

general\_ledger

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## Chapter 1

# General Ledger.

General Ledger will be a fully-featured, multi-user, open-source general ledger system. The project is in the early stages of development.



## Chapter 2

# Class Index

### 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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## Chapter 3

# Class Index

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## Chapter 5

# Class Documentation

### 5.1 genleg::Config Class Reference

```
#include <config.h>
```

#### Public Member Functions

- [Config](#) ()
- [~Config](#) ()
- void [add\\_cmdline\\_option](#) (const std::string option, const enum Argument arg)  
*Adds a supported command line option.*
- void [populate\\_from\\_cmdline](#) (const int argc, char \*const \*argv)  
*Populates options from the command line.*
- void [populate\\_from\\_file](#) (const std::string filename)  
*Populates options from a configuration file.*
- bool [is\\_set](#) (const std::string option) const  
*Checks if an option is set.*
- const std::string & [operator\[\]](#) (const std::string &option) const  
*operator[] overload.*

#### Private Attributes

- std::map< std::string, std::string > [m\\_opts\\_set](#)
- std::list< std::pair< std::string, enum Argument > > [m\\_opts\\_supp](#)

#### 5.1.1 Detailed Description

Configuration options class

#### 5.1.2 Constructor & Destructor Documentation

##### 5.1.2.1 Config::Config ( )

Constructor

### 5.1.2.2 Config::~Config ( )

Destructor

## 5.1.3 Member Function Documentation

### 5.1.3.1 void Config::add\_cmdline\_option ( const std::string *option*, const enum Argument *arg* )

Adds a supported command line option.

#### Parameters

<i>option</i>	The name of the option.
<i>arg</i>	The argument specification for the option.

### 5.1.3.2 bool Config::is\_set ( const std::string *option* ) const

Checks is an option is set.

#### Parameters

<i>option</i>	The name of the option to check.
---------------	----------------------------------

#### Returns

`true` if the option has been set, `false` if it has not.

### 5.1.3.3 const std::string & Config::operator[] ( const std::string & *option* ) const

operator[] overload.

Retrieves the value of a set option.

#### Parameters

<i>option</i>	The name of the option.
---------------	-------------------------

#### Returns

The value of the option.

#### Exceptions

<a href="#"><i>ConfigOptionNotSet</i></a>	If the named option has not been set.
---	---------------------------------------

### 5.1.3.4 void Config::populate\_from\_cmdline ( const int *argc*, char \*const \* *argv* )

Populates options from the command line.

#### Parameters

<i>argc</i>	<i>argc</i> supplied to <code>main()</code> .
<i>argv</i>	<i>argv</i> supplied to <code>main()</code> .

## Exceptions

<a href="#"><i>ConfigBadOption</i></a>	If an unsupported option is specified, or if a required argument is missing, or if an unexpected argument is found.
--	---

## 5.1.3.5 void Config::populate\_from\_file ( const std::string filename )

Populates options from a configuration file.

## Parameters

<i>filename</i>	The name of the configuration file.
-----------------	-------------------------------------

## Exceptions

<a href="#"><i>ConfigCouldNotOpenFile</i></a>	If the configuration file cannot be opened.
<a href="#"><i>ConfigBadConfigFile</i></a>	If the configuration file is badly formed.

## 5.1.4 Member Data Documentation

## 5.1.4.1 std::map&lt;std::string, std::string&gt; genleg::Config::m\_opts\_set [private]

Map of options which have been set

## 5.1.4.2 std::list&lt;std::pair&lt;std::string, enum Argument&gt; &gt; genleg::Config::m\_opts\_supp [private]

List of options which are supported

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

- lib/config/[config.h](#)
- lib/config/[config.cpp](#)
- lib/config/[config\\_getopt.cpp](#)

## 5.2 genleg::ConfigBadConfigFile Class Reference

```
#include <config.h>
```

## 5.2.1 Detailed Description

Exception class for badly formed configuration file

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

- lib/config/[config.h](#)

## 5.3 genleg::ConfigBadOption Class Reference

```
#include <config.h>
```

### 5.3.1 Detailed Description

Exception class for bad provided option

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

- lib/config/[config.h](#)

## 5.4 genleg::ConfigCouldNotOpenFile Class Reference

```
#include <config.h>
```

### 5.4.1 Detailed Description

Exception class for when conf file cannot be opened

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

- lib/config/[config.h](#)

## 5.5 genleg::ConfigOptionNotSet Class Reference

```
#include <config.h>
```

### 5.5.1 Detailed Description

Exception class for option not set

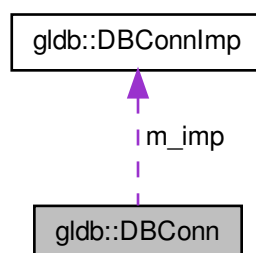
The documentation for this class was generated from the following file:

- lib/config/[config.h](#)

## 5.6 glldb::DBConn Class Reference

```
#include <dbconn.h>
```

Collaboration diagram for glldb::DBConn:



## Public Member Functions

- [DBConn](#) ([DBConnImp](#) \*imp)  
*Constructor.*
- [~DBConn](#) ()  
*Destructor..*
- [Table select](#) (std::string query)  
*Runs an SQL SELECT query.*
- [DBConn](#) (const [DBConn](#) &)
- [DBConn](#) & [operator=](#) (const [DBConn](#) &)

## Private Attributes

- [DBConnImp](#) \* [m\\_imp](#)

### 5.6.1 Detailed Description

Database connection class

### 5.6.2 Constructor & Destructor Documentation

#### 5.6.2.1 [DBConn::DBConn](#) ( [DBConnImp](#) \* *imp* ) [explicit]

Constructor.

##### Parameters

<i>imp</i>	Pointer to database implementation object.
------------	--

#### 5.6.2.2 [gldb::DBConn::DBConn](#) ( const [DBConn](#) & )

Deleted copy constructor

### 5.6.3 Member Function Documentation

#### 5.6.3.1 [DBConn& gldb::DBConn::operator=](#) ( const [DBConn](#) & )

Deleted assignment operator

#### 5.6.3.2 [Table](#) [DBConn::select](#) ( std::string *query* )

Runs an SQL SELECT query.

##### Parameters

<i>query</i>	The query.
--------------	------------

##### Returns

A [Table](#) object containing the results.

## 5.6.4 Member Data Documentation

### 5.6.4.1 DBConnImp\* glldb::DBConn::m\_imp [private]

Pointer to database implementation object.

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

- [lib/database/dbconn.h](#)
- [lib/database/dbconn.cpp](#)

## 5.7 glldb::DBConnCouldNotConnect Class Reference

```
#include <dbconn.h>
```

### Public Member Functions

- [DBConnCouldNotConnect](#) (const std::string &msg)  
*Constructor.*

### 5.7.1 Detailed Description

Could not connect to database exception class

### 5.7.2 Constructor & Destructor Documentation

#### 5.7.2.1 glldb::DBConnCouldNotConnect::DBConnCouldNotConnect ( const std::string & msg ) [inline], [explicit]

Constructor.

#### Parameters

<i>msg</i>	Database error message
------------	------------------------

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

- [lib/database/dbconn.h](#)

## 5.8 glldb::DBConnCouldNotQuery Class Reference

```
#include <dbconn.h>
```

### Public Member Functions

- [DBConnCouldNotQuery](#) (const std::string &msg)  
*Constructor.*

### 5.8.1 Detailed Description

Could not execute database query exception class

## 5.8.2 Constructor & Destructor Documentation

### 5.8.2.1 glldb::DBConnCouldNotQuery::DBConnCouldNotQuery ( const std::string & *msg* ) [inline], [explicit]

Constructor.

Parameters

<i>msg</i>	Database error message
------------	------------------------

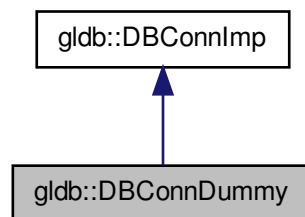
The documentation for this class was generated from the following file:

- lib/database/[dbconn.h](#)

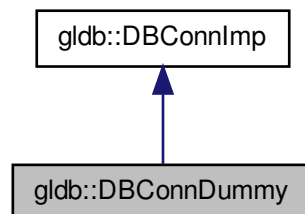
## 5.9 glldb::DBConnDummy Class Reference

```
#include <dbconn_dummy_imp.h>
```

Inheritance diagram for glldb::DBConnDummy:



Collaboration diagram for glldb::DBConnDummy:



## Public Member Functions

- [DBConnDummy](#) (const std::string database, const std::string hostname, const std::string username, const std::string password)

*Constructor.*

- [DBConnDummy](#) (const [DBConnDummy](#) &)
- virtual [~DBConnDummy](#) ()
- [DBConnDummy](#) & [operator=](#) (const [DBConnDummy](#) &)
- [Table select](#) (std::string query)

*Fakes running of an SQL SELECT query.*

### 5.9.1 Detailed Description

Dummy database implementation class

### 5.9.2 Constructor & Destructor Documentation

#### 5.9.2.1 [DBConnDummy::DBConnDummy](#) ( const std::string *database*, const std::string *hostname*, const std::string *username*, const std::string *password* )

Constructor.

