

DocumentClassHierarchy

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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 | 11 |

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 | 32 |
| src/ Spreadsheet.cpp | Implementation of the docs::Spreadsheet class | 33 |
| src/ WebPage.cpp | Implementation of the docs::WebPage class | 34 |

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_ROW_CNT](#) = 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.

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

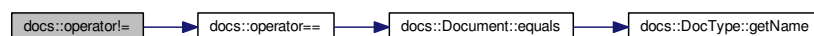
SPREADSHEET only [Spreadsheet](#) objects will have this [Document::getType\(\)](#) value

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.

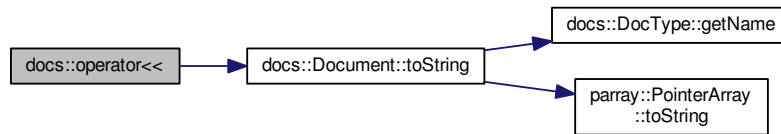
Here is the call graph for this function:



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.

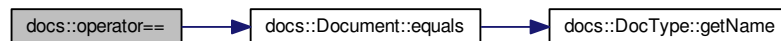
Here is the call graph for this function:



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

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:

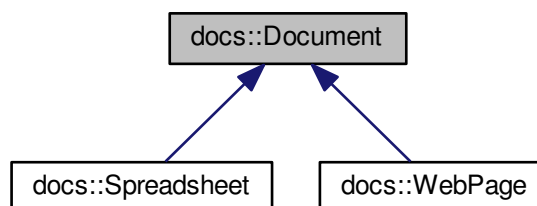
- src/[Document.h](#)

6.2 docs::Document Class Reference

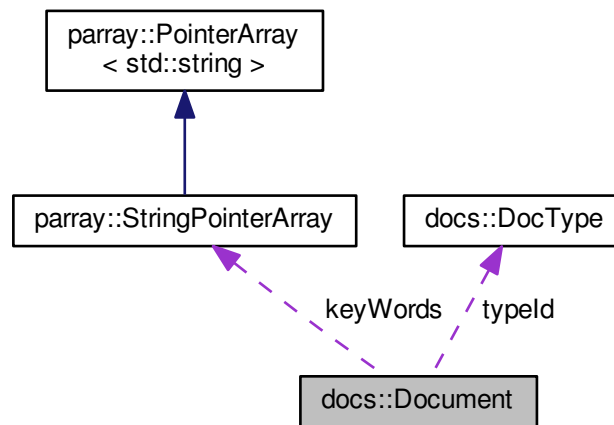
This is the base class of the [Document](#) hierarchy.

```
#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.

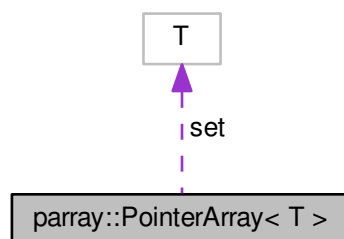
The documentation for this class was generated from the following files:

- [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:

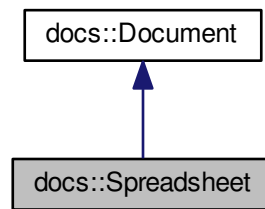
- src/[PointerArray.cpp](#)

6.4 docs::Spreadsheet Class Reference

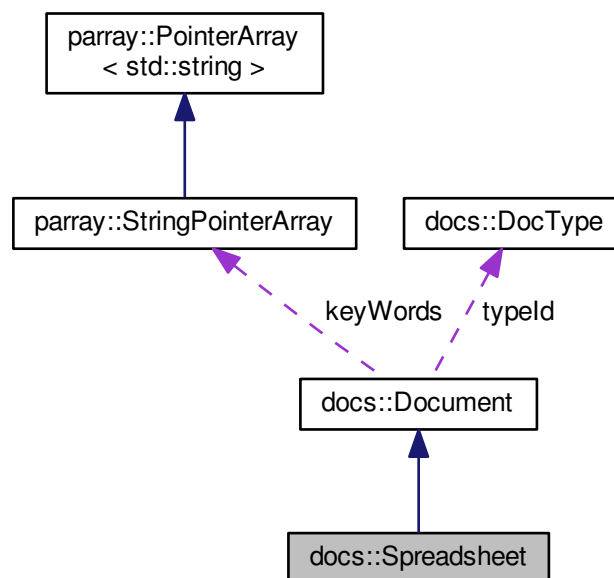
This describes a spreadsheet as a [Document](#) extension.

