

DocumentClassHierarchy

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Contents

1	Namespace Index	1
1.1	Namespace List	1
2	Hierarchical Index	3
2.1	Class Hierarchy	3
3	Class Index	5
3.1	Class List	5
4	File Index	7
4.1	File List	7
5	Namespace Documentation	9
5.1	docs Namespace Reference	9
5.1.1	Detailed Description	10
5.1.2	Enumeration Type Documentation	10
5.1.2.1	Type	10
5.1.3	Function Documentation	10
5.1.3.1	operator!=	10
5.1.3.2	operator<<	11
5.1.3.3	operator==	11
5.2	parray Namespace Reference	11
5.2.1	Detailed Description	12
5.3	patch Namespace Reference	12
5.3.1	Detailed Description	12
6	Class Documentation	13
6.1	docs::DocType Class Reference	13
6.1.1	Detailed Description	13
6.2	docs::Document Class Reference	14
6.2.1	Detailed Description	16
6.2.2	Friends And Related Function Documentation	17
6.2.2.1	operator!=	17

6.2.2.2	operator<<	17
6.2.2.3	operator==	17
6.3	parray::PointerArray< T > Class Template Reference	17
6.3.1	Detailed Description	19
6.3.2	Member Function Documentation	19
6.3.2.1	operator[]	19
6.4	docs::Spreadsheet Class Reference	19
6.4.1	Detailed Description	21
6.5	parray::StringPointerArray Class Reference	22
6.5.1	Detailed Description	23
6.5.2	Member Function Documentation	23
6.5.2.1	tester	23
6.6	docs::WebPage Class Reference	24
6.6.1	Detailed Description	26
7	File Documentation	27
7.1	src/Document.cpp File Reference	27
7.1.1	Detailed Description	28
7.2	src/Document.h File Reference	28
7.2.1	Detailed Description	30
7.3	src/main.cpp File Reference	30
7.3.1	Detailed Description	31
7.3.2	Function Documentation	32
7.3.2.1	main	32
7.4	src/PointerArray.cpp File Reference	33
7.4.1	Detailed Description	35
7.5	src/Spreadsheet.cpp File Reference	35
7.5.1	Detailed Description	35
7.6	src/WebPage.cpp File Reference	36
7.6.1	Detailed Description	36
Index		38

Chapter 1

Namespace Index

1.1 Namespace List

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

docs	This namespace is used to collect all the document hierarchy classes and types	9
parray	It specify the dynamic array manager for a generic data T and a std::string specialisation . . .	11
patch	To emulate C++11 and get to_string translator	12

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

docs::DocType	13
docs::Document	14
docs::Spreadsheet	19
docs::WebPage	24
parray::PointerArray< T >	17
parray::PointerArray< std::string >	17
parray::StringPointerArray	22

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

docs::DocType	
The class containing the definition of Document Types names	13
docs::Document	
This is the base class of the Document hierarchy	14
parray::PointerArray< T >	
This class describes a manager of a dynamic array of generic type T*	17
docs::Spreadsheet	
This describes a spreadsheet as a Document extension	19
parray::StringPointerArray	
It implements a PointerArray with a string parameter (T)	22
docs::WebPage	
It describes a web page as a Document extensions	24

Chapter 4

File Index

4.1 File List

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

src/ Document.cpp	Implementation of the Document base class	27
src/ Document.h	The complete Document Hierarchy namespce specification	28
src/ main.cpp	Implements a main function to check the behavior of the parray template and docs hierarchy .	30
src/ PointerArray.cpp	The complete parray (parray::PointerArray<T>) and patch names paces definition	33
src/ Spreadsheet.cpp	Implementation of the docs::Spreadsheet class	35
src/ WebPage.cpp	Implementation of the docs::WebPage class	36

Chapter 5

Namespace Documentation

5.1 docs Namespace Reference

This namespace is used to collect all the document hierarchy classes and types.

Classes

- class [DocType](#)
The class containing the definition of [Document](#) Types names.
- class [Document](#)
This is the base class of the [Document](#) hierarchy.
- class [WebPage](#)
It describes a web page as a [Document](#) extensions.
- class [Spreadsheet](#)
This describes a spreadsheet as a [Document](#) extension.

Enumerations

- enum [Type](#) { [DOCUMENT](#), [WEB_PAGE](#), [SPREADSHEET](#) }
Instances of document identifier values.

Functions

- `std::ostream & operator<< (std::ostream &strm, const Document &doc)`
- `bool operator== (const Document &c1, const Document &c2)`
- `bool operator!= (const Document &c1, const Document &c2)`

Variables

- `const std::string DEFAULT_DOCUMENT_TITLE = "Default Title"`
The title, if not specified on [Document](#) construction.
- `const int DEFAULT_DOCUMENT_KWSIZE = 3`
The size, of key words if not specified on [Document](#) construction.
- `const std::string DEFAULT_WEBPAGE_URL = "www.default.com"`
The url, if not specified on [WebPage](#) construction.
- `const int DEFAULT_WEBPAGE_TEXTSIZE = 10`

- The size of contents, if not specified on [WebPage](#) construction.*
- const int [DEFAULT_SPREADSHEET_COLCNT](#) = 7
- The number of columns, if not specified on [Spreadsheet](#) construction.*
- const int [DEFAULT_SPREADSHEET_ROWcnt](#) = 2
- The number of rows, if not specified on [Spreadsheet](#) construction.*
- const std::string [TYPE_NAME_DOCUMENT](#) = "\"Document\""
- The name of the Type.DOCUMENT type values.*
- const std::string [TYPE_NAME_WEBPAGE](#) = "\"Web Page\""
- The name of the Type.WEB_PAGE type values.*
- const std::string [TYPE_NAME_SPREADSHEET](#) = "\"Spreadsheet\""
- The name of the Type.SPREADSHEET type values.*
- const std::string [LOG_HEADER](#) = " DocumentHierarchy: "
- the debugging string to be appended on log head by this [Document](#)*
- const std::string [LOG_HEADER_TEST](#) = "\t[TEST] " + [LOG_HEADER](#)
- the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Test logs*
- const std::string [LOG_HEADER_WARNING](#) = "[WARNING] " + [LOG_HEADER](#)
- the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Warning logs*
- const std::string [LOG_HEADER_INFO](#) = "[INFO] " + [LOG_HEADER](#)
- the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Info logs*
- const std::string [LOG_HEADER_ERROR](#) = "[ERROR] " + [LOG_HEADER](#)
- the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Error logs*

5.1.1 Detailed Description

This namespace is used to collect all the document hierarchy classes and types.

