

Doxygen Quick Reference¹

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Notational syntax

Syntax	Scope, meaning
<arg>	Single word
(arg)	End of the line on which the command was found
{arg}	Next paragraph ²
[arg]	Optional argument

Comment blocks – use `///`, `///
<turn on JAVADOC_AUTOBRIEF`, put brief docs at declarations, detailed docs at definitions.³

Structural organization - It is wise to have separate documentation files for your projects (myproject.h), namespaces (mynamespace.h), modules (mymodule.h) and other pages (mypage.h).

Mainpage, page – Purpose is to have a main index + documentation. Typical mainpage:

```

\section Introduction
ONE PARAGRAPH DESCRIPTION OF THE
PACKAGE/PROJECT
\section Overview
ORGANIZATION PRINCIPLES, PARTS
\subsection Part1
..
\section Additional Resources
RECOMMENDED PRACTICES USING PROJECT,
TEST CODE, CODING GUIDELINES USED,
TODO PAGES, EXTERNAL LINKS.
```

\mainpage [(title)]	Main page documentation ⁴
\page <name> (title)	Separate documentation page
\section <name> (title)	Creates a section named <name> and title <title>.
\subsection, \subsubsection,	\subsection, \subsubsection, \par

¹ This document reflects my special needs and views. In particular it is not meant to be a complete reference guide to Doxygen commands.

² Paragraphs are delimited by a blank line or by a section indicator.

³ By the implementation use `\\<NL>\\` DOC

⁴ Use `\section` and friends to provide a structure of the main page

\par	work in the same way.
\anchor <word>	Invisible, named anchor; can be used with <code>\ref</code> . ⁵

Groups –Purpose is to provide a means for documenting semantically related objects together. Groups exist in two flavours: *modules* & *member groups*. Modules get a separate page. Members of modules can be files, namespaces, classes, functions, variables, enums, typedefs, and defines, but also other groups. Commands to create and organize modules are `\addtogroup`, `\defgroup`, `\ingroup`, and `\weakgroup`. *Member groups* group together things (typically class members) that are also physically grouped in the source file. No nesting is allowed here. Use `\\{&@` and `\\}&@` to enclose group members – this can be used to group both module and member groups members.

\addtogroup <name> [(title)]	Incremental group definition
\defgroup <name> (title)	Defines group with given name and title.
\ingroup (<gr1> [<gr2> <gr3 >])	Links block into a group or groups; applies to comment block of a class, file or namespace
\name (header)	Turns a comment block into a header definition of a member group. Must be followed by a <code>\\{&@ .. \\}&@</code> block.
\weakgroup <name> [(title)]	Similar to <code>\addtogroup</code> , but has a lower priority when it comes to resolving conflicting grouping definitions.
\\@{,..\\}@}	Starts and closes a group.

Out-of-order Documentation

\class <name> [<headerfile>] [<headername>]
\def <name> ⁶
\enum <name>
\file [<name>]
\mainpage [(title)]
\namespace <name>
\page <name> (title)
\struct <name> [<headerfile>] [<headername>]
\typedef (typedef declaration)
\union <name> [<headerfile>] [<headername>]
\var (variable declaration)

⁵ Works only on `\page` and `\mainpage`.

⁶ Macro definition

Documentation Sectioning

\author {author list}
\bug {description}
\date {description}
\deprecated {description}
\exception <object> {description}
\invariant {description}
\note {text}
\param <name> {description} ⁷
\post {description}
\pre {description}
\remarks {text}
\return {description}
\retval <value> {description}
\todo {description}
\version {description}
\warning {description}

Cross References, Links

URLs and mail addresses found in the documentation are automatically replaced by links. All words in the documentation that correspond to a documented objects will automatically be replaced by a link. Suppress links with `%`.

\sa {list}	cross-references to classes, functions, methods, variables, files or URL; NAME::NAME refers to class member, just like NAME#NAME. Argument types can be used to select among overloaded function.
\link <link-object> TEXT \endlink	TEXT will be hyperlinked to <link-object>
\ref <name> ["(text)"]	References a named section, subsection, page or anchor.

Visual Enhancement

\a <word>	Arguments; same as <code>\p</code>
\b <word>	Boldface
\c <word>	Typewrite font (for code)
\code BLOCK \endcode	Block of code
\e <word>	Emphasizes word
\f\$ FORMULA \f\$	Inline formula
\f{ FORMULA \f}	Displayed formula
\n	New line; same as <code>\br</code>
\par [(title)] {text}	Starts new paragraph – indented

⁷ You can also document parameters by putting `///
<after the parameter (if you list one parameter per line).`

Special Commands

\copydoc <link-object>	Copies to doc of the referenced block
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Graphs, Images

\dot DOT-GRAPH \enddot	Produces a dot-graph, can be made clickable.
\dotfile <file> ["caption"]	Insert a dotfile generated by dot. Search path is given by the DOT_PATH tag.
\image <format> <file> [<sizeindicat>=<size>]	Inserts an image into the documentation. Search path is given by the IMAGE_PATH tag.

Lists

Use `'-'` to precede list items, aligned on the same column. Use `'-#'` to create a numbered list. Lists can be nested. Use `'.'` to indicate that a list is closed.

```

/// Text before the list
/// - list item 1
/// - sub item 1
/// - sub sub item 1
/// - sub sub item 2
/// .
/// The dot ends the sub sub item
/// list.
/// More text for the first sub item
/// .
/// The dot above ends the first sub
/// item.
/// More text for the first list item
/// - sub item 2
/// - sub item 3
/// - list item 2
/// .
/// More text in the same paragraph.
/// .
/// More text in a new paragraph.
///
```

Tagfiles – Purpose is to modularize documentation. A tag-file created for a project can be used in another project to generate links to the documentation of the source project. To generate a tag-file specify the name of the tag file after `GENERATE_TAGFILE` in the config file of the project. To use the tag-file generated, list it in the TAGFILES list of the project that should use it. Config time link generation: put `TAG_FILE_NAME=HTMLDOC_LOC`. Use relative paths! (and slash not backslash).