
Integrated Development Environment e2 studio

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Introduction

Eclox is a simple doxygen front-end plug-in for Eclipse. e² studio is an integrated development environment based on Eclipse, so that e² studio is possible to realize work with external tool using plugin of Eclipse. This document will describe how to install, perform configuration, and operate typical of eclox in e² studio.

Contents

1. Introduction	2
2. Install eclox plugin	3
3. Configuration and usage.....	4
4. Reference Information	12

1. Introduction

1.1 e² studio with eclox

e² studio is an integrated development environment based on Eclipse, so that e² studio is possible to realize work with external tool using plugin of Eclipse. Eclox is perfect if you need to add complex code documentation to your projects by using the integrated development environment e² studio and the Doxygen multi-language documentation tool.

1.2 Environment

This document is described based on environment as the following:

e ² studio:	2.1.0.xx
eclox:	0.8.0
Doxygen:	1.4.7
Graphviz:	1.0.0.0
OS:	Windows 7

2. Install ecloX plugin

2.1 Prerequisites installation

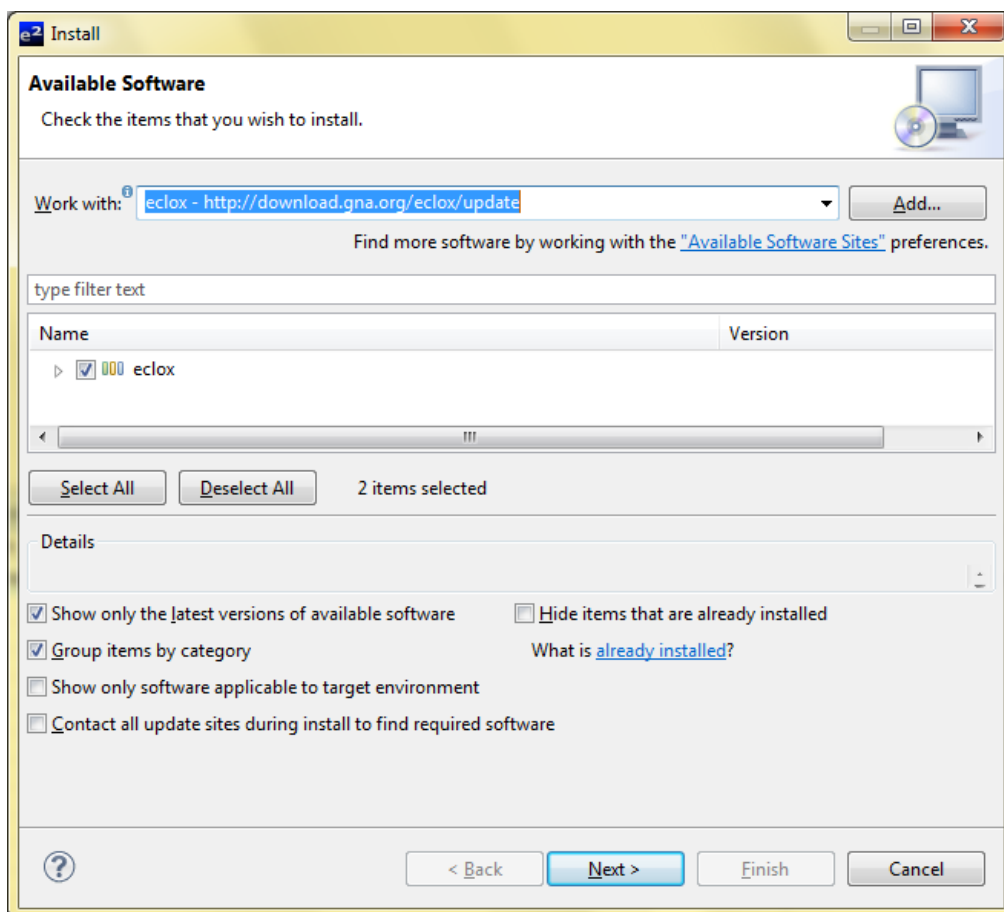
This section describes how to install the bright ecloX plug-in to e² studio. But at first, we need to prepare environments as below:

- e² studio is installed correctly
- Doxygen is installed correctly
- Graphviz is installed correctly

2.2 EcloX installation instruction

EcloX can be simply installed from within Eclipse using update manager. All what the user should do is just point update manager to the remote or local update-site. To install ecloX:

1. Start e2 studio and select menu item 'Help' > 'Install New Software...'. The 'Install' wizard opens.
2. On the 'Work with' field, direct to ecloX update-site (<http://download.gna.org/ecloX/update>).