5.1.2 Enumeration Type Documentation

5.1.2.1 enum docs::Type

Instances of document identifier values.

Enumerator

DOCUMENT only [Document](#) objects will have this [Document::getType\(\)](#) value

WEB_PAGE only [WebPage](#) objects will have this [Document::getType\(\)](#) value

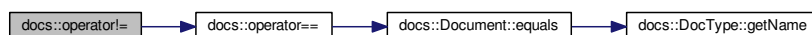
SPREADSHEET only [Spreadsheet](#) objects will have this [Document::getType\(\)](#) value

5.1.3 Function Documentation

5.1.3.1 bool docs::operator!=(const Document & c1, const Document & c2)

it returns '!c1.equals(c2)'. This method should not be implemented on derived classes.

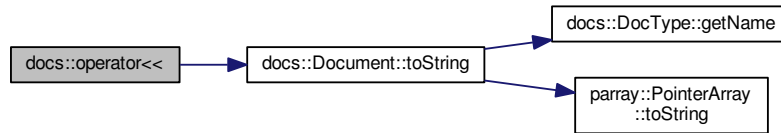
Here is the call graph for this function:



5.1.3.2 std::ostream& docs::operator<< (std::ostream & *strm*, const Document & *doc*)

it returns '*strm* << *doc.toString()*'. This method should not be implemented on derived classes.

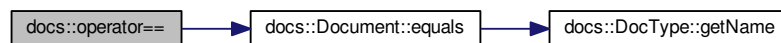
Here is the call graph for this function:



5.1.3.3 bool docs::operator==(const Document & *c1*, const Document & *c2*)

it returns '*c1.equals(c2)*'. This method should not be implemented on derived classes.

Here is the call graph for this function:



5.2 parray Namespace Reference

it specify the dynamic array manager for a generic data T and a std::string specialisation.

Classes

- class [PointerArray](#)
This class describes a manager of a dynamic array of generic type T.*
- class [StringPointerArray](#)
It implements a [PointerArray](#) with a string parameter (T).

Variables

- const std::string [LOG_HEADER](#) = " PointerArray: "
the debugging string to be appended on log head by this list manager
- const std::string [LOG_HEADER_TEST](#) = "[TEST] " + [LOG_HEADER](#)
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Test logs
- const std::string [LOG_HEADER_WARNING](#) = "[WARNING] " + [LOG_HEADER](#)
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Warning logs
- const std::string [LOG_HEADER_INFO](#) = "[INFO] " + [LOG_HEADER](#)
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Info logs
- const std::string [LOG_HEADER_ERROR](#) = "[ERROR] " + [LOG_HEADER](#)
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Error logs

5.2.1 Detailed Description

it specify the dynamic array manager for a generic data T and a std::string specialisation.

5.3 patch Namespace Reference

to emulate C++11 and get to_string translator

Functions

- `template<typename T >`
`std::string to_string (const T &n)`
returns the description of the parameter by using << operator on a fresh std::ostringstream

5.3.1 Detailed Description

to emulate C++11 and get to_string translator

Chapter 6

Class Documentation

6.1 docs::DocType Class Reference

The class containing the definition of [Document](#) Types names.

```
#include <Document.h>
```

Public Member Functions

- [DocType](#) ([Type](#) t)
constructors must provide a final type to be attached on document constructors.
- [~DocType](#) ()
empty since all instances of this class are suppose to be constant.
- const [Type](#) [getType](#) () const
returns the final type ID.
- const std::string [getName](#) () const
returns the name of the type of the document and "Invalid Type" if unknown.

Private Attributes

- const [Type](#) t
the member type assign on constructor.

Friends

- std::ostream & [operator<<](#) (std::ostream &st, const [DocType](#) &t)
prints the [getName\(\)](#) result.
- bool [operator==](#) (const [DocType](#) &c1, const [DocType](#) &c2)
return the comparison of [getName\(\)](#) methods.
- bool [operator!=](#) (const [DocType](#) &c1, const [DocType](#) &c2)
return the negation of the comparison of [getName\(\)](#).

6.1.1 Detailed Description

The class containing the definition of [Document](#) Types names.

See Also

Type
[TYPE_NAME_DOCUMENT](#)
[TYPE_NAME_WEBPAGE](#)
[TYPE_NAME_SPREADSHEET](#)

It allows to print the name of the of type of document and at the same time make an easy comparison or perhaps a searching rule.

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

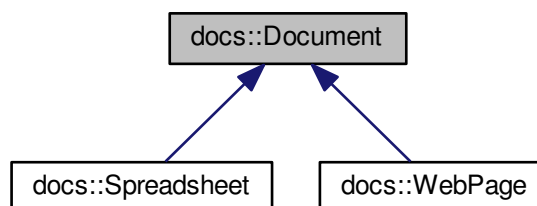
- [src/Document.h](#)

6.2 docs::Document Class Reference

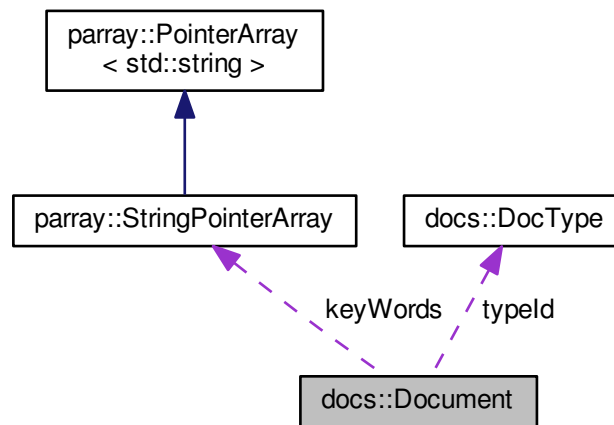
This is the base class of the [Document](#) hierarchy.

```
#include <Document.h>
```

Inheritance diagram for docs::Document:



Collaboration diagram for docs::Document:



