {
00012
00013     class IAction {
00014     public:
00022         virtual void make() = 0;
00023     };
00024
00028     class PushNodeAction : public IAction {
00029     public:
00030         using push_node_proto = void (common::Graph::*)(std::string);
00031
00032         PushNodeAction(push_node_proto action, Graph* instance, std::string name);
00033         // IAction
00034         virtual void make() override final;
00035
00036     private:
00037         push_node_proto action_;
00038         Graph* this_;
00039         std::string name_;
00040     };
00041
00045     class SetLabelAction : public IAction {
00046     public:
00047         using set_node_label = void (common::Graph::*)(std::string, std::string);
00048
00049         SetLabelAction(set_node_label action, Graph* instance, std::string name, std::string label);
00050         // IAction
00051         virtual void make() override final;
00052
00053     private:
00054         set_node_label action_;
00055         Graph* this_;
00056         std::string name_;
00057         std::string label_;
00058     };
00059
00063     class PushEdgeAction : public IAction {
00064     public:
00065         using push_edge_action = void (common::Graph::*)(std::string, Connection);
00066
00067         PushEdgeAction(push_edge_action action, Graph* instance, std::string name, Connection edge);
00068         // IAction
00069         virtual void make() override final;
00070
00071     private:
00072         push_edge_action action_;
00073         Graph* this_;
```

```

00074         std::string name_;
00075         Connection edge_;
00076     };
00077
00082     class ActionQueue {
00083     public:
00084
00088         void dumpAllActions();
00089
00093         void dumpAction();
00094
00099         void query(std::shared_ptr<IAction> action);
00100
00101     private:
00102         std::queue<std::shared_ptr<IAction> actions_;
00103     };
00104
00105 }

```

## 7.2 common.hpp

```

00001 #pragma once
00002
00003 // standard
00004 #include <unordered_map>
00005 #include <string_view>
00006 #include <optional>
00007 #include <cstdint>
00008 #include <utility>
00009 #include <ostream>
00010 #include <memory>
00011 #include <string>
00012 #include <vector>
00013 #include <any>
00014
00015 namespace common {
00016
00017     // class to invert graph parsing (write it back)
00018     class GraphDumpingFactory;
00019
00026     namespace opt {
00027         inline constexpr std::uint8_t drc = 0x01;
00028         inline constexpr std::uint8_t wgh = 0x02;
00029     } // namespace opt
00030
00035     enum class LexemeType : std::uint8_t {
00036         GRAPH_START_LABEL = 0,
00037         OPEN_CURLY_BRACKET = 1,
00038         NODE_ID = 2,
00039         POINTED_ARROW = 3,
00040         FLAT_ARROW = 4,
00041         OPEN_SQUARE_BRACKET = 5,
00042         LABEL_ATTRIBUTE = 6,
00043         EQUALS_SIGN = 7,
00044         ATTRIBUTE_STRING_VALUE = 8,
00045         ATTRIBUTE_INT_VALUE = 9,
00046         CLOSED_CURLY_BRACKET = 10,
00047         CLOSED_SQUARE_BRACKET = 11
00048     };
00049
00054     struct Lexeme {
00055         LexemeType type;
00056         std::any value;
00057     };
00058
00063     struct Connection {
00064         // std::nullopt for non-weighted graphs
00065         std::optional<int> weight;
00066         // Peer
00067         std::string peer;
00068
00069         Connection(std::string peer, std::optional<int> weight = std::nullopt) noexcept;
00070         bool operator==(const Connection& other) const;
00071     };
00072
00078     class Graph {
00079     public:
00080
00081         using graph_flags_t = std::uint8_t;
00082         using connections_t = std::vector<Connection>;
00083         using label_container_t = std::unordered_map<std::string, std::string>;
00084         using container_t = std::unordered_map<std::string, connections_t>;
00085         using container_value_t = std::pair<std::string, connections_t>;

```