Parameters

<i>database</i>	The name of the Dummy database.
<i>hostname</i>	The hostname of the server.
<i>username</i>	The username to log into the database.
<i>password</i>	The password to log into the database.

#### 5.9.2.2 [gldb::DBConnDummy::DBConnDummy](#) ( const [DBConnDummy](#) & )

Deleted copy constructor

#### 5.9.2.3 [DBConnDummy::~~DBConnDummy](#) ( ) [[virtual](#)]

Destructor

### 5.9.3 Member Function Documentation

#### 5.9.3.1 [DBConnDummy& gldb::DBConnDummy::operator=](#) ( const [DBConnDummy](#) & )

Deleted assignment operator

#### 5.9.3.2 [Table DBConnDummy::select](#) ( std::string *query* ) [[virtual](#)]

Fakes running of an SQL SELECT query.

Parameters

<i>query</i>	Any query.
--------------	------------

Returns

A [Table](#) object containing dummy results.

Implements [gldb::DBConnImp](#).



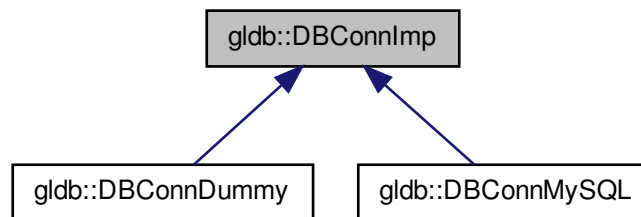
The documentation for this class was generated from the following files:

- [lib/database\\_imp/dummy/dbconn\\_dummy\\_imp.h](#)
- [lib/database\\_imp/dummy/dbconn\\_dummy\\_imp.cpp](#)

## 5.10 glldb::DBConnImp Class Reference

```
#include <dbconnimp.h>
```

Inheritance diagram for glldb::DBConnImp:



### Public Member Functions

- [DBConnImp](#) ()
- virtual [~DBConnImp](#) ()
- virtual [Table select](#) (std::string query)=0  
*Runs an SQL SELECT query.*

#### 5.10.1 Detailed Description

Abstract database implementation base class

#### 5.10.2 Constructor & Destructor Documentation

5.10.2.1 `glldb::DBConnImp::DBConnImp ( ) [inline]`

Constructor

5.10.2.2 `virtual glldb::DBConnImp::~~DBConnImp ( ) [inline], [virtual]`

Destructor

#### 5.10.3 Member Function Documentation

5.10.3.1 `virtual Table glldb::DBConnImp::select ( std::string query ) [pure virtual]`

Runs an SQL SELECT query.

## Parameters

<i>query</i>	The query.
--------------	------------

## Returns

A [Table](#) object containing the results.

Implemented in [gldb::DBConnMySQL](#), and [gldb::DBConnDummy](#).

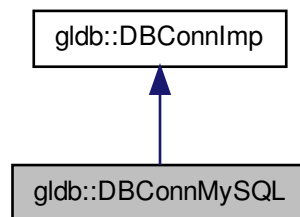
The documentation for this class was generated from the following file:

- [lib/database/dbconnimp.h](#)

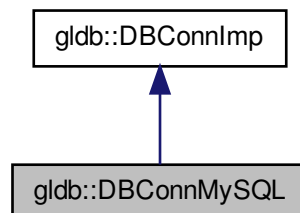
## 5.11 gldb::DBConnMySQL Class Reference

```
#include <dbconn_mysql_imp.h>
```

Inheritance diagram for gldb::DBConnMySQL:



Collaboration diagram for gldb::DBConnMySQL:



### Public Member Functions

- [DBConnMySQL](#) (const std::string database, const std::string hostname, const std::string username, const std::string password)

*Constructor.*

- [DBConnMySQL](#) (const [DBConnMySQL](#) &)
- virtual [~DBConnMySQL](#) ()
- [DBConnMySQL](#) & [operator=](#) (const [DBConnMySQL](#) &)
- [Table select](#) (std::string query)

*Runs an SQL SELECT query.*

## Private Attributes

- MYSQL \* [m\\_conn](#)

### 5.11.1 Detailed Description

MySQL database implementation class

### 5.11.2 Constructor & Destructor Documentation

- 5.11.2.1 [DBConnMySQL::DBConnMySQL](#) ( const std::string *database*, const std::string *hostname*, const std::string *username*, const std::string *password* )

Constructor.

#### Parameters

<i>database</i>	The name of the MySQL database.
<i>hostname</i>	The hostname of the server.
<i>username</i>	The username to log into the database.
<i>password</i>	The password to log into the database.

#### Exceptions

<a href="#">DBConnCouldNotConnect</a>	If could not connect to database.
---------------------------------------	-----------------------------------

- 5.11.2.2 [gdb::DBConnMySQL::DBConnMySQL](#) ( const [DBConnMySQL](#) & )

Deleted copy constructor

- 5.11.2.3 [DBConnMySQL::~~DBConnMySQL](#) ( ) [[virtual](#)]

Destructor

### 5.11.3 Member Function Documentation

- 5.11.3.1 [DBConnMySQL& gdb::DBConnMySQL::operator=](#) ( const [DBConnMySQL](#) & )

Deleted assignment operator

- 5.11.3.2 [Table DBConnMySQL::select](#) ( std::string *query* ) [[virtual](#)]

Runs an SQL SELECT query.

## Parameters

<i>query</i>	The query.
--------------	------------

## Returns

A [Table](#) object containing the results.

## Exceptions

<a href="#">DBConnCouldNotQuery</a>	If could not successfully execute query.
-------------------------------------	--

Implements [gldb::DBConnImp](#).

### 5.11.4 Member Data Documentation

#### 5.11.4.1 MySQL\* gldb::DBConnMySQL::m\_conn [private]

The initialized MySQL handle.

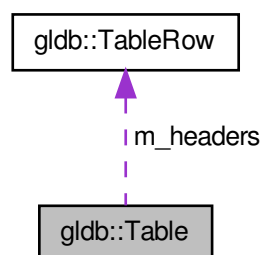
The documentation for this class was generated from the following files:

- lib/database\_imp/mysql/dbconn\_mysql\_imp.h
- lib/database\_imp/mysql/dbconn\_mysql\_imp.cpp

## 5.12 gldb::Table Class Reference

```
#include <table.h>
```

Collaboration diagram for gldb::Table:



### Public Member Functions

- [Table](#) (const [TableRow](#) &headers)  
*Constructor.*
- [~Table](#) ()
- size\_t [num\\_fields](#) () const  
*Returns the number of fields in each row.*

- `size_t num_records () const`  
*Returns the number of record in the table.*
- `const TableRow & get_headers () const`  
*Returns the field names.*
- `const TableRow & operator[] (const size_t idx) const`  
*Overloaded index operator.*
- `void append_record (const TableRow &new_record)`  
*Appends a record to the table.*

### Private Attributes

- `TableRow m_headers`
- `std::vector< TableRow > m_records`

## 5.12.1 Detailed Description

Database table class

## 5.12.2 Constructor & Destructor Documentation

### 5.12.2.1 Table::Table ( const TableRow & headers ) [explicit]

Constructor.

Parameters

<i>headers</i>	Table row containing field names.
----------------	-----------------------------------

### 5.12.2.2 Table::~~Table ( )

Destructor

## 5.12.3 Member Function Documentation

### 5.12.3.1 void Table::append\_record ( const TableRow & new\_record )

Appends a record to the table.

Parameters

<i>new_record</i>	The record to append.
-------------------	-----------------------

### 5.12.3.2 const TableRow & Table::get\_headers ( ) const

Returns the field names.

Returns

The field names.

#### 5.12.3.3 `size_t Table::num_fields ( ) const`

Returns the number of fields in each row.

##### Returns

The number of fields in each row.

#### 5.12.3.4 `size_t Table::num_records ( ) const`

Returns the number of record in the table.

##### Returns

The number of records in the table.

#### 5.12.3.5 `const TableRow & Table::operator[] ( const size_t idx ) const`

Overloaded index operator.

##### Parameters

<i>idx</i>	The zero-based index of the record.
------------	-------------------------------------

##### Returns

The selected record.