Public Member Functions

- `Document` (std::string title=DEFAULT_DOCUMENT_TITLE, int keyWordSize=DEFAULT_DOCUMENT_KW-SIZE)
construct by creating a new keyword list.
- `Document` (const parray::StringPointerArray &kws, std::string title=DEFAULT_DOCUMENT_TITLE)
construct by using a copy of a PointerArray of string.
- `Document` (const Document &original)
`copy()` constructor, to create an independent clone.
- virtual `~Document` ()
destructor, to clear the keywords list.
- `Document & operator=` (const Document &)
to `copy()` this object
- virtual const std::string `toString` () const
print the information of this object by listing all the data members.
- virtual bool const `equals` (const Document &) const
check if all the data member are equals (type, title, keyWords).
- virtual std::string `getTitle` () const
return the `title` of this document
- virtual void `setTitle` (const std::string)
set a `title` to this document.
- virtual
parray::StringPointerArray * `getKeyWords` () const
returns the manager of the `keyWords` array of this document.
- virtual void `setKeyWords` (parray::StringPointerArray *)
set a copy of the input `keyWords` and overwrites the previous.
- virtual const std::string * `getKeyWordsArray` () const
returns the dynamic array containing the `keyWords`
- virtual const int `getKeyWordsSize` () const
returns the `getKeyWordsArray()` size

- const [DocType](#) [getType](#) () const
return the type identifier of this document assigned on custruction.

Protected Member Functions

- virtual void [copy](#) (const [Document](#) &)
copy this object on a new memory location.
- [Document](#) (const [DocType](#) [typeld](#), const std::string [title](#)=[DEFAULT_DOCUMENT_TITLE](#), const int [keyWordSize](#)=[DEFAULT_DOCUMENT_KWSIZE](#))
The [Document](#)(std::string, int) constructor to be use on derived class for specifying the document typeld ID.
- [Document](#) (const [DocType](#) [typeld](#), const [parray::StringPointerArray](#) &[kws](#), const std::string [title](#)=[DEFAULT_DOCUMENT_TITLE](#))
The [Document](#)(const [parray::StringPointerArray](#)&, std::string) constructor to be use on derived class for specifying the document typeld ID.

Protected Attributes

- const [DocType](#) [typeld](#)
the type ID assigned to this document on constructor.

Private Attributes

- std::string [title](#)
the title of this [Document](#).
- [parray::StringPointerArray](#) * [keyWords](#)
the key word array manager of this [Document](#).

Friends

- std::ostream & [operator<<](#) (std::ostream &, const [Document](#) &)
return the result of [toString\(\)](#).
- bool [operator==](#) (const [Document](#) &, const [Document](#) &)
returns the result of [equals\(\)](#).
- bool [operator!=](#) (const [Document](#) &, const [Document](#) &)
returns the negation of [equals\(\)](#)

6.2.1 Detailed Description

This is the base class of the [Document](#) hierarchy.

See Also

[DocType](#)
[parray::StringPointerArray](#)

It describes a generic document through: a Type, a title (string) and a keyword set (PointerArray). It implements default empty and copy constructors as well as basic operator overloading.

6.2.2 Friends And Related Function Documentation

6.2.2.1 `bool operator!=(const Document & c1, const Document & c2)` `[friend]`

returns the negation of [equals\(\)](#)

it returns '!c1.equals(c2)'. This method should not be implemented on derived classes.

6.2.2.2 `std::ostream& operator<< (std::ostream & strm, const Document & doc)` `[friend]`

return the result of [toString\(\)](#).

it returns 'strm << doc.toString()'. This method should not be implemented on derived classes.

6.2.2.3 `bool operator==(const Document & c1, const Document & c2)` `[friend]`

returns the result of [equals\(\)](#).

it returns 'c1.equals(c2)'. This method should not be implemented on derived classes.

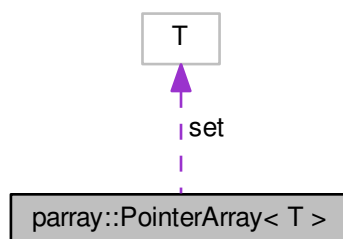
The documentation for this class was generated from the following files:

- [src/Document.h](#)
- [src/Document.cpp](#)

6.3 parray::PointerArray< T > Class Template Reference

This class describes a manager of a dynamic array of generic type T*.

Collaboration diagram for parray::PointerArray< T >:



Public Member Functions

- [PointerArray](#) ()
does not initialise the set and invalidates the counter (generates also warning log to advertise the call of [setSize\(\)](#))
- [PointerArray](#) (const int length)
create a new empty array of specified size
- [PointerArray](#) (const [PointerArray](#)< T > &original)
[copy\(\)](#) constructors
- virtual [~PointerArray](#) ()

- destructors, invalidate counter, pointer and clear memory. Logs: "deleting", for debugging purposes.*
- void `setSize` (const int length)
set the size of a new empty array on memory and delete the previous.
 - int `getSize` () const
returns the actual size of the array.
 - int `getCnt` () const
returns the actual number of elements in the array.
 - const T * `getArray` () const
returns the head to the memory managed by this class.
 - virtual const T & `get` (int idx) const
returns an element of the array by index.
 - const T & `operator[]` (size_t idx) const
 - virtual bool `add` (const T toAdd)
add an element into the array. Returns false if the array is full
 - virtual const int `find` (const T toFind) const
returns the index of an occurrence in the array. -1 if not found
 - virtual void `clear` ()
delete the array and create a new memory location of the same size.
 - virtual const bool `remove` (T toRemove)
remove an element from the array (based on `find()` and `remove(int)`).
 - virtual const bool `remove` (int idx)
remove an element from the array by index.
 - virtual void `resize` (const int newLenght)
replace the array with a new memory of the defined size. Possible old values are copied from start up to fill the array.
 - virtual void `pack` ()
replace the array by removing empty cell on tail (size will be equal to cnt). Based on `resize()`.
 - virtual const std::string `toString` () const
returns a description of the memory managed by this class
 - virtual bool `equals` (const `PointerArray`< T > &toCompare) const
returns true if all the elements of this array are the only elements of the parameter.
 - `PointerArray`< T > & `operator=` (const `PointerArray`< T > &newCopy)
make a `copy()` of this array.
 - virtual const bool `isEmpty` () const
returns true if there are no elements in the array.
 - bool const `operator!` () const
returns `isEmpty()`.

Private Member Functions

- void `init` (int length)
initialises a new array of given lenght (based on `newSet()`).
- void `newSet` ()
allocate a new memory of this object size. Delete old memory if is not invalidated.
- virtual void `copy` (const `PointerArray`< T > &original)
make a new copy in memory (based on `newSet()`).