```

00086
00091     Graph() noexcept;
00092
00098     void init(graph_flags_t flags = 0x0) noexcept;
00099
00105     bool isDirectional() const noexcept;
00106
00112     bool isWeighted() const noexcept;
00113
00118     void pushNode(std::string name);
00119
00125     void pushEdge(std::string source, Connection edge);
00126
00132     void setLabel(std::string source, std::string label);
00133
00141     bool areConnected(std::string_view source, std::string_view target);
00142
00149     std::optional<int> getWeight(std::string_view source, std::string_view target);
00150
00156     std::optional<std::string> getLabel(std::string source) const;
00157
00162     std::string dumpGraphState() const;
00163
00164     friend std::ostream& operator<<(std::ostream& os, const Graph& graph);
00165     friend GraphDumpingFactory;
00166
00167 private:
00168     void insert(std::string_view source, Connection edge);
00169     connections_t::iterator findConnection(std::string_view source, std::string_view target);
00170
00171 private:
00172     std::uint8_t flags_;
00173     std::unique_ptr<container_t> connections_;
00174     std::unique_ptr<label_container_t> labels_;
00175 };
00176
00177     std::ostream& operator<<(std::ostream& os, const Graph& graph);
00178
00179 } // namespace common

```

## 7.3 reverted.hpp

```

00001 #pragma once
00002
00003 // standard
00004 #include <unordered_map>
00005 #include <string_view>
00006 #include <optional>
00007 #include <fstream>
00008 #include <utility>
00009 #include <ostream>
00010 #include <memory>
00011 #include <string>
00012 #include <vector>
00013 #include <any>
00014
00015 // local
00016 #include <common/common.hpp>
00017
00018 namespace common {
00019
00020     class GraphDumpingFactory {
00021     public:
00022         struct Settings {
00023             bool verboseWrite = false;
00024         };
00025         // constructors
00026         GraphDumpingFactory(Settings settings) noexcept;
00027         GraphDumpingFactory(GraphDumpingFactory&&) noexcept = default;
00028         GraphDumpingFactory(const GraphDumpingFactory&) = delete;
00029
00030         void dumpOne(const Graph& one, std::string_view filename);
00031
00032     private:
00033         void dumpGraphMetadata(const Graph& unit);
00034         void dumpGraphNodes(const Graph& unit);
00035         void dumpGraphEdges(const Graph& unit);
00036         void trail(const Graph& unit);
00037
00038         void error(const std::string& message);
00039
00040     private:

```

```

00051         Settings settings_;
00052         std::ofstream ofs_;
00053     };
00054
00055 }

```

## 7.4 lexer.hpp

```

00001 #pragma once
00002
00003 // standard
00004 #include <vector>
00005 #include <string>
00006
00007 // internal
00008 #include <common/common.hpp>
00009
00010 // contrib
00011 #include <tinyfsm.hpp>
00012
00013 namespace lexer {
00014     inline void throw_invalid_input(std::string message) {
00015         throw std::runtime_error(message);
00016     }
00017
00018     struct SharedState {
00019         std::vector<common::Lexeme> tokens;
00020         std::string token;
00021
00022         int flag_label = 0;
00023         int flag_curly = 0;
00024         int flag_square = 0;
00025         int flag_hyphen = 0;
00026         int flag_label_l = 0;
00027         int quotes_count = 0;
00028     };
00029
00030 // -----
00031 // 1. Event Declarations
00032 //
00033 struct lexemeEvent : tinyfsm::Event {};
00034 struct InputDigraph_D : lexemeEvent {};
00035 struct InputDigraph_i : lexemeEvent {};
00036 struct InputDigraph_g : lexemeEvent {};
00037 struct InputDigraph_r : lexemeEvent {};
00038 struct InputDigraph_a : lexemeEvent {};
00039 struct InputDigraph_p : lexemeEvent {};
00040 struct InputDigraph_h : lexemeEvent {};
00041 struct InputGraph_G : lexemeEvent {};
00042 struct InputGraph_r : lexemeEvent {};
00043 struct InputGraph_a : lexemeEvent {};
00044 struct InputGraph_p : lexemeEvent {};
00045 struct InputGraph_h : lexemeEvent {};
00046 struct InputOpenCurlyBracket : lexemeEvent {};
00047 struct InputCloseCurlyBracket : lexemeEvent {};
00048 struct InputOpenSquareBracket : lexemeEvent {};
00049 struct InputCloseSquareBracket : lexemeEvent {};
00050 struct InputHyphenFirst : lexemeEvent {};
00051 struct InputHyphenSecond : lexemeEvent {};
00052 struct InputArrow : lexemeEvent {};
00053 struct InputLabel_L : lexemeEvent {};
00054 struct InputLabel_a : lexemeEvent {};
00055 struct InputLabel_b : lexemeEvent {};
00056 struct InputLabel_e : lexemeEvent {};
00057 struct InputLabel_l : lexemeEvent {};
00058 struct InputEqualLabel : lexemeEvent {};
00059 struct InputSpace : lexemeEvent {};
00060 struct InputNewLine : lexemeEvent {};
00061 struct InputNodeId : lexemeEvent {std::string NodeId; };
00062 struct InputNodeIdSecond : lexemeEvent {std::string NodeIdSecond; };
00063 struct InputStringValue : lexemeEvent {std::string StringValue; };
00064 struct InputIntValue : lexemeEvent {int IntValue; };
00065
00066 // -----
00067 // 2. State Machine Base Class Declaration
00068 //
00069 class SymbolParser : public tinyfsm::Fsm<SymbolParser> {
00070 public:
00071     virtual void react(InputDigraph_D const &) { throw_invalid_input(""); };
00072     virtual void react(InputDigraph_i const &) { throw_invalid_input(""); };
00073     virtual void react(InputDigraph_g const &) { throw_invalid_input(""); };
00074     virtual void react(InputDigraph_r const &) { throw_invalid_input(""); };
00075     virtual void react(InputDigraph_a const &) { throw_invalid_input(""); };

```