### 5.12.4 Member Data Documentation

#### 5.12.4.1 `TableRow glldb::Table::m_headers [private]`

The names of the fields

#### 5.12.4.2 `std::vector<TableRow> glldb::Table::m_records [private]`

A vector of the records

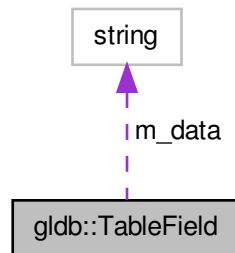
The documentation for this class was generated from the following files:

- lib/database/[table.h](#)
- lib/database/[table.cpp](#)

## 5.13 `glldb::TableField` Class Reference

```
#include <tablefield.h>
```

Collaboration diagram for glldb::TableField:



## Public Member Functions

- [TableField](#) (const char \*data)  
*Constructor accepting `const char * data`.*
- [TableField](#) (const std::string &data)  
*Constructor accepting `std::string data`.*
- [~TableField](#) ()
- [size\\_t length](#) () const  
*Returns the length of the field.*
- [operator std::string](#) () const  
*Overridden conversion operator.*
- [TableField & operator=](#) (const char \*data)  
*Overridden assignment operator for `const char *`.*
- [TableField & operator=](#) (const std::string &data)  
*Overridden assignment operator for `std::string`.*
- [char & operator\[\]](#) (const size\_t idx)  
*Overridden index operator.*
- [const char & operator\[\]](#) (const size\_t idx) const  
*Overridden index operator.*
- [TableField & operator+=](#) (const char &c)  
*Overridden compound assignment operator.*
- [TableField & operator+=](#) (const std::string &data)  
*Overridden compound assignment operator.*

## Private Attributes

- `std::string` [m\\_data](#)

## Friends

- `std::ostream & operator<<` (std::ostream &out, const [TableField](#) &field)  
*Overridden << operator for printing a field.*

### 5.13.1 Detailed Description

Database table field class

### 5.13.2 Constructor & Destructor Documentation

#### 5.13.2.1 `TableField::TableField ( const char * data )` `[explicit]`

Constructor accepting `const char * data`.

##### Parameters

<i>data</i>	The initial contents of the field.
-------------	------------------------------------

#### 5.13.2.2 `TableField::TableField ( const std::string & data )` `[explicit]`

Constructor accepting `std::string data`.

##### Parameters

<i>data</i>	The initial contents of the field.
-------------	------------------------------------

#### 5.13.2.3 `TableField::~~TableField ( )`

Destructor

### 5.13.3 Member Function Documentation

#### 5.13.3.1 `size_t TableField::length ( ) const`

Returns the length of the field.

##### Returns

The length of the field.

#### 5.13.3.2 `TableField::operator std::string ( ) const`

Overridden conversion operator.

Returns the field contents as a string.

#### 5.13.3.3 `TableField & TableField::operator+= ( const char & c )`

Overridden compound assignment operator.

##### Parameters

<i>c</i>	The character to append to the field.
----------	---------------------------------------



**Returns**

A reference to the same field.

**5.13.3.4 TableField & TableField::operator+= ( const std::string & *data* )**

Overridden compound assignment operator.

**Parameters**

<i>data</i>	The string to append to the field.
-------------	------------------------------------

**Returns**

A reference to the same field.

**5.13.3.5 TableField & TableField::operator= ( const char \* *data* )**

Overridden assignment operator for `const char *`.

**Parameters**

<i>data</i>	The new contents of the field.
-------------	--------------------------------

**Returns**

A reference to the same field.

**5.13.3.6 TableField & TableField::operator= ( const std::string & *data* )**

Overridden assignment operator for `std::string`.

**Parameters**

<i>data</i>	The new contents of the field.
-------------	--------------------------------

**Returns**

A reference to the same field.

**5.13.3.7 char & TableField::operator[] ( const size\_t *idx* )**

Overridden index operator.

**Parameters**

<i>idx</i>	The desired index.
------------	--------------------

**Returns**

A reference to the character at the specified index.

#### 5.13.3.8 `const char & TableField::operator[] ( const size_t idx ) const`

Overridden index operator.

##### Parameters

<i>idx</i>	The desired index.
------------	--------------------

##### Returns

A const reference to the character at the specified index.

### 5.13.4 Friends And Related Function Documentation

#### 5.13.4.1 `std::ostream& operator<< ( std::ostream & out, const TableField & field )` [*friend*]

Overridden << operator for printing a field.

##### Parameters

<i>out</i>	The ostream to which to print.
<i>field</i>	A reference to the field.

##### Returns

A reference to `out`.

### 5.13.5 Member Data Documentation

#### 5.13.5.1 `std::string glldb::TableField::m_data` [*private*]

The field contents

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

- lib/database/[tablefield.h](#)
- lib/database/[tablefield.cpp](#)

## 5.14 `glldb::TableRow` Class Reference

```
#include <tablerow.h>
```

### Public Member Functions

- [TableRow](#) ()
- [TableRow](#) (const size\_t *size*)  
*Constructor with initial number of fields.*
- [~TableRow](#) ()
- size\_t *size* () const  
*Returns the number of fields.*
- [TableField](#) & [operator\[\]](#) (const size\_t *idx*)  
*Overridden index operator.*
- const [TableField](#) & [operator\[\]](#) (const size\_t *idx*) const

*Overridden index operator.*

- void [append\\_field](#) (const char \*new\_field)  
*Appends a field to the row.*
- void [append\\_field](#) (const std::string &new\_field)  
*Appends a field to the row.*
- void [append\\_field](#) (const [TableField](#) &new\_field)  
*Appends a field to the row.*
- void [print](#) (std::ostream &stream) const  
*Prints a row.*

## Private Attributes

- std::vector< [TableField](#) > [m\\_fields](#)

### 5.14.1 Detailed Description

Database table row class

### 5.14.2 Constructor & Destructor Documentation

#### 5.14.2.1 TableRow::TableRow ( )

Default constructor

#### 5.14.2.2 TableRow::TableRow ( const size\_t size ) [explicit]

Constructor with initial number of fields.

##### Parameters

<i>size</i>	The initial number of fields.
-------------	-------------------------------

#### 5.14.2.3 TableRow::~~TableRow ( )

Destructor

### 5.14.3 Member Function Documentation

#### 5.14.3.1 void TableRow::append\_field ( const char \* new\_field )

Appends a field to the row.

##### Parameters

<i>new_field</i>	The contents of the new field.
------------------	--------------------------------

#### 5.14.3.2 void TableRow::append\_field ( const std::string & new\_field )

Appends a field to the row.

## Parameters

<i>new_field</i>	The contents of the new field.
------------------	--------------------------------

**5.14.3.3 void TableRow::append\_field ( const TableField & *new\_field* )**

Appends a field to the row.

## Parameters

<i>new_field</i>	A field from which to copy.
------------------	-----------------------------

**5.14.3.4 TableField & TableRow::operator[] ( const size\_t *idx* )**

Overridden index operator.

## Parameters

<i>idx</i>	The zero-based index of the field.
------------	------------------------------------

## Returns

A reference to the field at the specified index.

**5.14.3.5 const TableField & TableRow::operator[] ( const size\_t *idx* ) const**

Overridden index operator.

## Parameters

<i>idx</i>	The zero-based index of the field.
------------	------------------------------------

## Returns

A const reference to the field at the specified index.

**5.14.3.6 void TableRow::print ( std::ostream & *stream* ) const**

Prints a row.

## Parameters

<i>stream</i>	The ostream to which to print.
---------------	--------------------------------

**5.14.3.7 size\_t TableRow::size ( ) const**

Returns the number of fields.

## Returns

The number of fields.

### 5.14.4 Member Data Documentation

#### 5.14.4.1 `std::vector<TableField> glldb::TableRow::m_fields` [private]

A vector of fields

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

- lib/database/[tablerow.h](#)
- lib/database/[tablerow.cpp](#)



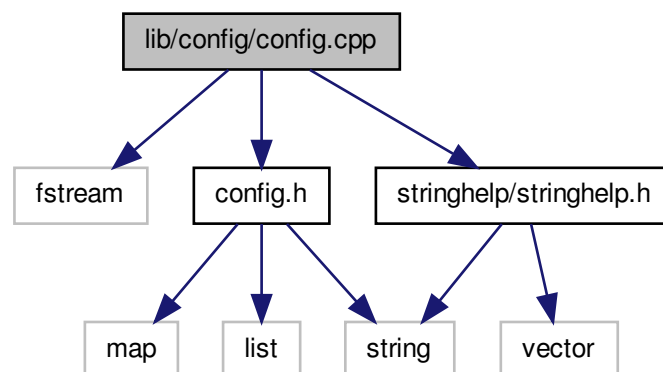
## Chapter 6

# File Documentation

### 6.1 lib/config/config.cpp File Reference

Implementation of program configurations class.

```
#include <fstream>
#include "config.h"
#include "stringhelp/stringhelp.h"
Include dependency graph for config.cpp:
```



#### 6.1.1 Detailed Description

Implementation of program configurations class.

##### Author

Paul Griffiths

##### Copyright

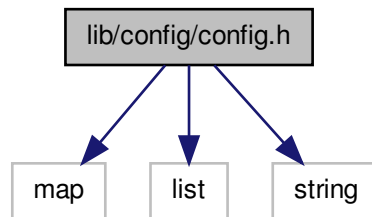
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## 6.2 lib/config/config.h File Reference

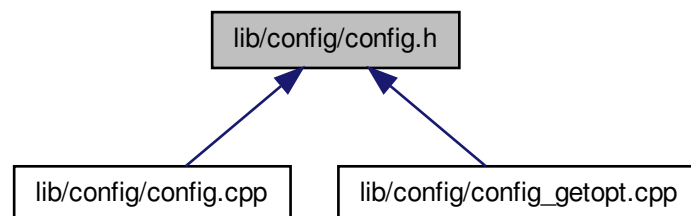
Interface to program configurations class.

```
#include <map>
#include <list>
#include <string>
```

Include dependency graph for config.h:



This graph shows which files directly or indirectly include this file:



### Classes

- class `genleg::ConfigOptionNotSet`
- class `genleg::ConfigBadOption`
- class `genleg::ConfigCouldNotOpenFile`
- class `genleg::ConfigBadConfigFile`
- class `genleg::Config`

### Enumerations

- enum **Argument**



### 6.2.1 Detailed Description

Interface to program configurations class.