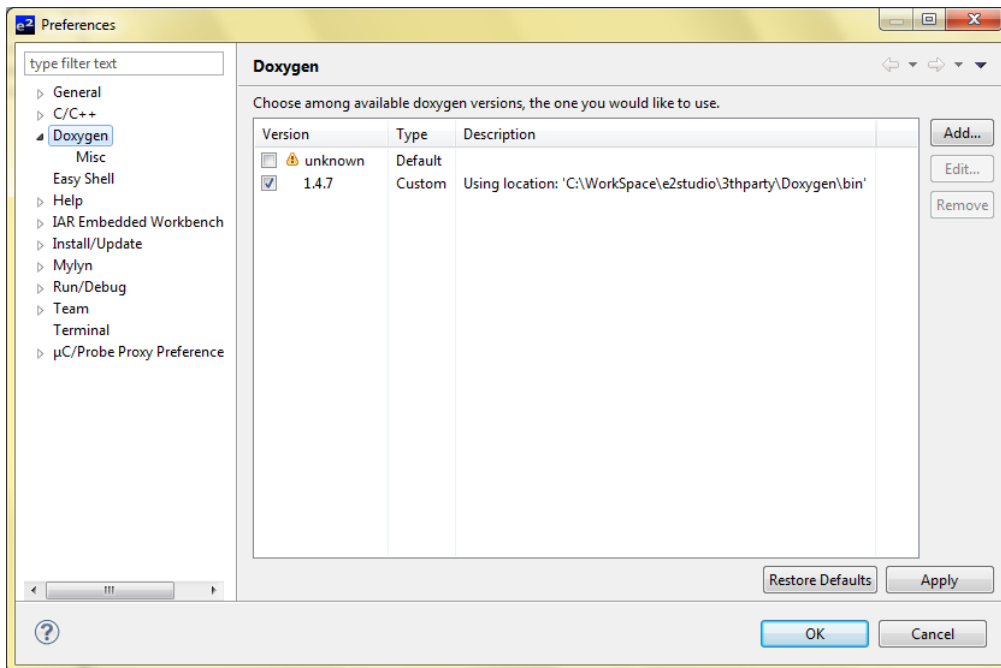


3. Select the 'ecloX' item to install.
4. Click the 'Next >' button.
5. Accept terms of license agreement and click the 'Finish' button in order to start the download of selected features.
6. To apply installation changes and restart e² studio, click on the 'Yes' button.

3. Configuration and usage

3.1 Configuration

Once the plugin installed, you must ensure that the default PATH environment variable makes the doxygen binary reachable for the plugin. If not, you can update PATH to include to directory containing the Doxygen binary, or you can tell Eclox where that binary is located on your system. To do this, open e2 studio's preference edition dialog window and go into the new 'Doxygen' section.



3.2 Usage

3.2.1 Workflow of code documentation process

Eclox is one of e² studio's plugin. It aims to provide a slim and sleek integration of the code documentation process into e² studio by providing a high-level graphical user interface over doxygen.