```

00076     virtual void react(InputDigraph_p const &) { throw_invalid_input(""); };
00077     virtual void react(InputDigraph_h const &) { throw_invalid_input(""); };
00078     virtual void react(InputGraph_G const &) { throw_invalid_input(""); };
00079     virtual void react(InputGraph_r const &) { throw_invalid_input(""); };
00080     virtual void react(InputGraph_a const &) { throw_invalid_input(""); };
00081     virtual void react(InputGraph_p const &) { throw_invalid_input(""); };
00082     virtual void react(InputGraph_h const &) { throw_invalid_input(""); };
00083     virtual void react(InputOpenCurlyBracket const &) { throw_invalid_input(""); };
00084     virtual void react(InputCloseCurlyBracket const &) { throw_invalid_input(""); };
00085     virtual void react(InputNodeId const &) { throw_invalid_input(""); };
00086     virtual void react(InputNodeIdSecond const &) { throw_invalid_input(""); };
00087     virtual void react(InputSpace const &) { throw_invalid_input(""); };
00088     virtual void react(InputNewLine const &) { throw_invalid_input(""); };
00089     virtual void react(InputOpenSquareBracket const &) { throw_invalid_input(""); };
00090     virtual void react(InputCloseSquareBracket const &) { throw_invalid_input(""); };
00091     virtual void react(InputHyphenFirst const &) { throw_invalid_input(""); };
00092     virtual void react(InputHyphenSecond const &) { throw_invalid_input(""); };
00093     virtual void react(InputArrow const &) { throw_invalid_input(""); };
00094     virtual void react(InputLabel_L const &) { throw_invalid_input(""); };
00095     virtual void react(InputLabel_a const &) { throw_invalid_input(""); };
00096     virtual void react(InputLabel_b const &) { throw_invalid_input(""); };
00097     virtual void react(InputLabel_e const &) { throw_invalid_input(""); };
00098     virtual void react(InputLabel_l const &) { throw_invalid_input(""); };
00099     virtual void react(InputEqualLabel const &) { throw_invalid_input(""); };
00100     virtual void react(InputStringValue const &) { throw_invalid_input(""); };
00101     virtual void react(InputIntValue const &) { throw_invalid_input(""); };
00102
00103
00104     static void reset();
00105     void entry(); /* entry actions in some states */
00106     void exit(); /* no exit actions */
00107
00108     friend std::vector<common::Lexeme> lex(const std::string& input);
00109
00110     inline static SharedState shared {};
00111 };
00112
00113 // -----
00114 // 3. State Declarations
00115 //
00116 class Idle : public SymbolParser {
00117     void react(InputDigraph_D const &) override;
00118     void react(InputGraph_G const &) override;
00119     void react(InputSpace const &) override;
00120     void react(InputNewLine const &) override;
00121 };
00122
00123 class Digraph_D : public SymbolParser {
00124     void react(InputDigraph_i const &) override;
00125 };
00126 class Digraph_i : public SymbolParser {
00127     void react(InputDigraph_g const &) override;
00128 };
00129 class Digraph_g : public SymbolParser {
00130     void react(InputDigraph_r const &) override;
00131 };
00132 class Digraph_r : public SymbolParser {
00133     void react(InputDigraph_a const &) override;
00134 };
00135 class Digraph_a : public SymbolParser {
00136     void react(InputDigraph_p const &) override;
00137 };
00138 class Digraph_p : public SymbolParser {
00139     void react(InputDigraph_h const &) override;
00140 };
00141 class Digraph_h : public SymbolParser {
00142     void react(InputOpenCurlyBracket const &) override;
00143     void react(InputSpace const &) override;
00144 };
00145
00146 class Graph_G : public SymbolParser {
00147     void react(InputGraph_r const &) override;
00148 };
00149 class Graph_r : public SymbolParser {
00150     void react(InputGraph_a const &) override;
00151 };
00152 class Graph_a : public SymbolParser {
00153     void react(InputGraph_p const &) override;
00154 };
00155 class Graph_p : public SymbolParser {
00156     void react(InputGraph_h const &) override;
00157 };
00158 class Graph_h : public SymbolParser {
00159     void react(InputOpenCurlyBracket const &) override;
00160     void react(InputSpace const &) override;
00161 };
00162

```