#### Author

Paul Griffiths

#### Copyright

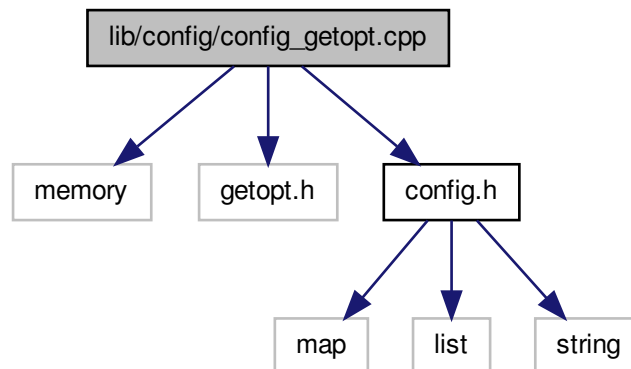
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## 6.3 lib/config/config\_getopt.cpp File Reference

Implementation of command line functionality.

```
#include <memory>
#include <getopt.h>
#include "config.h"
```

Include dependency graph for config\_getopt.cpp:



#### Macros

- `#define _XOPEN_SOURCE 600`

### 6.3.1 Detailed Description

Implementation of command line functionality. Included in separate file to isolate usage of non-standard getopt library.

#### Author

Paul Griffiths

## Copyright

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## 6.3.2 Macro Definition Documentation

### 6.3.2.1 `#define _XOPEN_SOURCE 600`

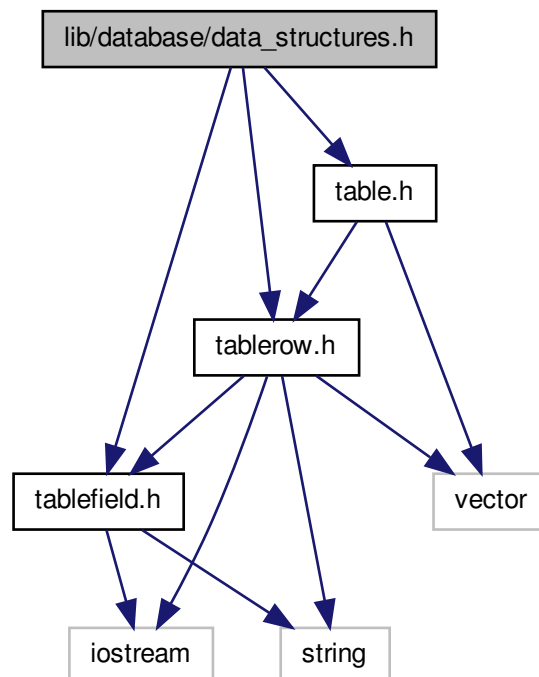
UNIX feature test macro for getopt library

## 6.4 `lib/database/data_structures.h` File Reference

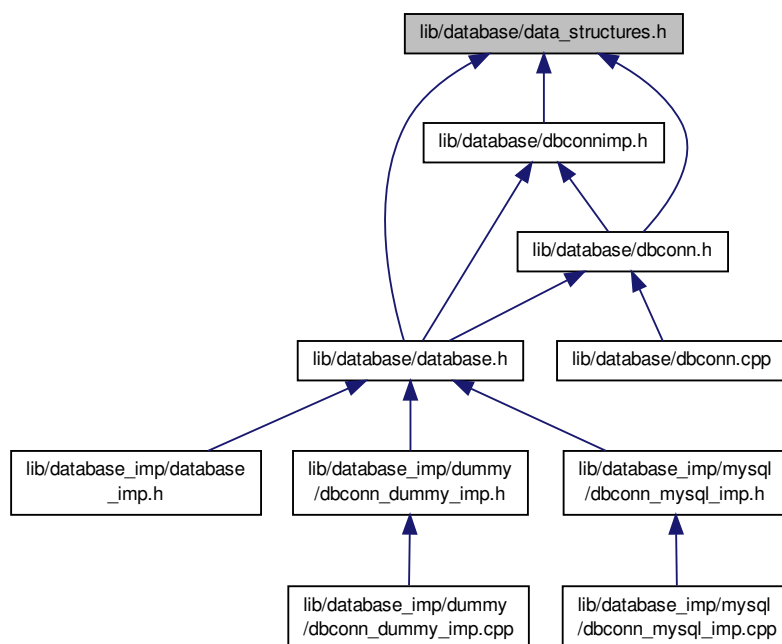
Main interface to database data structures.

```
#include "tablefield.h"  
#include "tablerow.h"  
#include "table.h"
```

Include dependency graph for `data_structures.h`:



This graph shows which files directly or indirectly include this file:



### 6.4.1 Detailed Description

Main interface to database data structures.

#### Author

Paul Griffiths

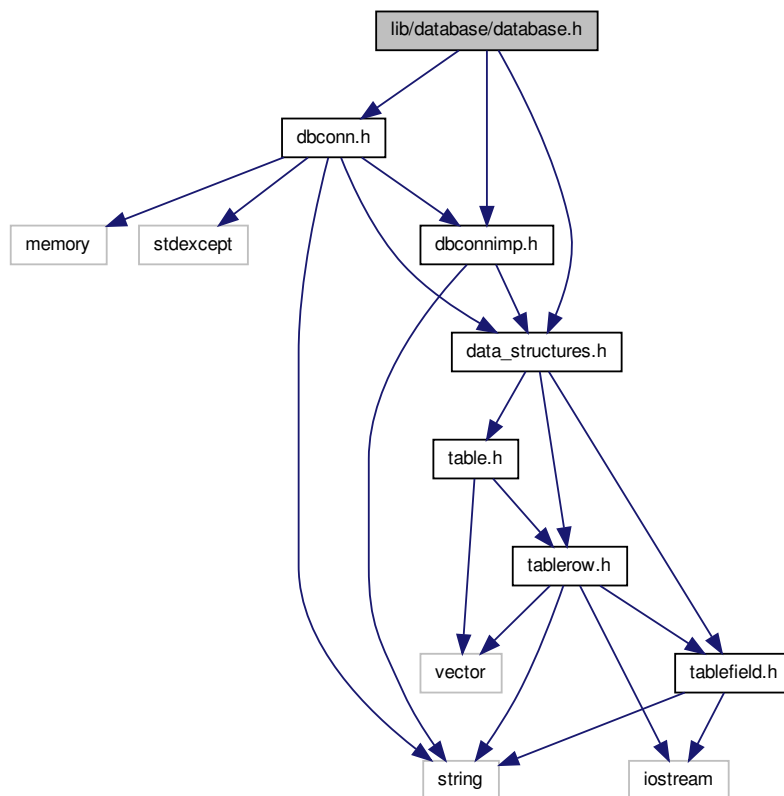
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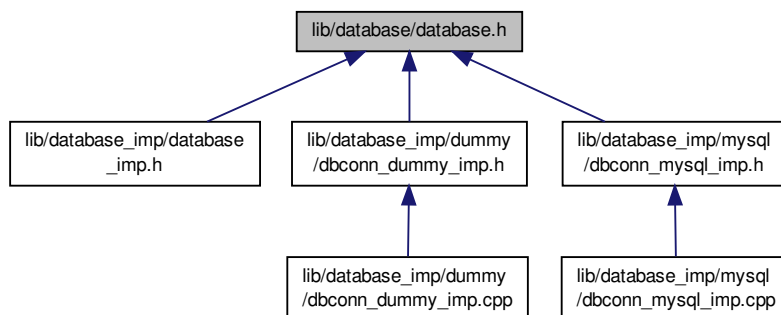
## 6.5 lib/database/database.h File Reference

User interface to database functionality.

```
#include "data_structures.h"  
#include "dbconnimp.h"  
#include "dbconn.h"  
Include dependency graph for database.h:
```



This graph shows which files directly or indirectly include this file:



### 6.5.1 Detailed Description

User interface to database functionality.