Private Attributes

- int [size](#)
the size of the dynamic array
- int [cnt](#)
the number of elements in the array
- T * [set](#)
the head of the array

Friends

- std::ostream & [operator<<](#) (std::ostream &strm, const [PointerArray](#)< T > &par)
calls [toString\(\)](#) to describe the object.
- bool [operator==](#) (const [PointerArray](#)< T > &c1, const [PointerArray](#)< T > &c2)
calls [equals\(\)](#)
- bool [operator!=](#) (const [PointerArray](#)< T > &c1, const [PointerArray](#)< T > &c2)
returns the negation of [equals\(\)](#)

6.3.1 Detailed Description

`template<class T>class parray::PointerArray< T >`

This class describes a manager of a dynamic array of generic type T*.

It manage manipulation, creation, copy and destruction, as well as basic operator overloading. In details, the array is specified by: a pointer to the head, a size integer and a cnt meaning the number of elements currently in the array.

6.3.2 Member Function Documentation

6.3.2.1 `template<class T> const T& parray::PointerArray< T >::operator[] (size_t idx) const` `[inline]`

returns [get\(\)](#).

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

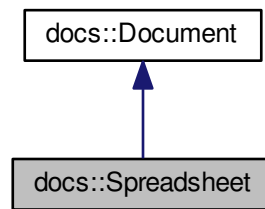
- [src/PointerArray.cpp](#)

6.4 docs::Spreadsheet Class Reference

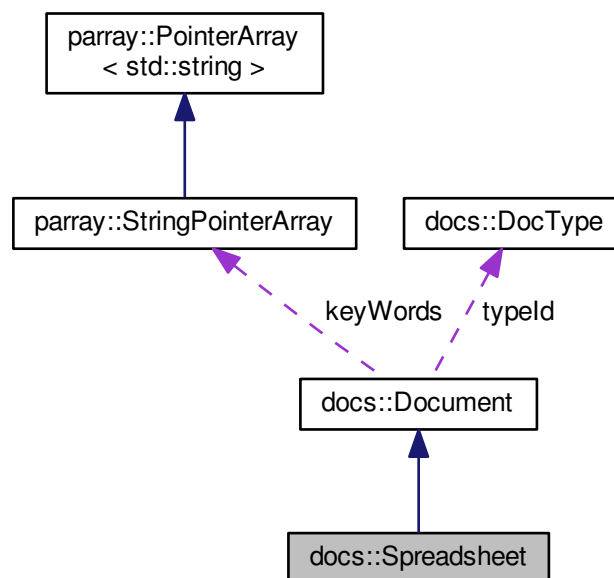
This describes a spreadsheet as a [Document](#) extension.

```
#include <Document.h>
```

Inheritance diagram for docs::Spreadsheet:



Collaboration diagram for docs::Spreadsheet:



Public Member Functions

- [Spreadsheet](#) (int [columnCnt](#)=DEFAULT_SPREADSHEET_COLCNT, int [rowCnt](#)=DEFAULT_SPREADSHEET_ROW_CNT, std::string [title](#)=DEFAULT_DOCUMENT_TITLE, int [keyWordSize](#)=DEFAULT_DOCUMENT_KWSIZE)
Construct by creating a new [Spreadsheet](#). It is based on [Document](#)(const [DocType](#) [typeId](#), std::string, int)
- [Spreadsheet](#) (const [parray::StringPointerArray](#) &[kws](#), std::string [title](#)=DEFAULT_DOCUMENT_TITLE, int [columnCnt](#)=DEFAULT_SPREADSHEET_COLCNT, int [rowCnt](#)=DEFAULT_SPREADSHEET_ROW_CNT)
Construct by creating a new [Spreadsheet](#). It is based on [Document](#)(const [DocType](#) [typeId](#), const [parray::StringPointerArray](#)&, std::string [title](#));.
- [Spreadsheet](#) (const [Spreadsheet](#) &[original](#))

- to [copy\(\)](#) this object
- virtual [~Spreadsheet](#) ()
 - empty destructor, it relies on class hierarchy.*
- virtual const std::string [toString](#) () const
 - append to the result of [Document::toString\(\)](#) the description of the number of columns and rows.*
- virtual const bool [equals](#) (const [Spreadsheet](#) &) const
 - return true if [Document::equals\(\)](#) is true as well as the number of columns and rows are equals.*
- const int [getRowCnt](#) () const
 - get the number of rows ([rowCnt](#)) of this [Spreadsheet](#).*
- void [setRowCnt](#) (const int)
 - set the number of rows ([rowCnt](#)) of this [Spreadsheet](#).*
- int [getColoumnCnt](#) () const
 - get the number of columns ([coloumnCnt](#)) of this [Spreadsheet](#).*
- void [setColoumnCnt](#) (const int)
 - set the number of columns ([coloumnCnt](#)) of this [Spreadsheet](#).*

Protected Member Functions

- virtual void [copy](#) (const [Spreadsheet](#) &)
 - copy this object on a new memory location. It relies on [Document::copy\(\)](#), which is also used on copy constructor and assign operator.*

Private Attributes

- int [rowCnt](#)
 - the number of rows assigned to this [Spreadsheet](#).*
- int [coloumnCnt](#)
 - the number of columns assigned to this [Spreadsheet](#).*

Additional Inherited Members

6.4.1 Detailed Description

This describes a spreadsheet as a [Document](#) extension.

See Also

[Document](#)
[DocType](#)
[parray::StringPointerArray](#)

It is a [Document](#), which has also a specified number of columns and rows.

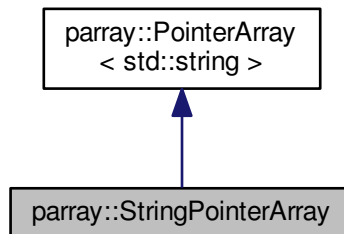
The documentation for this class was generated from the following files:

- src/[Document.h](#)
- src/[Spreadsheet.cpp](#)

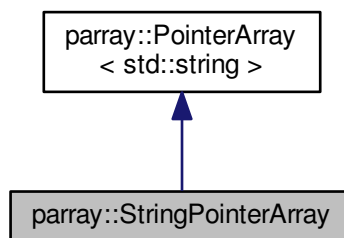
6.5 parray::StringPointerArray Class Reference

It implements a [PointerArray](#) with a string parameter (T).