```

00163     class OpenCurlyBracket : public SymbolParser {
00164         void react(InputNodeId const &) override;
00165         void react(InputCloseCurlyBracket const &) override;
00166         void react(InputSpace const &) override;
00167         void react(InputNewLine const &) override;
00168     };
00169
00170     class NodeName : public SymbolParser {
00171         void react(InputOpenSquareBracket const &) override;
00172         void react(InputCloseCurlyBracket const &) override;
00173         void react(InputHyphenFirst const &) override;
00174         void react(InputSpace const &) override;
00175         void react(InputNewLine const &) override;
00176     };
00177
00178     class OpenSquareBracket : public SymbolParser {
00179         void react(InputLabel_L const &) override;
00180         void react(InputSpace const &) override;
00181         void react(InputCloseSquareBracket const &) override;
00182     };
00183
00184     class HyphenFirst : public SymbolParser {
00185         void react(InputHyphenSecond const &) override;
00186         void react(InputArrow const &) override;
00187     };
00188
00189     class HyphenSecond : public SymbolParser {
00190         void react(InputNodeIdSecond const &) override;
00191         void react(InputSpace const &) override;
00192     };
00193
00194     class Arrow : public SymbolParser {
00195         void react(InputNodeIdSecond const &) override;
00196         void react(InputSpace const &) override;
00197     };
00198
00199     class NodeNameSecond : public SymbolParser {
00200         void react(InputOpenSquareBracket const &) override;
00201         void react(InputCloseCurlyBracket const &) override;
00202         void react(InputNewLine const &) override;
00203         void react(InputSpace const &) override;
00204     };
00205
00206     class Label_L : public SymbolParser {
00207         void react(InputLabel_a const &) override;
00208     };
00209     class Label_a : public SymbolParser {
00210         void react(InputLabel_b const &) override;
00211     };
00212     class Label_b : public SymbolParser {
00213         void react(InputLabel_e const &) override;
00214     };
00215     class Label_e : public SymbolParser {
00216         void react(InputLabel_l const &) override;
00217     };
00218     class Label_l : public SymbolParser {
00219         void react(InputEqualLabel const &) override;
00220         void react(InputSpace const &) override;
00221     };
00222     class EqualLabel : public SymbolParser {
00223         void react(InputStringValue const &) override;
00224         void react(InputIntValue const &) override;
00225         void react(InputSpace const &) override;
00226     };
00227     class StringValue : public SymbolParser {
00228         void react(InputCloseSquareBracket const &) override;
00229         void react(InputSpace const &) override;
00230     };
00231     class IntValue : public SymbolParser {
00232         void react(InputCloseSquareBracket const &) override;
00233         void react(InputSpace const &) override;
00234     };
00235
00236     class CloseSquareBracket : public SymbolParser {
00237         void react(InputNodeId const &) override;
00238         void react(InputCloseCurlyBracket const &) override;
00239         void react(InputSpace const &) override;
00240         void react(InputNewLine const &) override;
00241     };
00242
00243     std::vector<common::Lexeme> lex(const std::string& input);
00244 }
00245
00250

```

## 7.5 parser.hpp