#### Author

Paul Griffiths

#### Copyright

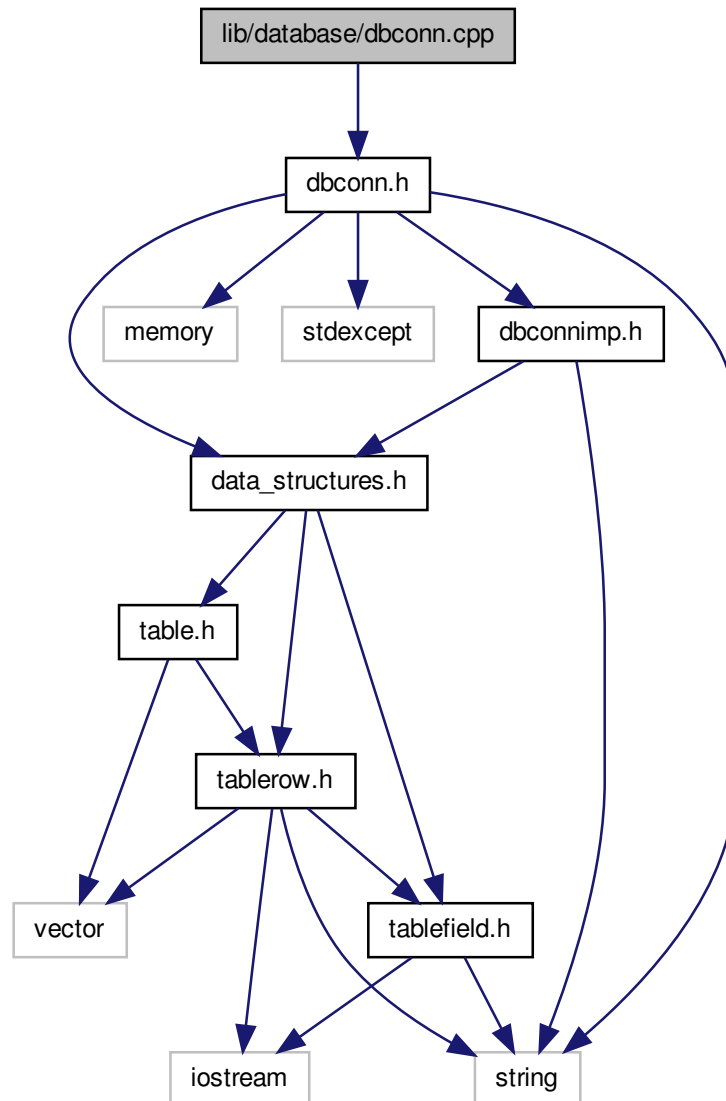
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## 6.6 lib/database/dbconn.cpp File Reference

Implementation of database connection class.

```
#include "dbconn.h"
```

Include dependency graph for dbconn.cpp:



### 6.6.1 Detailed Description

Implementation of database connection class.

Author

Paul Griffiths

Copyright

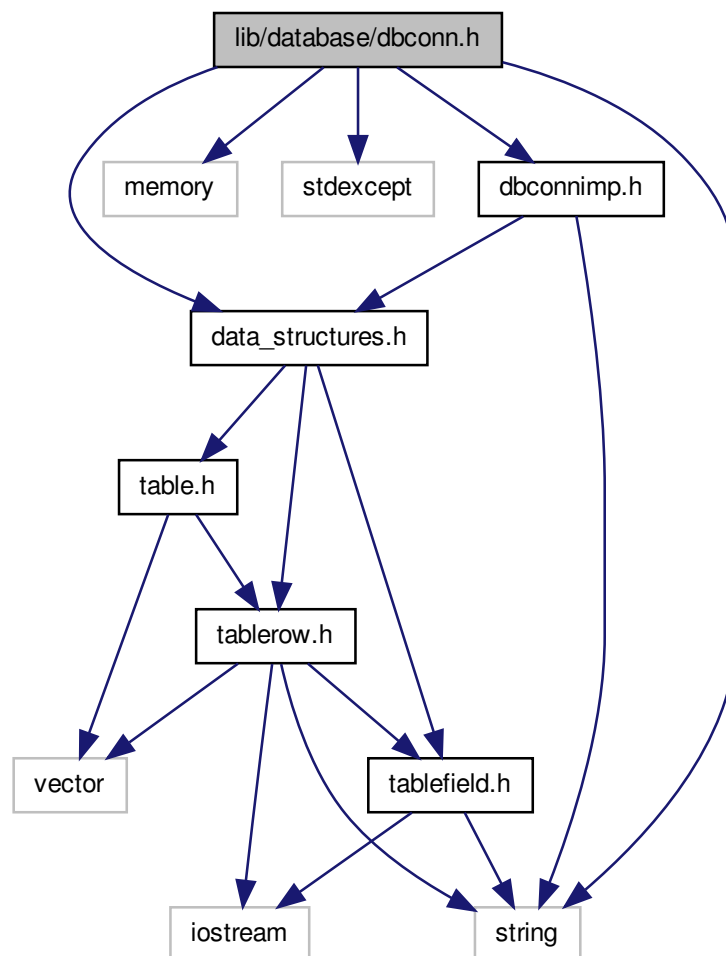
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## 6.7 lib/database/dbconn.h File Reference

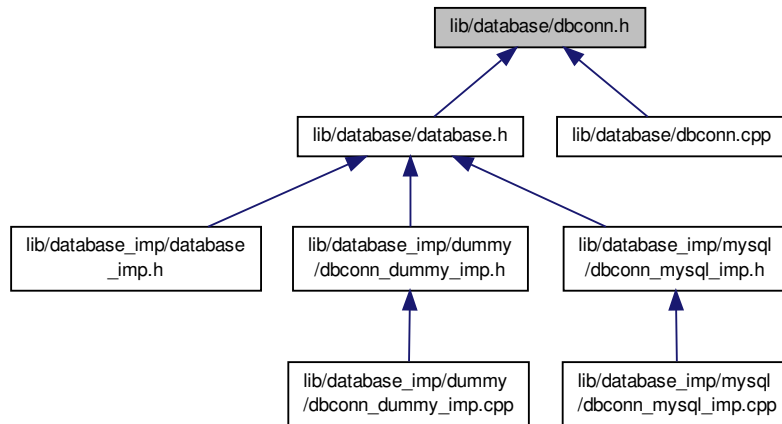
Interface to database connection base class.

```
#include <string>
#include <memory>
#include <stdexcept>
#include "data_structures.h"
#include "dbconnimp.h"
```

Include dependency graph for dbconn.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::DBConnCouldNotConnect](#)
- class [gldb::DBConnCouldNotQuery](#)
- class [gldb::DBConn](#)

### 6.7.1 Detailed Description

Interface to database connection base class.

#### Author

Paul Griffiths

#### Copyright

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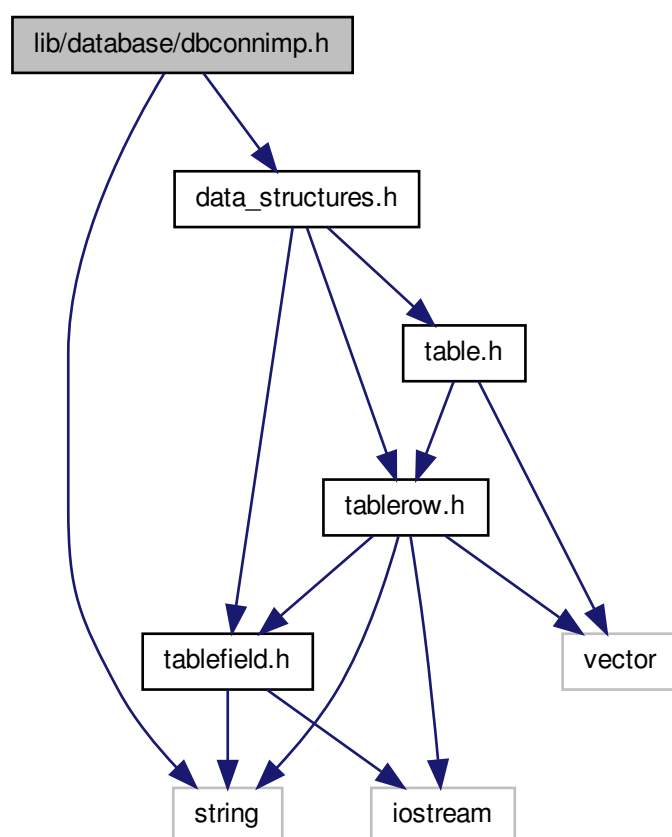
## 6.8 lib/database/dbconnimp.h File Reference

Interface to abstract database implementation base class.

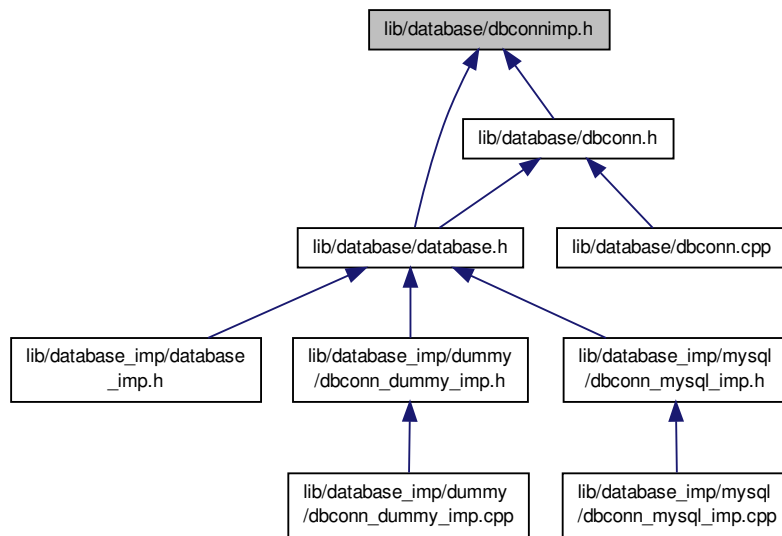
```
#include <string>
#include "data_structures.h"
```



Include dependency graph for dbconnimp.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::DBConnImp](#)

### 6.8.1 Detailed Description

Interface to abstract database implementation base class.