```
#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.

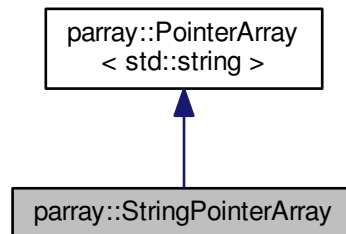
The documentation for this class was generated from the following files:

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

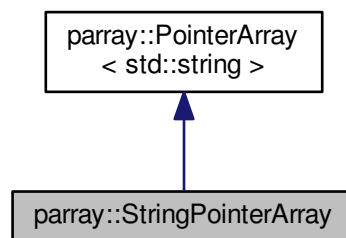
6.5 parray::StringPointerArray Class Reference

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 pararray::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.

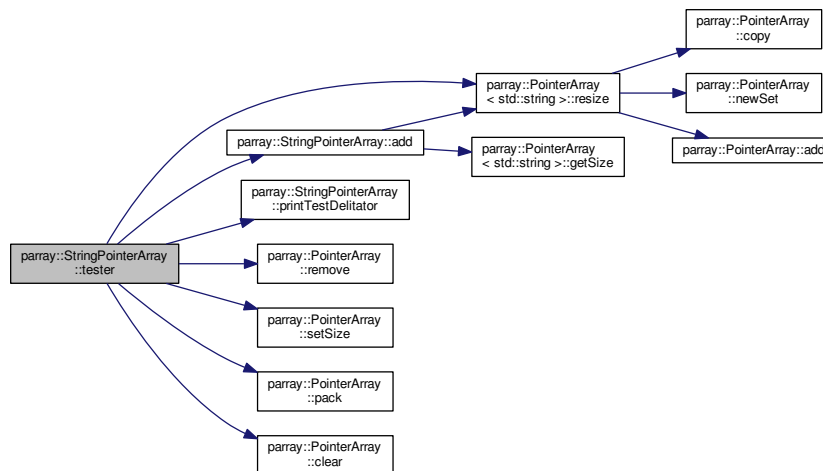
Adds two strings to pa2.

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:

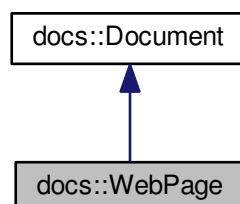
- [src/PointerArray.cpp](#)

6.6 docs::WebPage Class Reference

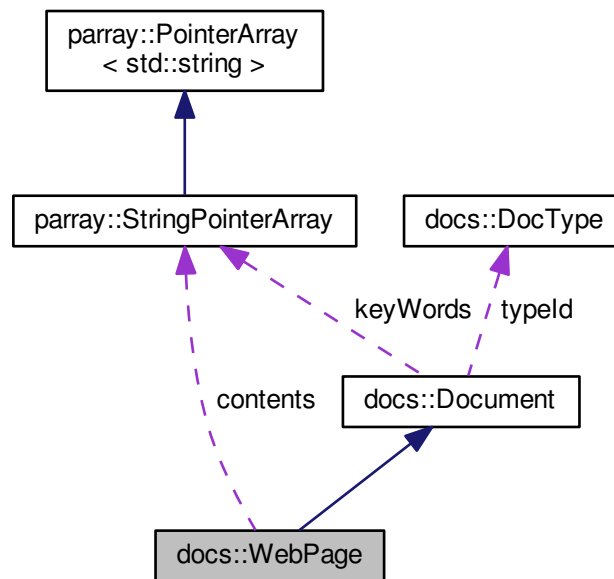
It describes a web page as a [Document](#) extensions.

```
#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

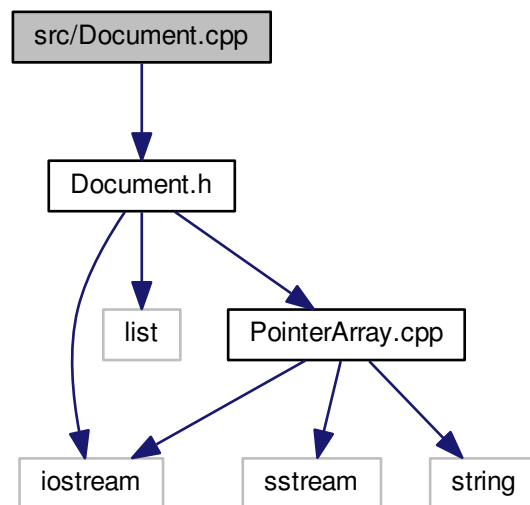
File Documentation

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

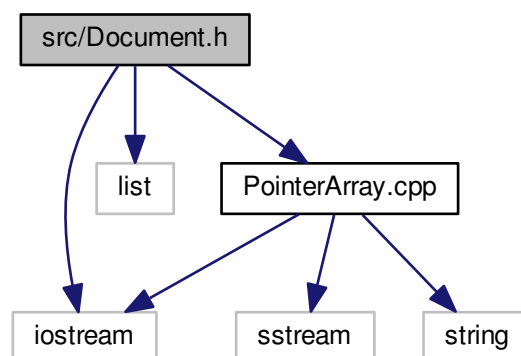
Document
[docs](#)

7.2 src/Document.h File Reference

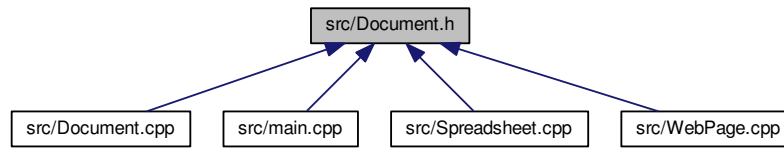
The complete Document Hierarchy namespace specification.