Inheritance diagram for parray::StringPointerArray:



Collaboration diagram for parray::StringPointerArray:



Public Member Functions

- [StringPointerArray](#) ()
empty constructor, based on [PointerArray::PointerArray\(\)](#).
- [StringPointerArray](#) (const int length)
constructor a new array of given length, based on [PointerArray::PointerArray\(int\)](#).
- [StringPointerArray](#) (const [StringPointerArray](#) &original)
[PointerArray::copy\(\)](#) constructor, based on [PointerArray::PointerArray\(PointerArray\)](#).
- virtual [~StringPointerArray](#) ()
empty destructor, it relies on the base implementation.
- virtual bool [add](#) (std::string toAdd)
overload the [PointerArray::add\(\)](#) method by call [resize](#) if the array is full (generate warning).

Static Public Member Functions

- static void [tester](#) ()

static method to test the behavior of a [PointerArray](#) of strings.

Static Private Member Functions

- static void [printTestDelitator](#) ()

prints a line to separe different tests used in [tester\(\)](#) function

6.5.1 Detailed Description

It implements a [PointerArray](#) with a string parameter (T).

See Also

[PointerArray](#)

6.5.2 Member Function Documentation

6.5.2.1 static void parray::StringPointerArray::tester () [inline], [static]

static method to test the behavior of a [PointerArray](#) of strings.

Creates (pa0) new [StringPointerArray\(const int\)](#) and populate with letters.

[StringPointerArray::remove\(T\)](#) an element from pa0 and access the first char ([StringPointerArray::operator\[\]\(\)](#)) after the manipulation.

Creates (pa1) a new [StringPointerArray\(\)](#) and set is size to be smaller than pa0.

Populate ([StringPointerArray::add\(\)](#)) pa1 with some elements.

Make a comparison ([StringPointerArray::operator==\(\)](#)) between two [StringPointerArray](#) (pa0 == pa1)

Creates (pa2) a copy ([StringPointerArray::copy\(\)](#) and [StringPointerArray\(StringPointerArray\)](#)) of pa1.

[StringPointerArray::remove\(\)](#) all its elements and makes a comparison.

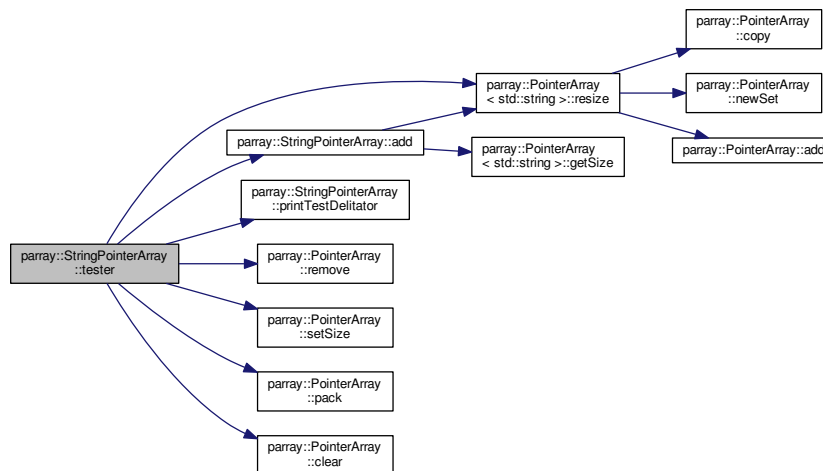
Adds two strings to pa2.

Creates (pa3) a [copy\(\)](#) of pa2 and remove the first element.

Makes a comparison (pa3 == pa2) and [pack\(\)](#) pa2.

[resize\(\)](#) pa1 to be bigger and smaller.

Here is the call graph for this function:



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

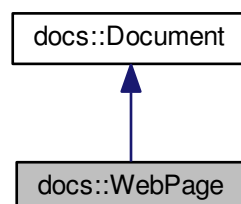
- [src/PointerArray.cpp](#)

6.6 docs::WebPage Class Reference

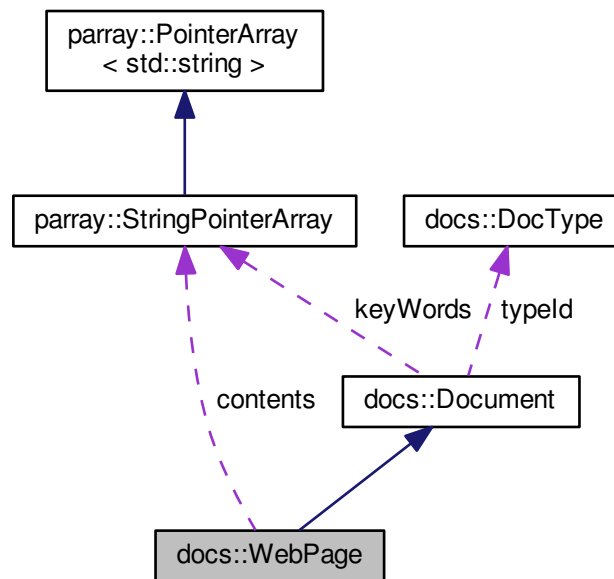
It describes a web page as a [Document](#) extensions.

```
#include <Document.h>
```

Inheritance diagram for docs::WebPage:



Collaboration diagram for docs::WebPage:



Public Member Functions

- [WebPage](#) (std::string title=DEFAULT_DOCUMENT_TITLE, std::string url=DEFAULT_WEBPAGE_URL, int keyWordSize=DEFAULT_DOCUMENT_KWSIZE, int textSize=DEFAULT_WEBPAGE_TEXTSIZE)
construct by creating a new contents list. It is based on [Document\(const DocType typeld, std::string, int\)](#)
- [WebPage](#) (const parray::StringPointerArray &kws, const parray::StringPointerArray &tex=0, std::string title=DEFAULT_DOCUMENT_TITLE, std::string url=DEFAULT_WEBPAGE_URL)
construct by using a copy of a PointerArray of contents. It is based on [Document\(const DocType typeld, const parray::StringPointerArray&, std::string title\);](#)
- [WebPage](#) (const [WebPage](#) &original)
to [copy\(\)](#) this object
- virtual [~WebPage](#) ()
destructor, to clear the contents list.
- virtual const std::string [toString](#) () const
append to the result of [Document::toString\(\)](#) the description of the url and contents.
- virtual const bool [equals](#) (const [WebPage](#) &) const
return true if [Document::equals\(\)](#) is true as well as urls and contents are equals.
- virtual const std::string [getUrl](#) () const
returns the url assign to this web page.
- virtual void [setUrl](#) (const std::string)
set the url for this web page
- virtual
[parray::StringPointerArray * getContents](#) () const
returns the manager of the contents array of this document.
- virtual void [setContents](#) (parray::StringPointerArray *)
set a copy of the input contents and overwrites the previous.