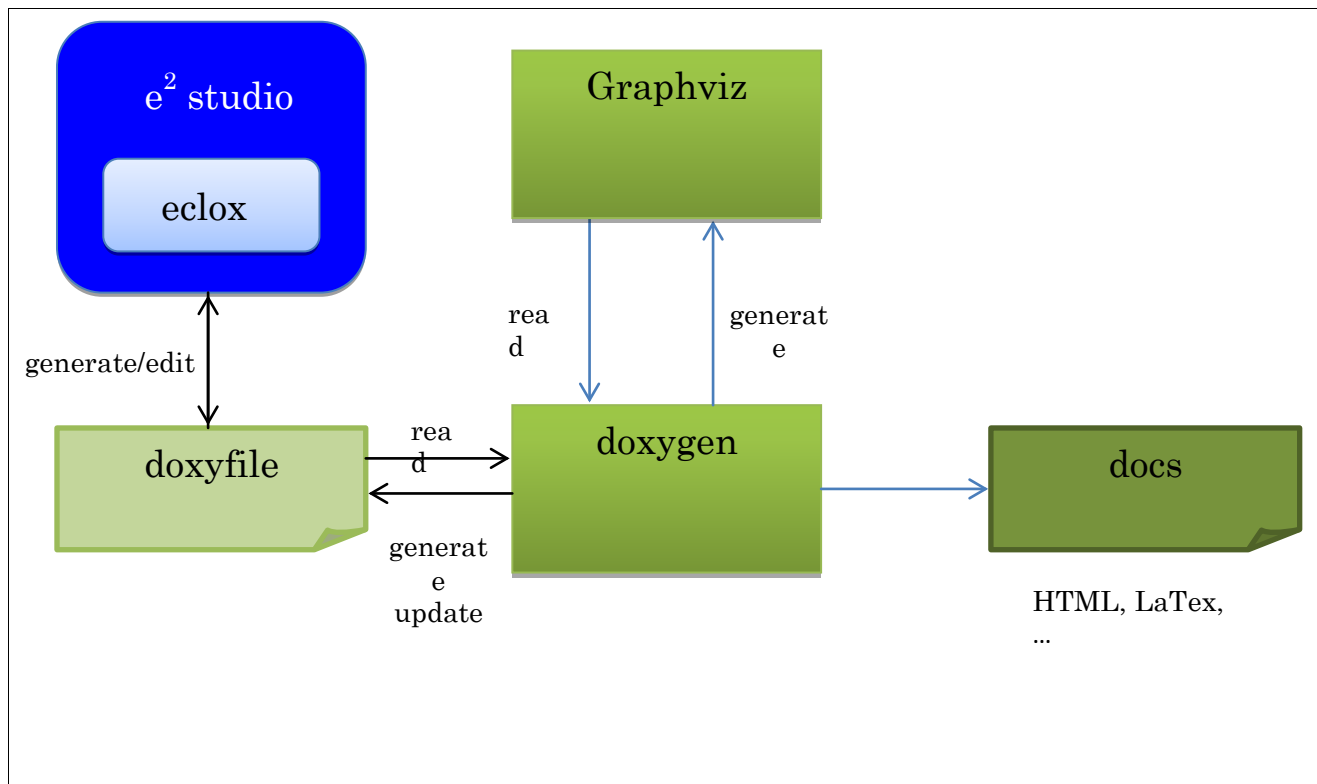


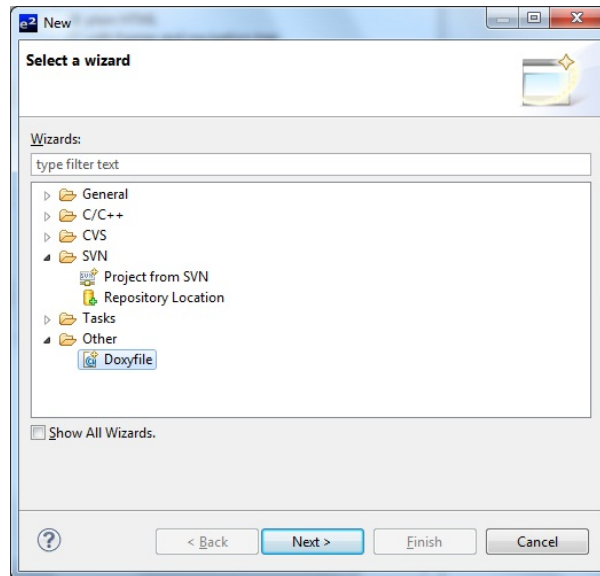
Figure 1 Workflow of code documentation process

3.2.2 Create doxyfile

To create a new doxyfile:

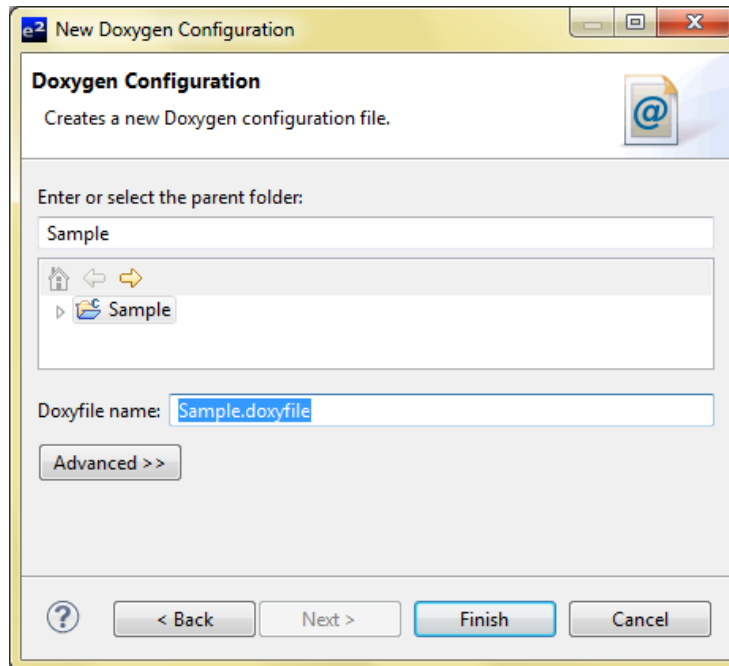
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1. Select menu items 'New' > 'File' > 'Other...'. The 'New' dialog will be shown.
2. On the 'New' dialog, select 'Other' > 'Doxyfile'

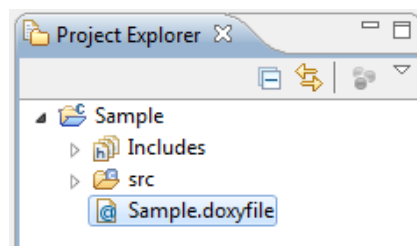


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3. Press the 'Next>' button. The 'New Doxygen Configuration' dialog will be shown.
4. On the 'New Doxygen Configuration' dialog, select project and modify Doxyfile name.