#### Author

Paul Griffiths

### Copyright

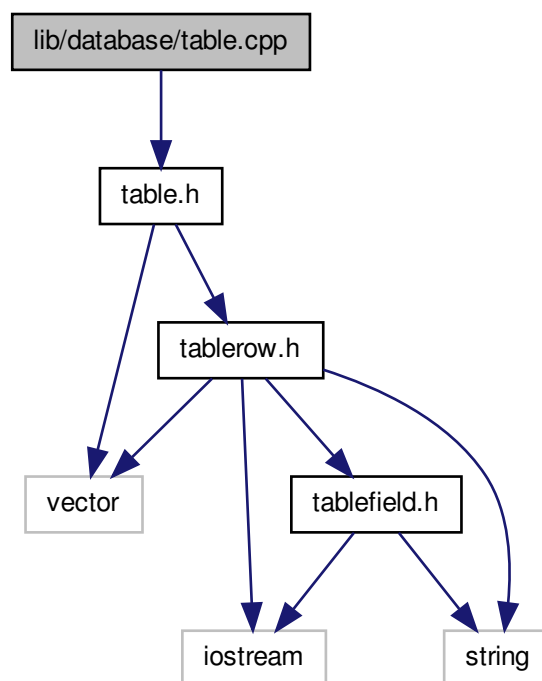
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## 6.9 lib/database/table.cpp File Reference

Implementation of database table data structure.

```
#include "table.h"
```

Include dependency graph for table.cpp:



### 6.9.1 Detailed Description

Implementation of database table data structure.

#### Author

Paul Griffiths

### Copyright

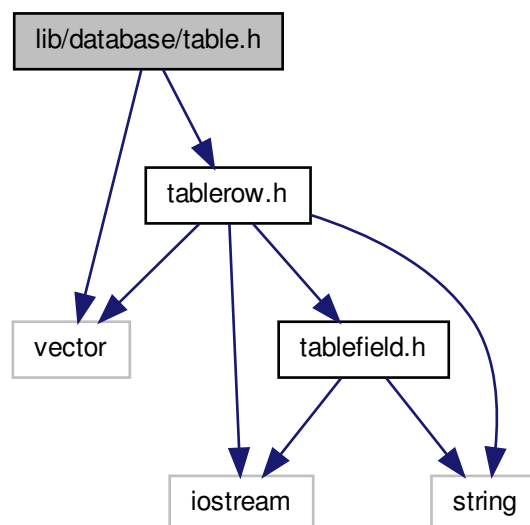
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## 6.10 lib/database/table.h File Reference

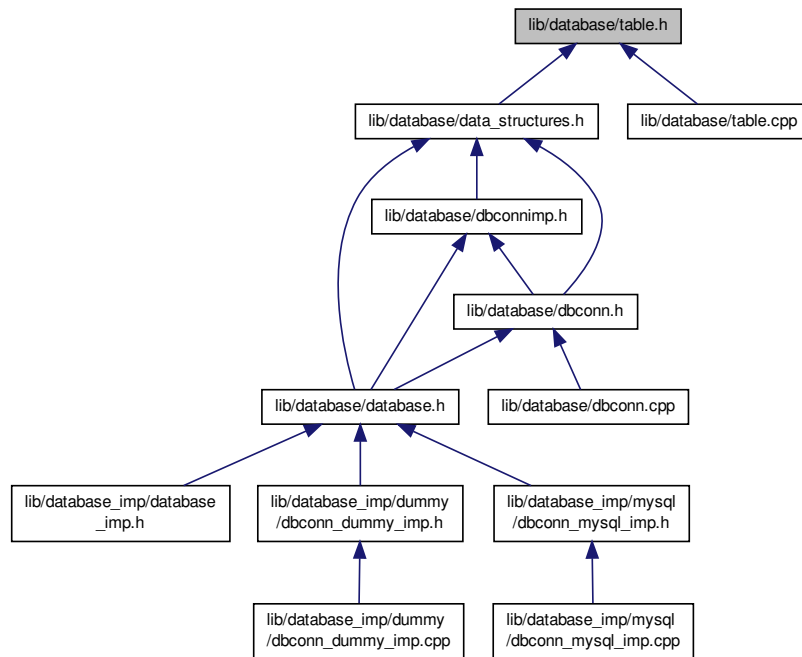
Interface to database table data structure.

```
#include <vector>
#include "tablerow.h"
```

Include dependency graph for table.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::Table](#)

### 6.10.1 Detailed Description

Interface to database table data structure.

#### Author

Paul Griffiths

#### Copyright

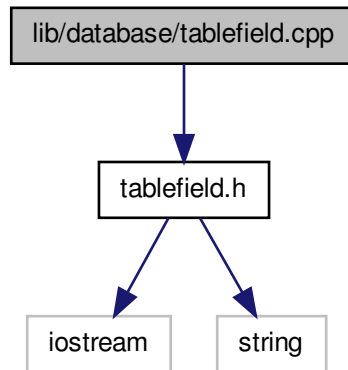
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## 6.11 lib/database/tablefield.cpp File Reference

Implementation of database table field class.

```
#include "tablefield.h"
```

Include dependency graph for tablefield.cpp:



### 6.11.1 Detailed Description

Implementation of database table field class.

#### Author

Paul Griffiths

#### Copyright

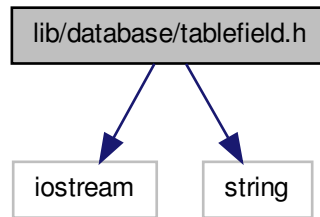
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## 6.12 lib/database/tablefield.h File Reference

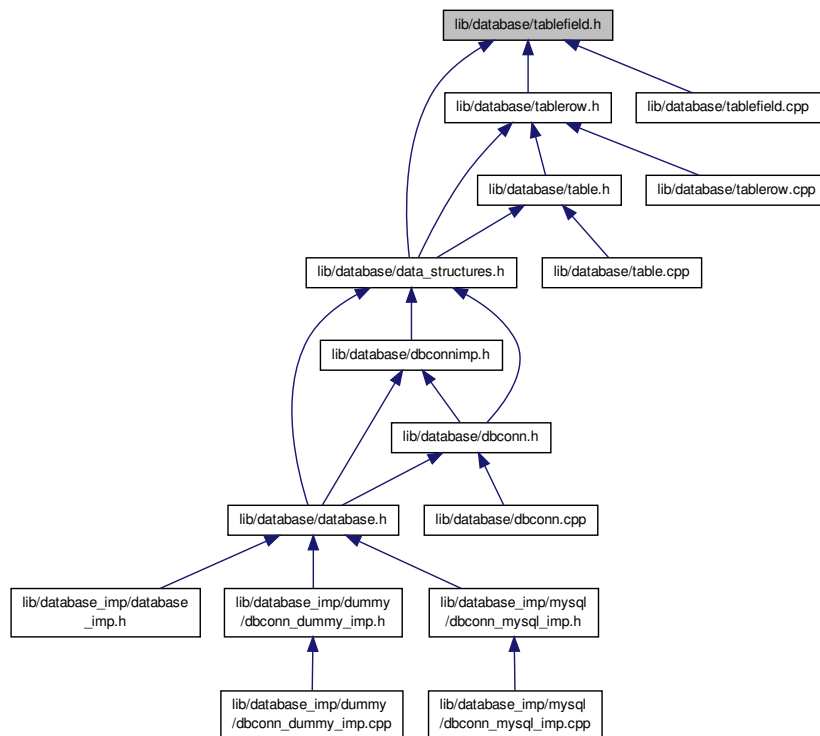
Interface to database table field class.

```
#include <iostream>
#include <string>
```

Include dependency graph for tablefield.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::TableField](#)

## Functions

- `std::ostream & gldb::operator<< (std::ostream &out, const TableField &field)`  
*Overridden << operator for printing a field.*

### 6.12.1 Detailed Description

Interface to database table field class.

