

The background is a solid orange color with a subtle gradient. It is decorated with various leaf silhouettes in a darker shade of orange, scattered across the page. The leaves vary in shape and size, some resembling maple leaves and others more like simple ovals.

Doxygen

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Used For:

- Generating reference manuals in HTML, LATEX, RTF, PostScript, PDF, Man Pages
- Generating code structure from source files

Language Support

- C
- C++
- Objective – C
- C#
- PHP
- Java
- Python
- IDL
- Fortran
- VHDL
- TCL
- D (to an extent)

Installation

- Windows
 - <http://ftp.stack.nl/pub/users/dimitri/doxygen-1.8.3.1-setup.exe>
- Mac
 - <http://ftp.stack.nl/pub/users/dimitri/Doxygen-1.8.3.1.dmg>
- Linux
 - Source
 - <http://ftp.stack.nl/pub/users/dimitri/doxygen-1.8.3.1.src.tar.gz>
 - ./configure
 - make
 - make install
 - Also available in the package manager in most distros including Debian
- Manual http://ftp.stack.nl/pub/users/dimitri/doxygen_manual-1.8.3.1.pdf.zip

Command Line Calls

- Create doxygen config file from template
 - doxygen -g
- Create documentation
 - doxygen <config file>

Structure

- Commands and comments are stored in doxygen comments

```
/**          /*!  
 * Commands  * and Comments  
 */         */
```

- First line is a brief description
- Second line is a longer description

Commands

- 160+
- Prefixed with \ or @
- To provide arguments:
 - `<cmd>` single word
 - `(cmd)` until end of next line
 - `{cmd}` until end of next paragraph
 - `[cmd]` used with one of above to illustrate optional

Common Commands: Param

- `\param [(dir)] <parameter-name> { parameter description }`
- Starts a parameter description for a function parameter with name `<parameter-name>`, followed by a description of the parameter.
- Examples:
 - `@param[out] dest` The memory area to copy to.
 - `@param[in] src` The memory area to copy from.
 - `@param[in] n` The number of bytes to copy

Common Commands: Return

- `\return { description of the return value }`
- Starts a return value description for a function.
- Example:
 - `\return a character pointer.`

Common Commands: C

- `\c <word>`
- Displays the argument `<word>` using a typewriter font.
- Example:
 - This function returns `\c void` and not `\c int`

Common Commands: Relates

- `\relates <name>`
- This command can be used in the documentation of a non-member function `<name>`. It puts the function inside the 'related function' section of the class documentation.

- Example:

```
    /*! \relates String
    *   A string debug function.
    */
```

- `void stringDebug() { }`

Common Commands: Bug

- `\bug { bug description }`
- Starts a paragraph where one or more bugs may be reported. The paragraph will be indented.
- Example:
 - `\bug` Calling this procedure sometimes results in an 'Opps'

Common Commands: Todo

- `\todo { paragraph describing what is to be done }`
- Starts a paragraph where a TODO item is described. The description will also add an item to a separate TODO list..
- Example:
 - `\todo Make it work...`

Other Common Commands:

- Warning
- Code
- Example
- Test
- Throw
- Author
- Version
- Date
- Paragraph
- Section

Example: IOCache.cpp from



```
/*! Maps a range of pages in \c fPages into fArea.
```

```
If successful, it must be balanced by a call to _UnmapPages().
```

```
\param firstPage The \c fPages relative index of the first page to map.
```

```
\param endPage The \c fPages relative index of the page after the last page  
to map.
```

```
\return \c B_OK, if mapping went fine, another error code otherwise.
```

```
*/  
  
status_t  
IOCache::_MapPages(size_t firstPage, size_t endPage)  
{  
    ...  
    return B_OK;  
}
```

Demo

```
dennis@COP5641-dennis: ~  
dennis@COP5641-dennis: ~/temp$  
  
dennis@COP5641-dennis: ~ 191x30  
  
dennis@COP5641-dennis: ~ 191x14  
configuration: --extra-version=4:0.5.9-1 --prefix=/usr --enable-avfilter --enable-avfilter-lavf --enable-avfilter-vdpau --enable-bzlib --enable-libdirac --enable-libgsm --ena  
-libschrödinger --enable-libspeex --enable-libtheora --enable-libvorbis --enable-threads --enable-zlib --disable-stripping --disable-vhook --enable-runtime-cpudetect  
ostproc --enable-swscale --enable-x11grab --enable-libfaad --enable-libdc1394 --enable-shared --disable-static  
libavutil      49.15. 0 / 49.15. 0  
libavcodec     52.20. 1 / 52.20. 1  
libavformat    52.31. 0 / 52.31. 0  
libavdevice    52. 1. 0 / 52. 1. 0  
libavfilter    0. 4. 0 / 0. 4. 0  
libswscale     0. 7. 1 / 0. 7. 1  
libpostproc    51. 2. 0 / 51. 2. 0
```


Sources

- <http://en.wikipedia.org/wiki/Doxygen>
- <http://www.stack.nl/~dimitri/doxygen/>
- <http://www.stack.nl/~dimitri/doxygen/projects.html>
- <http://www.haiku-os.org/>
- http://cgit.haiku-os.org/haiku/tree/src/system/kernel/device_manager/IOCache.cpp
- Brief Introduction
- Manual
- List of projects that use it
- A project that uses it
- Source code used in example