

Documenting standards

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1 Documenting program

To document the written code, Doxygen will be used. Doxygen parses the sources and automatically generates documentation.

2 Installation

No prerequisite tools are needed to install Doxygen, Doxygen can be installed using the following command.

```
sudo apt-get install doxygen
```

To use Doxygen, a Doxyfile must be created/used. A Doxyfile is a configuration file for Doxygen. To create a template Doxygen file, use the following command.

```
doxygen -g <config-file>
```

Where <config-file> is the name of the Doxyfile. In the folder of this .pdf, a pre-configured Doxyfile is given.

3 Documenting standard

3.1 Comment blocks

To create a comment block, the Javadoc style will be used. The starting line of a comment block starts with two *'s:

```
/**
 * .. text ..
 */
```

Comment blocks are used for i.e. functions and classes. These descriptions consist of a brief and detailed description. The detailed description ends at the first dot. Keeping track of parameters, return value descriptions and reference is done using @.

```
/** Brief description of Foo(Bar). Detailed description of Foo(Bar). Type as much as you'd like
 * here.
 * @param Bar An integer argument
 * @return A string
 * @see Foo2();
 */
string Foo(int Bar);
```

3.2 Single line descriptions

If you wish to document the members of a file, struct, union, class or enum, the documentation can be placed after the member instead of before. This is done when the documentation can be written down on the same line, by placing a `;` after the opening of a comment 'block':

```
int var; /**< Detailed description of var */
```

3.3 Special commands

Special commands are used to document certain pieces of code with a certain syntax (i.e. structs/classes/enum/type-def/defines). A detailed list of the commands can be seen here: <http://www.doxygen.nl/manual/commands.html>

4 Generating HTML files

To generate the HTML documentation, follow these steps:

- Place the Doxyfile in the same directory as the CMakeLists.txt
- Run the following command in the command line: `doxygen <config-file>` where config-file is the name of the Doxyfile.

The generated documentation can be found in the 'html' folder in the same directory as the CMakeLists.txt