**Author**

Paul Griffiths

**Copyright**

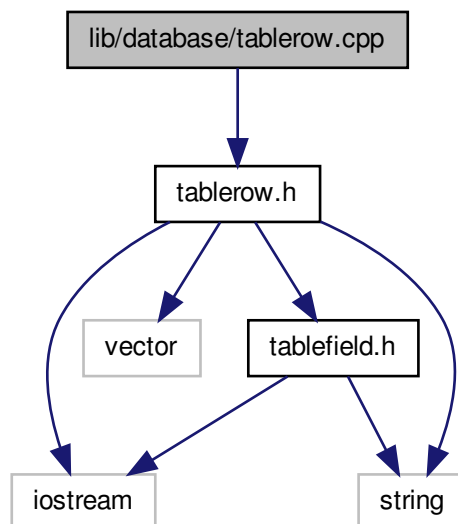
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## 6.13 lib/database/ablerow.cpp File Reference

Implementation of database table row data structure.

```
#include "ablerow.h"
```

Include dependency graph for ablerow.cpp:



### 6.13.1 Detailed Description

Implementation of database table row data structure.

**Author**

Paul Griffiths

**Copyright**

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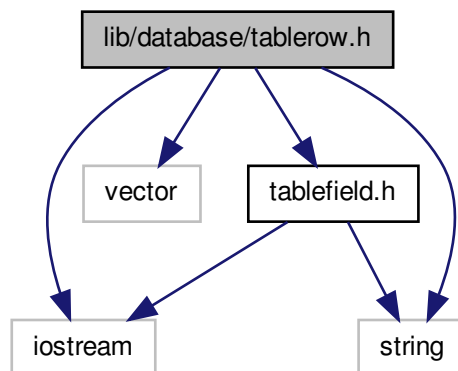


## 6.14 lib/database/tablerow.h File Reference

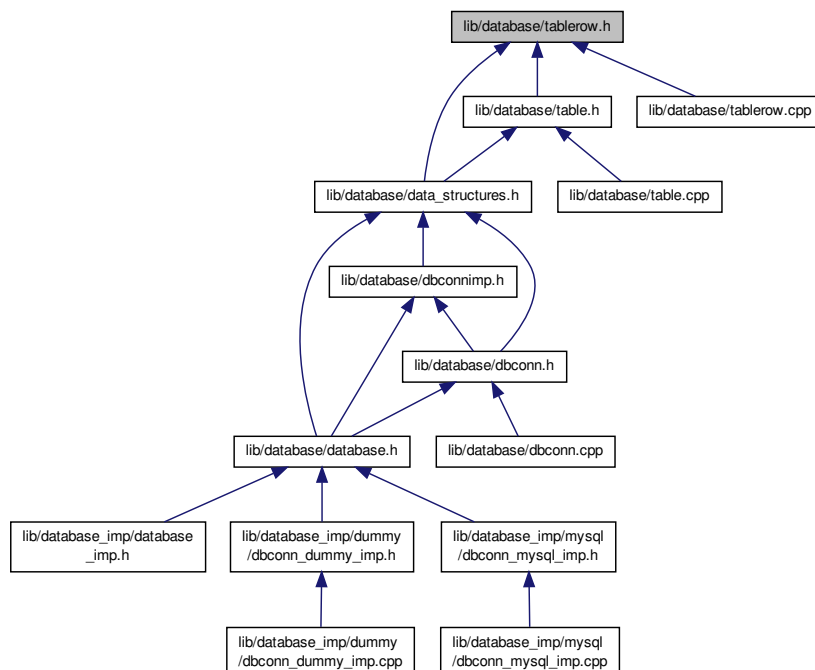
Interface to database table row data structure.

```
#include <iostream>
#include <vector>
#include <string>
#include "tablefield.h"
```

Include dependency graph for tablerow.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class `gldb::TableRow`

### 6.14.1 Detailed Description

Interface to database table row data structure.

#### Author

Paul Griffiths

#### Copyright

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## 6.15 lib/database\_imp/database\_imp.h File Reference

Interface to database implementation factory function.

```
#include <memory>
#include "database/database.h"
```



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Paul Griffiths

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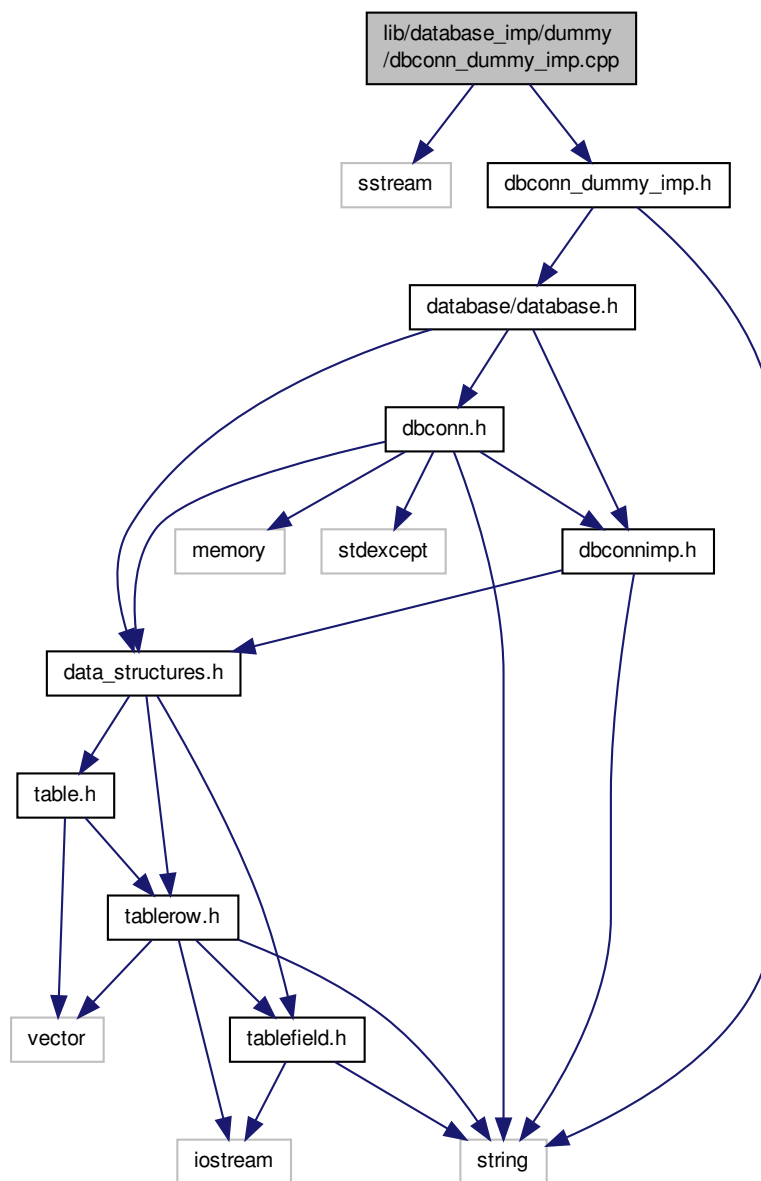
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## 6.16 lib/database\_imp/dummy/dbconn\_dummy\_imp.cpp File Reference

Implementation of Dummy database connection implementation class.

```
#include <sstream>
#include "dbconn_dummy_imp.h"
```

Include dependency graph for dbconn\_dummy\_imp.cpp:



### 6.16.1 Detailed Description

Implementation of Dummy database connection implementation class.

Author

Paul Griffiths

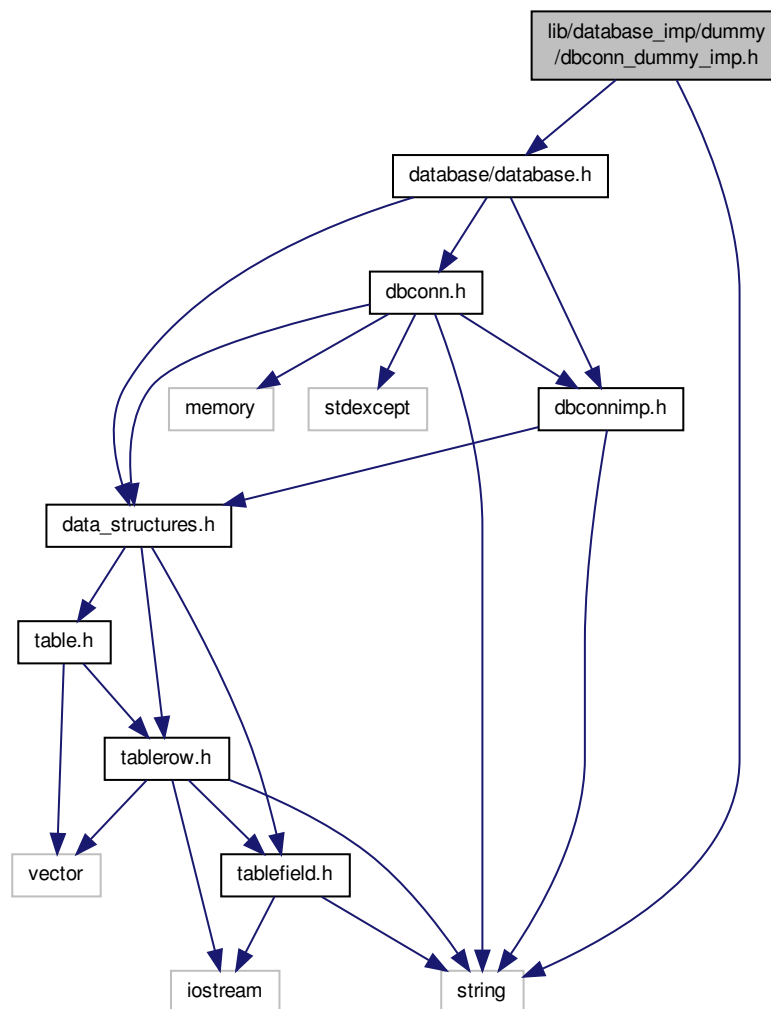
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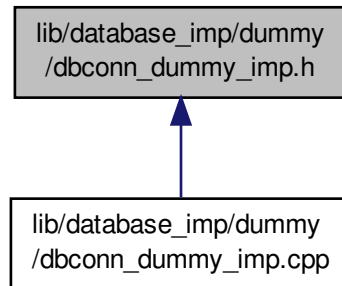
## 6.17 lib/database\_imp/dummy/dbconn\_dummy\_imp.h File Reference

Interface to dummy database connection implementation class.

```
#include <string>
#include "database/database.h"
Include dependency graph for dbconn_dummy_imp.h:
```



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::DBConnDummy](#)

### 6.17.1 Detailed Description

Interface to dummy database connection implementation class.