```
#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.

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 (

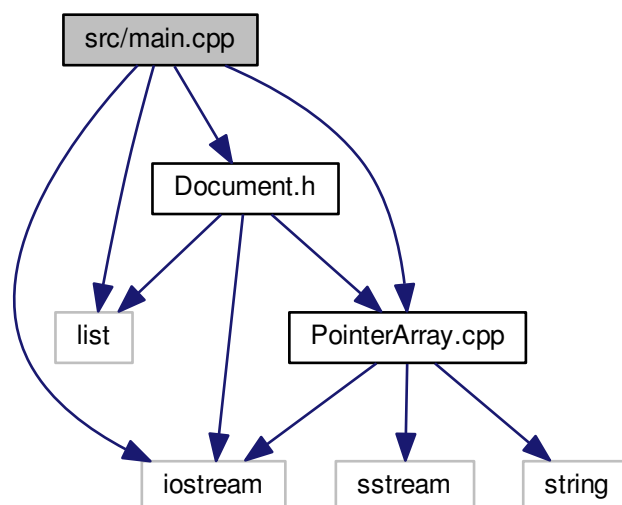
See Also

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

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](#)) through the `#documentTest()` function;

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

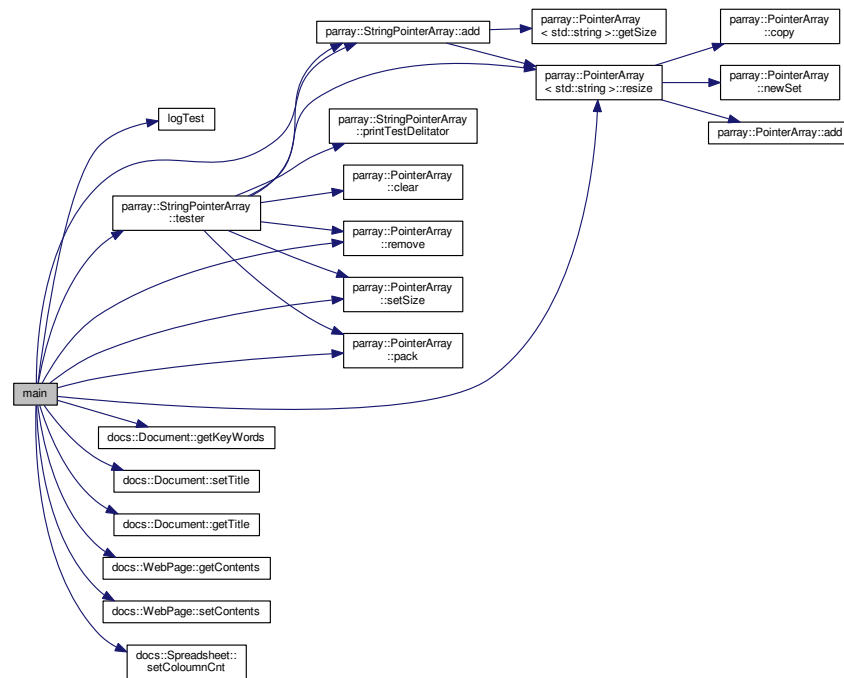
create a new Spreadsheet with given number of columns and rows