```

00001 #pragma once
00002
00003 // standard
00004 #include <cstdlib>
00005 #include <memory>
00006 #include <string>
00007
00008 // internal
00009 #include <common/action-queue.hpp>
00010 #include <common/common.hpp>
00011
00012 // contrib
00013 #include <tinyfsm.hpp>
00014
00015
00016 namespace parser {
00017     inline void throw_invalid_input(std::string message) {
00018         throw std::runtime_error(message);
00019     }
00020
00021     struct SharedState {
00022         std::shared_ptr<common::Graph> graph;
00023
00024         common::ActionQueue backoffQueue;
00025         common::ActionQueue actionQueue;
00026
00027         std::string fromNodeId;
00028         std::string toNodeId;
00029         std::string label;
00030         std::string expectedValue;
00031
00032         std::uint8_t flags = 0x0;
00033         int weight = -1;
00034     };
00035
00036     // -----
00037     // 1. Event Declarations
00038     //
00039     struct GraphEvent : tinyfsm::Event {};
00040     struct InputOpenCurlyBracket : GraphEvent {};
00041     struct InputCloseCurlyBracket : GraphEvent {};
00042     struct InputOpenSquareBracket : GraphEvent {};
00043     struct InputCloseSquareBracket : GraphEvent {};
00044     struct InputEdge : GraphEvent {};
00045     struct InputLabel : GraphEvent {};
00046     struct InputEqual : GraphEvent {};
00047     struct InputGraphType : GraphEvent { std::string graphType; };
00048     struct InputNodeId : GraphEvent { std::string NodeID; };
00049     struct InputStringValue : GraphEvent { std::string label; };
00050     struct InputIntValue : GraphEvent { int weight; };
00051
00052     // -----
00053     // 2. State Machine Base Class Declaration
00054     //
00055     class LexemeParser : public tinyfsm::Fsm<LexemeParser> {
00056     public:
00057         virtual void react(InputGraphType const &) {};
00058         virtual void react(InputOpenCurlyBracket const &) { throw_invalid_input(""); };
00059         virtual void react(InputCloseCurlyBracket const &) { throw_invalid_input(""); };
00060         virtual void react(InputNodeId const &) { throw_invalid_input(""); };
00061         virtual void react(InputOpenSquareBracket const &) { throw_invalid_input(""); };
00062         virtual void react(InputCloseSquareBracket const &) { throw_invalid_input(""); };
00063         virtual void react(InputEdge const &) { throw_invalid_input(""); };
00064         virtual void react(InputLabel const &) { throw_invalid_input(""); };
00065         virtual void react(InputEqual const &) { throw_invalid_input(""); };
00066         virtual void react(InputStringValue const &) { throw_invalid_input(""); };
00067         virtual void react(InputIntValue const &) { throw_invalid_input(""); };
00068
00069         static void reset();
00070         void entry(); /* entry actions in some states */
00071         void exit(); /* no exit actions */
00072
00073         friend std::shared_ptr<common::Graph> parse(std::vector<common::Lexeme>& input);
00074
00075     protected:
00076         inline static SharedState shared {};
00077     };
00078
00079     // -----
00080     // 3. State Declarations
00081     //
00082     class Idle : public LexemeParser {
00083     public:
00084         void react(InputGraphType const &) override;
00085     };

```

```
00086     };
00087
00088     class GraphType : public LexemeParser {
00089     void react(InputOpenCurlyBracket const &) override;
00090     };
00091
00092     class OpenCurlyBracket : public LexemeParser {
00093     void react(InputNodeId const &) override;
00094     void react(InputCloseCurlyBracket const &) override;
00095     };
00096
00097     class FromNodeID : public LexemeParser {
00098     void react(InputCloseCurlyBracket const&) override;
00099     void react(InputOpenSquareBracket const&) override;
00100     void react(InputEdge const&) override;
00101     void react(InputNodeId const&) override;
00102     };
00103
00104     class OpenSquareBracket : public LexemeParser {
00105     void react(InputLabel const &) override;
00106     };
00107
00108     class Edge : public LexemeParser {
00109     void react(InputNodeId const &) override;
00110     };
00111
00112     class ToNodeID : public LexemeParser {
00113     void react(InputOpenSquareBracket const &) override;
00114     void react(InputNodeId const& ) override;
00115     void react(InputCloseCurlyBracket const&) override;
00116     };
00117
00118     class Label : public LexemeParser {
00119     void react(InputEqual const &) override;
00120     };
00121
00122     class Equal : public LexemeParser {
00123     void react(InputStringValue const &) override;
00124     void react(InputIntValue const &) override;
00125     };
00126
00127     class Value : public LexemeParser {
00128     void react(InputCloseSquareBracket const &) override;
00129     };
00130
00136     std::shared_ptr<common::Graph> parse(std::vector<common::Lexeme>& input);
00137 }
```



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