#### Author

Paul Griffiths

#### Copyright

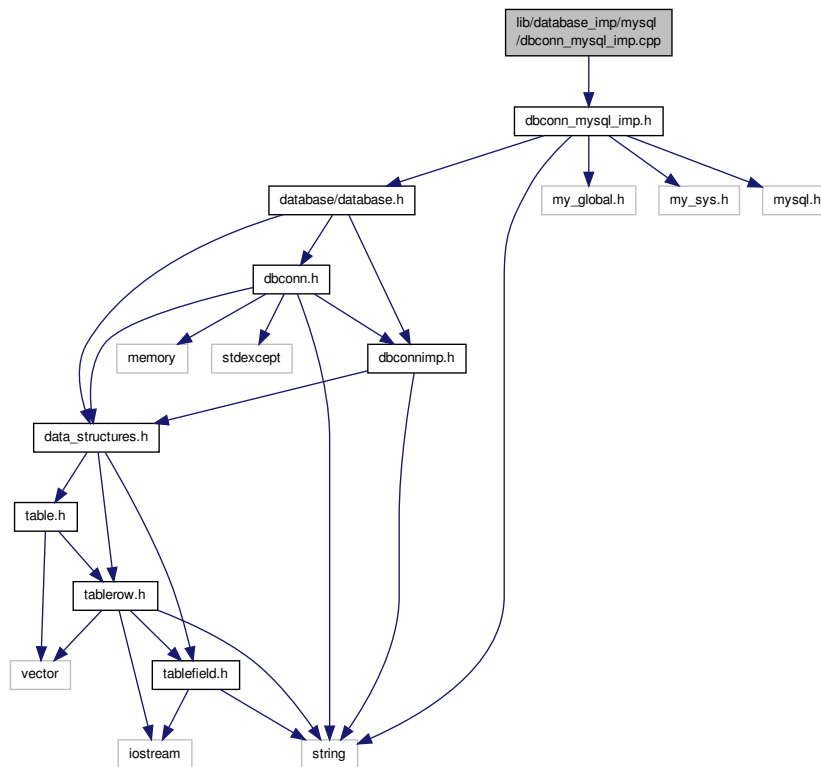
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## 6.18 lib/database\_imp/mysql/dbconn\_mysql\_imp.cpp File Reference

Implementation of MySQL database connection implementation class.

```
#include "dbconn_mysql_imp.h"
```

Include dependency graph for dbconn\_mysql\_imp.cpp:



### 6.18.1 Detailed Description

Implementation of MySQL database connection implementation class.

#### Author

Paul Griffiths

#### Copyright

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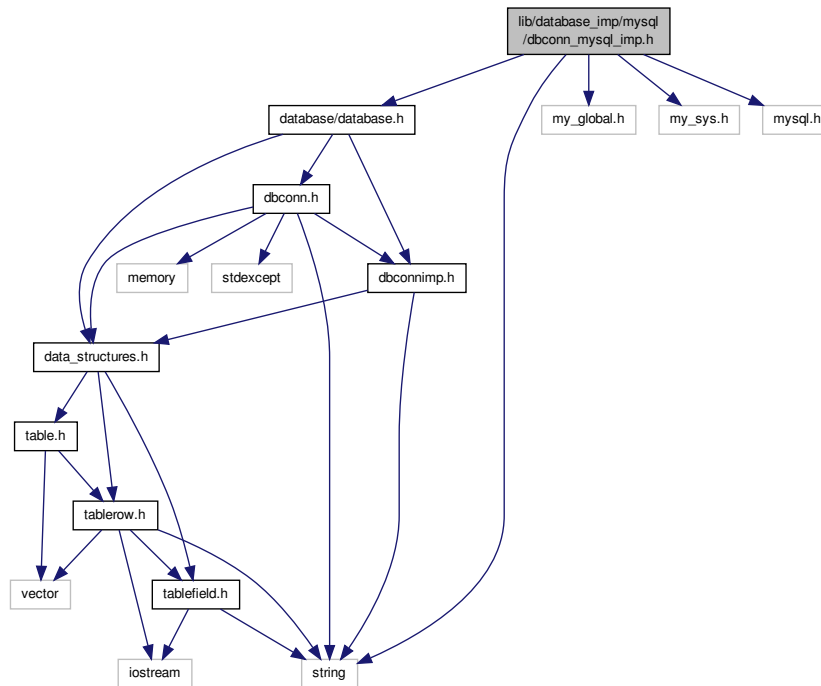
## 6.19 lib/database\_imp/mysql/dbconn\_mysql\_imp.h File Reference

Interface to MySQL database connection implementation class.

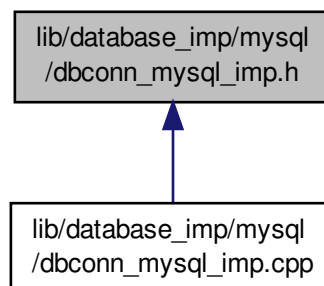
```
#include <string>
#include "database/database.h"
#include <my_global.h>
#include <my_sys.h>
#include <mysql.h>
```



Include dependency graph for dbconn\_mysql\_imp.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [gldb::DBConnMySQL](#)

## 6.19.1 Detailed Description

Interface to MySQL database connection implementation class.

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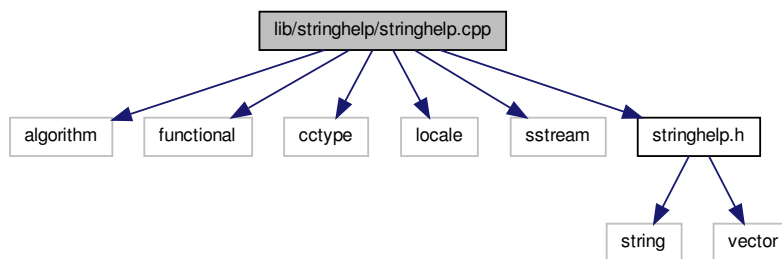
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## 6.20 lib/stringhelp/stringhelp.cpp File Reference

Implementation of string helper functions.

```
#include <algorithm>
#include <functional>
#include <cctype>
#include <locale>
#include <sstream>
#include "stringhelp.h"
```

Include dependency graph for stringhelp.cpp:



### 6.20.1 Detailed Description

Implementation of string helper functions.

**Author**

Paul Griffiths

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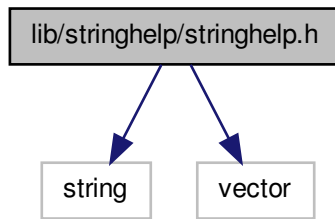
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## 6.21 lib/stringhelp/stringhelp.h File Reference

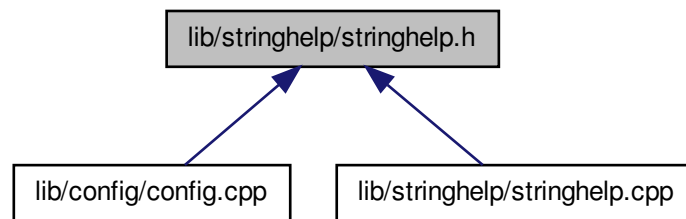
Interface to string helper functions.

```
#include <string>
#include <vector>
```

Include dependency graph for stringhelp.h:



This graph shows which files directly or indirectly include this file:



## Functions

- `std::string & pgstring::trim_front (std::string &s)`  
*Trims leading whitespace from a string.*
- `std::string & pgstring::trim_back (std::string &s)`  
*Trims trailing whitespace from a string.*
- `std::string & pgstring::trim (std::string &s)`  
*Trims leading and trailing whitespace from a string.*
- `std::vector< std::string > pgstring::split (const std::string &s, const char delim)`  
*Splits a delimited string into tokens.*

### 6.21.1 Detailed Description

Interface to string helper functions.

#### Author

Paul Griffiths

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