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:

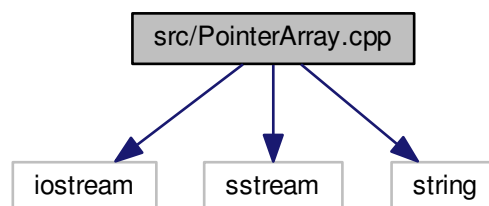


7.4 src/PointerArray.cpp File Reference

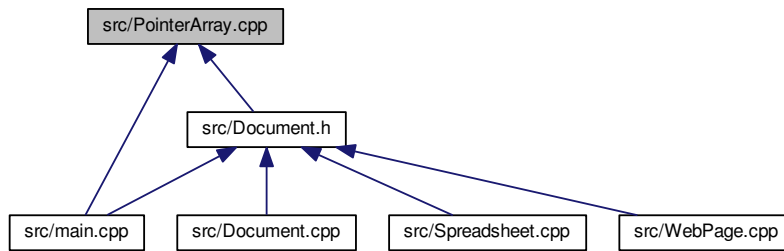
The complete [parray](#) (`parray::PointerArray<T>`) and [patch](#) namespaces definition.

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

Namespaces

- [patch](#)
to emulate C++11 and get to_string translator
- [parray](#)
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 parray::LOG_HEADER_INFO = " PointerArray: "`
the debugging string to be appended on log head by this manager
- const `std::string parray::LOG_HEADER_TEST = "\t[TEST] " + LOG_HEADER_INFO`
the debugging string to be appended on log head by the [StringPointerArray::tester\(\)](#)

7.4.1 Detailed Description

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

Author

Buoncompagni Luca

Date

Sep 14, 2016

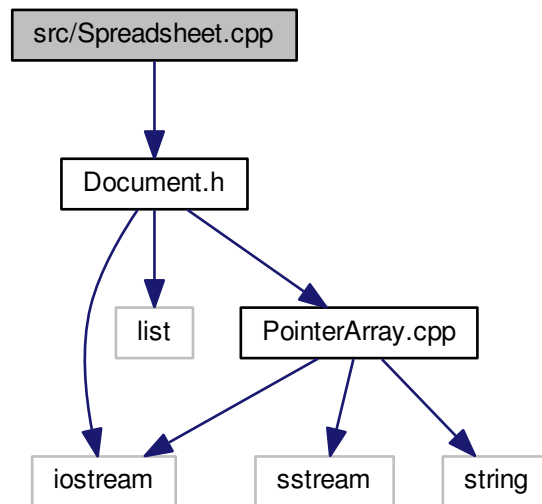
It describes a common templated method to convert an object into a string ([patch::to_string\(\)](#)). Also, it defines a templated manager to a dynamic array ([parray::PointerArray](#)) as well as a specialisation that deal with arrays of string ([parray::StringPointerArray](#)). For the last, also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

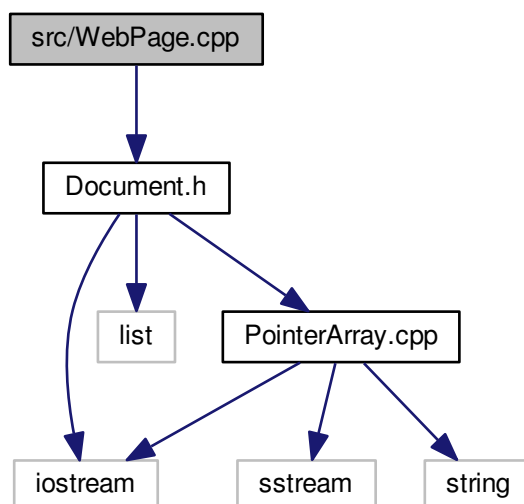
Spreadsheet
Document
[docs](#)

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](#)