- virtual const std::string * [getContentsArray](#) () const
returns the dynamic array containing the [contents](#).
- virtual const int [getContentsSize](#) () const
returns the [getContentsArray\(\)](#) size

Protected Member Functions

- virtual void [copy](#) (const [WebPage](#) &)
copy this object on a new memory location. It relies on [Document::copy\(\)](#), which is also used on copy constructor and assign operator.

Private Attributes

- std::string [url](#)
The url of this [WebPage](#).
- [parray::StringPointerArray](#) * [contents](#)
The contents of this [WebPage](#).

Additional Inherited Members

6.6.1 Detailed Description

It describes a web page as a [Document](#) extensions.

See Also

[Document](#)
[DocType](#)
[parray::StringPointerArray](#)

This is a [Document](#) which have also an url and an array of contents (e.g., textual line).

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

- src/[Document.h](#)
- src/[WebPage.cpp](#)

Chapter 7

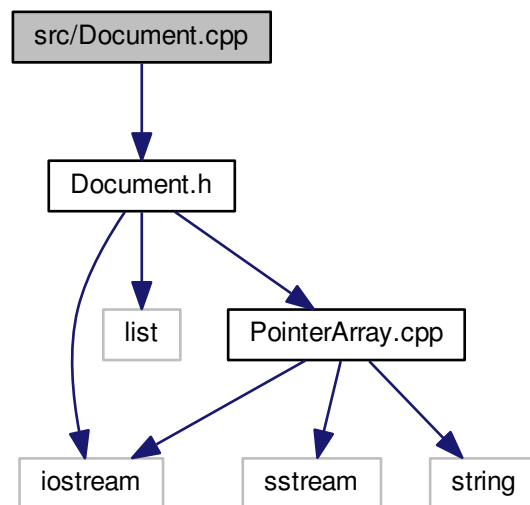
File Documentation

7.1 src/Document.cpp File Reference

implementation of the Document base class.

```
#include "Document.h"
```

Include dependency graph for Document.cpp:



Namespaces

- `docs`

This namespace is used to collect all the document hierarchy classes and types.

Functions

- `std::ostream & docs::operator<< (std::ostream &strm, const Document &doc)`
- `bool docs::operator== (const Document &c1, const Document &c2)`

- bool [docs::operator!=](#) (const Document &c1, const Document &c2)

7.1.1 Detailed Description

implementation of the Document base class.

Author

Buoncompagni Luca

Date

Sep 14, 2016

See Also

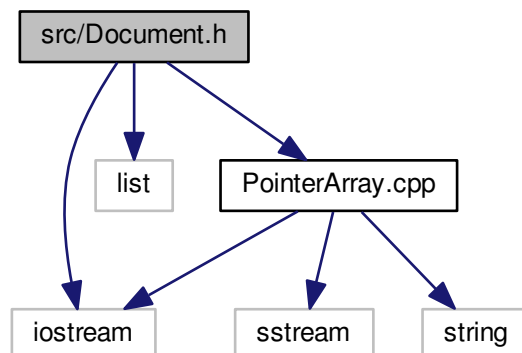
Document
[docs](#)

7.2 src/Document.h File Reference

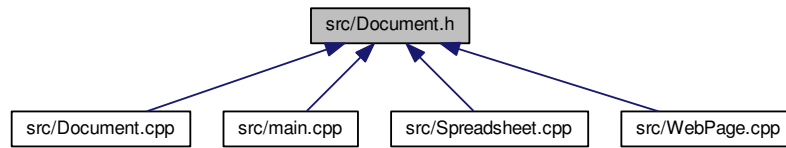
The complete Document Hierarchy namespace specification.

```
#include <iostream>
#include <list>
#include "PointerArray.cpp"
```

Include dependency graph for Document.h:



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



Classes

- class `docs::DocType`
The class containing the definition of `Document` Types names.
- class `docs::Document`
This is the base class of the `Document` hierarchy.
- class `docs::WebPage`
It describes a web page as a `Document` extensions.
- class `docs::Spreadsheet`
This describes a spreadsheet as a `Document` extension.

Namespaces

- `docs`
This namespace is used to collect all the document hierarchy classes and types.

Enumerations

- enum `docs::Type` { `docs::DOCUMENT`, `docs::WEB_PAGE`, `docs::SPREADSHEET` }
Instances of document identifier values.

Variables

- const std::string `docs::DEFAULT_DOCUMENT_TITLE` = "Default Title"
The title, if not specified on `Document` construction.
- const int `docs::DEFAULT_DOCUMENT_KWSIZE` = 3
The size, of key words if not specified on `Document` construction.
- const std::string `docs::DEFAULT_WEBPAGE_URL` = "www.default.com"
The url, if not specified on `WebPage` construction.
- const int `docs::DEFAULT_WEBPAGE_TEXTSIZE` = 10
The size of contents, if not specified on `WebPage` construction.
- const int `docs::DEFAULT_SPREADSHEET_COLCNT` = 7
The number of columns, if not specified on `Spreadsheet` construction.
- const int `docs::DEFAULT_SPREADSHEET_ROW_CNT` = 2
The number of rows, if not specified on `Spreadsheet` construction.
- const std::string `docs::TYPE_NAME_DOCUMENT` = "\"Document\""
The name of the `Type.DOCUMENT` type values.
- const std::string `docs::TYPE_NAME_WEBPAGE` = "\"Web Page\""

The name of the Type.WEB_PAGE type values.

- `const std::string docs::TYPE_NAME_SPREADSHEET = "\\Spreadsheet\\"`

The name of the Type.SPREADSHEET type values.

- `const std::string docs::LOG_HEADER = " DocumenHierarchy: "`

the debugging string to be appended on log head by this [Document](#)

- `const std::string docs::LOG_HEADER_TEST = "\\t[TEST] " + LOG_HEADER`

the debugging string to be appended on log head by the `StringPointerArray::tester()` for Test logs

- `const std::string docs::LOG_HEADER_WARNING = "[WARNING] " + LOG_HEADER`

the debugging string to be appended on log head by the `StringPointerArray::tester()` for Warning logs

- `const std::string docs::LOG_HEADER_INFO = "[INFO] " + LOG_HEADER`

the debugging string to be appended on log head by the `StringPointerArray::tester()` for Info logs

- `const std::string docs::LOG_HEADER_ERROR = "[ERROR] " + LOG_HEADER`

the debugging string to be appended on log head by the `StringPointerArray::tester()` for Error logs

7.2.1 Detailed Description

The complete Document Hierarchy namespace specification.

Author

Buoncompagni Luca

Date

Sep 14, 2016

This is a test implementation of a Document class, which contains an array of key words and a title and two derived classes. A WebPage representation, with an url and an array of lines contents (

See Also

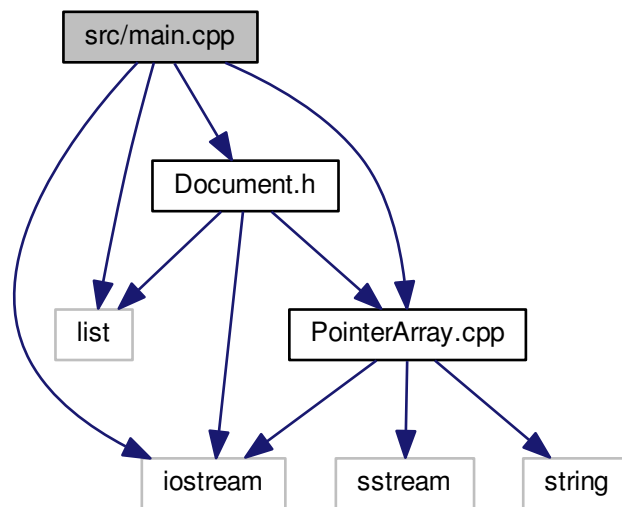
PointerArray), as well as a Spreadsheet, with related number of column and raw.
PointerArray

7.3 src/main.cpp File Reference

implements a main function to check the behavior of the [parray](#) template and [docs](#) hierarchy.

```
#include <iostream>
#include <list>
#include "Document.h"
#include "PointerArray.cpp"
```

Include dependency graph for main.cpp:



Functions

- void [logTest](#) (std::string msg)
function used to highlights debugging logs by printing a frame of '#'.
- int [main](#) ()
the main function to check project consistency by console logging.

Variables

- const std::string [LOG_HEADER](#) = " Main: "
the debugging string to be appended on log head by this manager
- const std::string [LOG_HEADER_TEST](#) = "\t[TEST] " + LOG_HEADER
the debugging string to be appended on log head by the StringPointerArray::tester()

7.3.1 Detailed Description

implements a main function to check the behavior of the [parray](#) template and [docs](#) hierarchy.

Author

Buoncompagni Luca

Date

Sep 17, 2016

See Also

StringPointerArray
plist
Document
SpreadSheet
WebPage
[docs](#)

7.3.2 Function Documentation

7.3.2.1 `int main ()`

the main function to check project consistency by console logging.

check the behavior of the template implementation ([parray](#)) through the [parray::StringPointerArray::tester\(\)](#) function.

check the behavior of the Document hierarchy ([docs](#)).

define a document with given title and keywords.

define another document with given title and keywords.

make a copy of the second Document, augment title and change keywords.

create a copy of the third Document. Overwrite the title and remove keywords.

create a Document with a given set of keywords.

create a WebPage. Add keywords and contents.

make a new Web Page by specifying only the title and url.

make a new Web Page by specifying the title, the url, the contents and keywords.

make a copy of the second WebPage. Augment the title, remove a keyword and add a contents.

Make a copy of the third WebPage. Set a new title and clear keywords.

create a new WebPage with a given keywords set.

create a new WebPage with a given keywords and contents sets. Set also its title.

create a new default Spreadsheet.

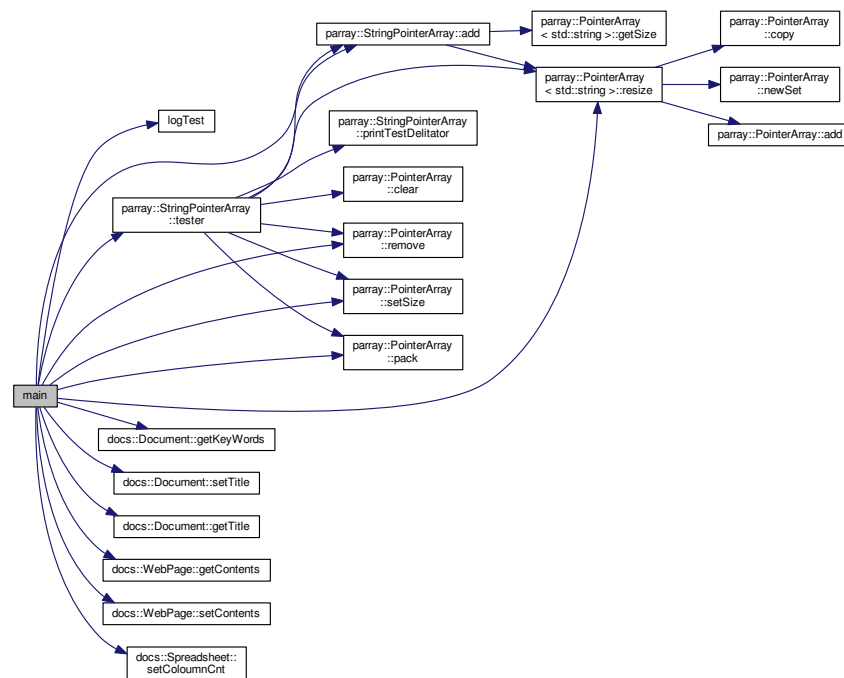
create a new Spreadsheet with given number of columns and rows.

create a new Spreadsheet with a given key words set, a title, the number of row and columns.

create a new SpreadSheet as the copy of the previous and set the title.

put all the created Document in a list and print its contents.

Here is the call graph for this function:

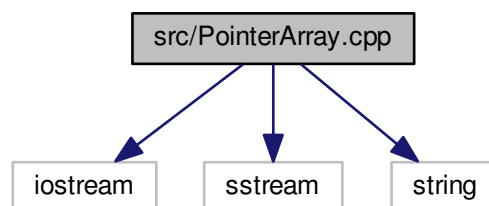


7.4 src/PointerArray.cpp File Reference

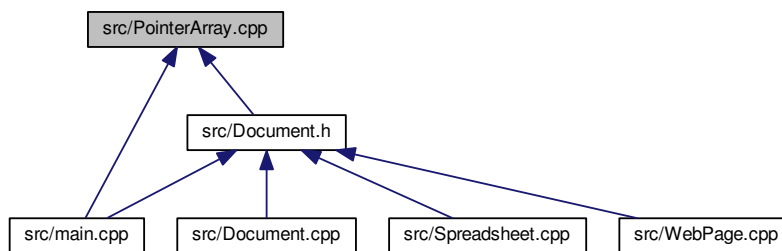
The complete `pararray` (`pararray::PointerArray<T>`) and `patch` namespaces definition.

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

Include dependency graph for `PointerArray.cpp`:



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



Classes

- class [pararray::PointerArray< T >](#)
This class describes a manager of a dynamic array of generic type T.*
- class [pararray::StringPointerArray](#)
It implements a [PointerArray](#) with a string parameter (T).

Namespaces

- [patch](#)
to emulate C++11 and get to_string translator
- [pararray](#)
it specify the dynamic array manager for a generic data T and a std::string specialisation.

Functions

- `template<typename T >`
`std::string patch::to_string (const T &n)`
returns the description of the parameter by using << operator on a fresh std::ostringstream

Variables

- `const std::string pararray::LOG_HEADER = " PointerArray: "`
the debugging string to be appended on log head by this list manager
- `const std::string pararray::LOG_HEADER_TEST = "\t[TEST] " + LOG_HEADER`
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Test logs
- `const std::string pararray::LOG_HEADER_WARNING = "[WARNING] " + LOG_HEADER`
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Warning logs
- `const std::string pararray::LOG_HEADER_INFO = "[INFO] " + LOG_HEADER`
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Info logs
- `const std::string pararray::LOG_HEADER_ERROR = "[ERROR] " + LOG_HEADER`
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#) for Error logs

7.4.1 Detailed Description

The complete [parray](#) ([parray::PointerArray<T>](#)) and [patch](#) names paces definition.

Author

Buoncompagni Luca

Date

Sep 14, 2016

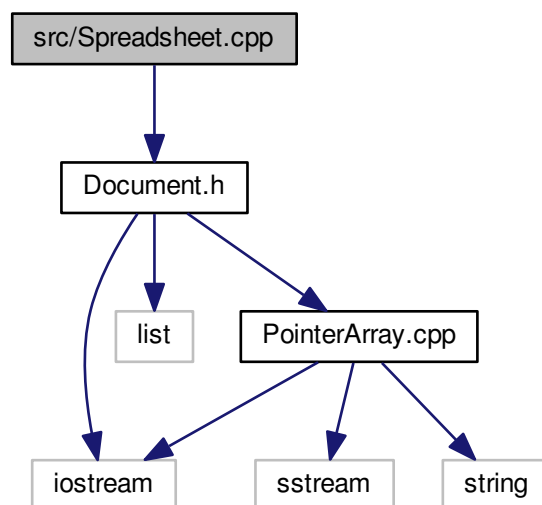
It describes a common templated method to convert an object into a string ([patch::to_string\(\)](#)). Also, it defines a templated manager to a dynamic array ([parray::PointerArray](#)) as well as a specialisation that deal with arrays of string ([parray::StringPointerArray](#)). For the last, also a static method for behavior testing is provided ([StringPointerArray::tester\(\)](#)).

7.5 src/Spreadsheet.cpp File Reference

implementation of the [docs::Spreadsheet](#) class.

```
#include "Document.h"
```

Include dependency graph for Spreadsheet.cpp:



Namespaces

- [docs](#)

This namespace is used to collect all the document hierarchy classes and types.

7.5.1 Detailed Description

implementation of the [docs::Spreadsheet](#) class.

Author

Buoncompagni Luca

Date

Sep 14, 2016

See Also

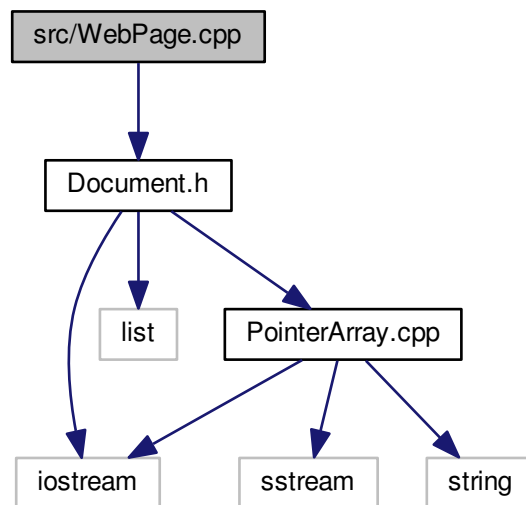
Spreadsheet
Document
[docs](#)

7.6 src/WebPage.cpp File Reference

implementation of the [docs::WebPage](#) class.

```
#include "Document.h"
```

Include dependency graph for WebPage.cpp:



Namespaces

- [docs](#)

This namespace is used to collect all the document hierarchy classes and types.

7.6.1 Detailed Description

implementation of the [docs::WebPage](#) class.

Author

Buoncompagni Luca

Date

Sep 14, 2016

See Also

WebPage
Document
[docs](#)

Index

DOCUMENT

docs, [10](#)

docs, [9](#)

DOCUMENT, [10](#)

operator<<, [10](#)

operator==, [11](#)

SPREADSHEET, [10](#)

Type, [10](#)

WEB_PAGE, [10](#)

docs::DocType, [13](#)

docs::Document, [14](#)

operator<<, [17](#)

operator==, [17](#)

docs::Spreadsheet, [19](#)

docs::WebPage, [24](#)

main

main.cpp, [32](#)

main.cpp

main, [32](#)

operator<<

docs, [10](#)

docs::Document, [17](#)

operator==

docs, [11](#)

docs::Document, [17](#)

parray, [11](#)

parray::PointerArray< T >, [17](#)

parray::StringPointerArray, [22](#)

tester, [23](#)

patch, [12](#)

SPREADSHEET

docs, [10](#)

src/Document.cpp, [27](#)

src/Document.h, [28](#)

src/PointerArray.cpp, [33](#)

src/Spreadsheet.cpp, [35](#)

src/WebPage.cpp, [36](#)

src/main.cpp, [30](#)

tester

parray::StringPointerArray, [23](#)

Type

docs, [10](#)

WEB_PAGE

docs, [10](#)