5. Press the 'Finish' button. Doxyfile will be created successfully

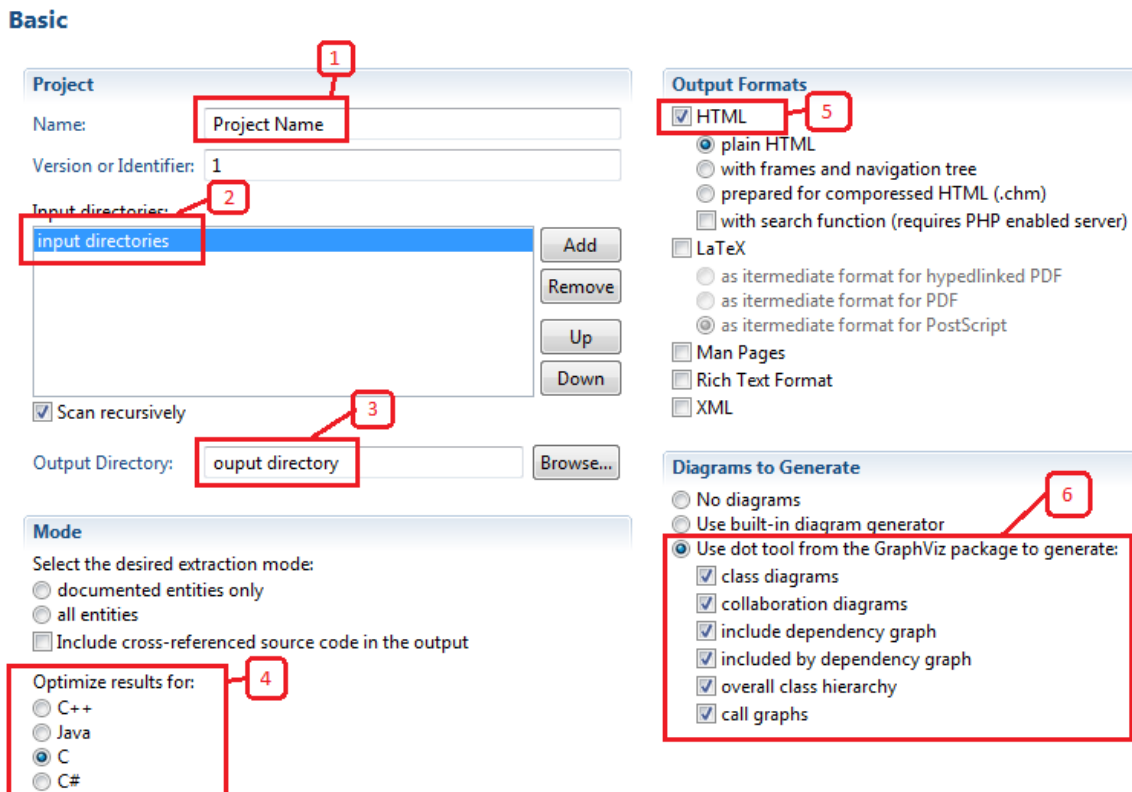


3.2.3 Configure doxyfile

To configure doxyfile

1. On the 'Project Explorer' view, right click on the doxyfile > 'Open'
2. Configure doxyfile and save file:
 - On the 'Basic' tab:

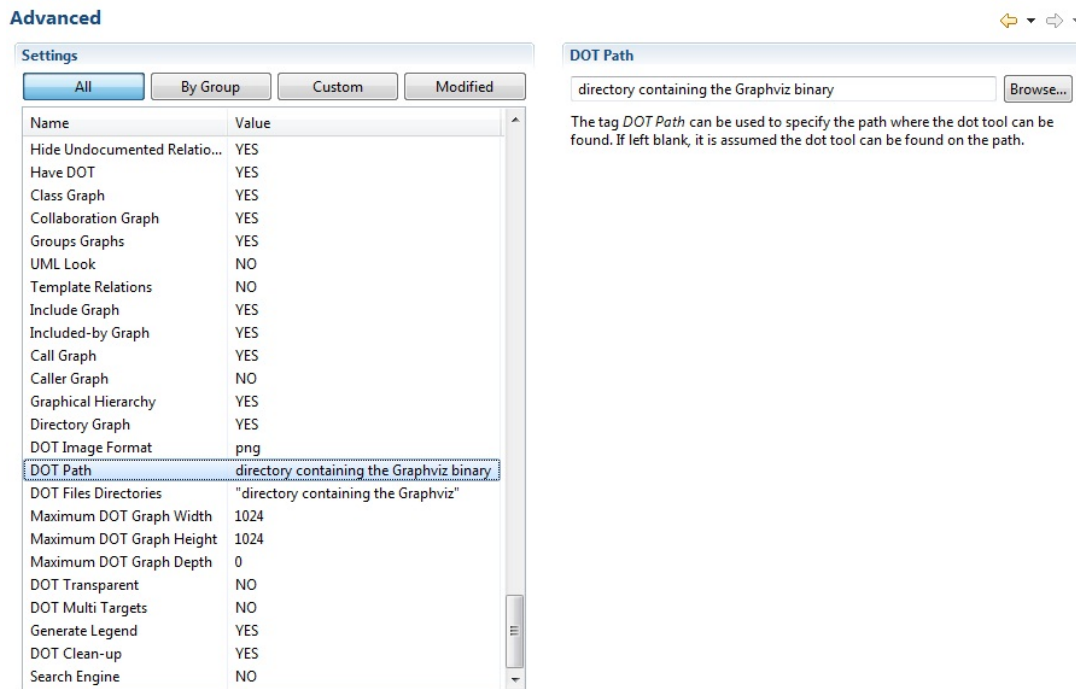
To build code documentation we need to make some configurations as below:



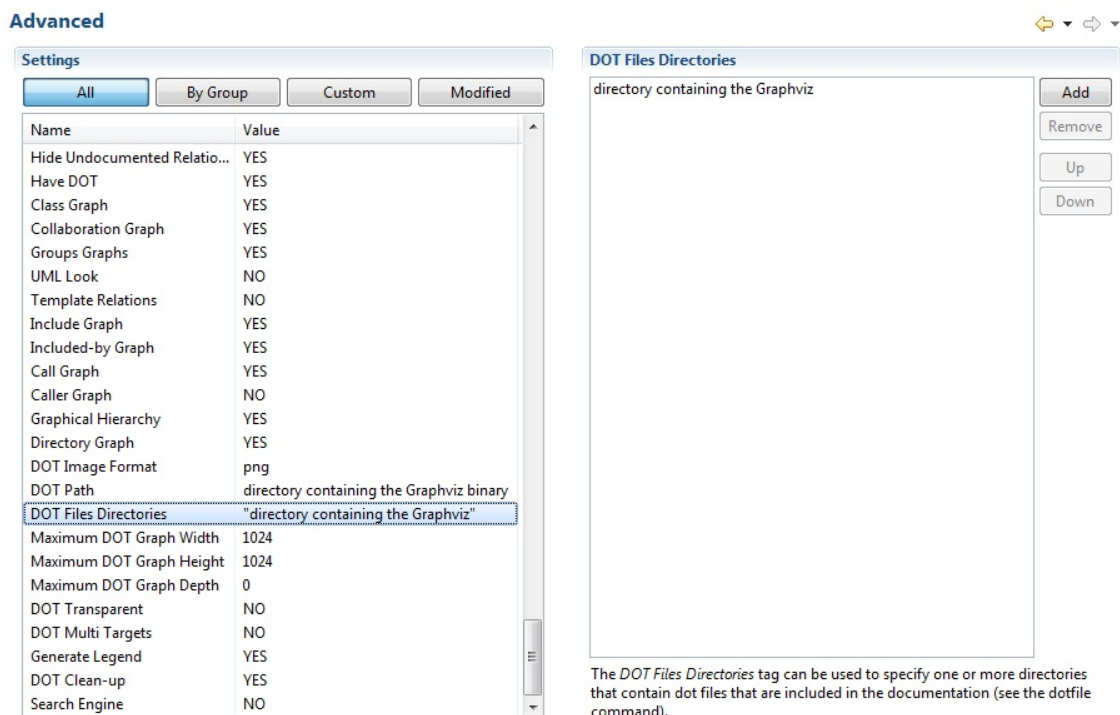
1. [1]: Input project name. This is name of doxygen project that will be generated.
2. [2]: On the 'Input directories' field, select the 'Add' button to direct to folders or files which users want to generate code documentation.
3. [3]: On the 'Output directory' field, input path of output folder or select 'Browse' button to direct output folder.
4. [4]: Select programming language to optimize results.
5. [5]: Select output formats.
6. [6]: Doxygen can use the 'dot' tool from Graphviz to generate more advanced diagrams and graphs. Graphviz is an open source, cross-platform graph drawing toolkit and can be found at: www.graphviz.org/ . If you want to generate diagram, select 'Use dot tool from the GraphViz package to generate:' (go to advance tab to configure dot tool path)

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- On the 'Advanced' tab
 1. To generate diagram by dot tool from GraphViz, go to advance tab as below:
 - Select 'Have DOT' is 'Yes'
 - Select 'Dot path' item, then specify the directory containing the GraphViz binary'.



- Select 'Dot file directories' item, then specify the directory containing the GraphViz'



2. Select 'Extract All' is 'Yes'

Advanced

The screenshot shows the 'Settings' dialog box with the 'Advanced' tab selected. The 'Extract All' setting is highlighted with a red box and set to 'Yes'. To the right, the 'Extract All' section is expanded, showing radio buttons for 'Yes', 'No', and 'Default', with 'Yes' selected. Below the radio buttons, there is explanatory text: 'If the *Extract All* tag documentation are Private class memb [Private](#) and [Extract](#)'.

Name	Value
Aliases	
Optimize Output for C	YES
Optimize Output Java	NO
Built-in STL Support	NO
Distribute Group Documentation	NO
Subgrouping	YES
Extract All	YES
Extract Private	NO
Extract Static	NO
Extract Local Classes	YES
Extract Local Methods	NO

3. Select 'Generate Tree View' is 'Yes'

Advanced

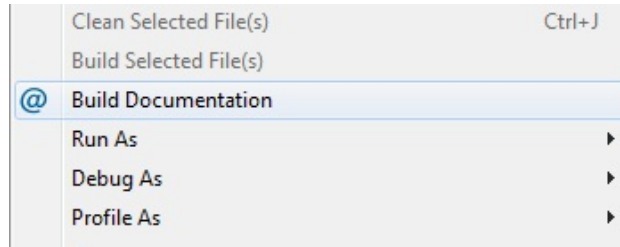
The screenshot shows the 'Settings' dialog box with the 'Advanced' tab selected. The 'Generate Tree View' setting is highlighted with a red box and set to 'Yes'. To the right, the 'Generate Tree View' section is expanded, showing radio buttons for 'Yes', 'No', and 'Default', with 'Yes' selected. Below the radio buttons, there is explanatory text: 'If the *Generat* containing a t HTML Help). For this to wo required (for i Konqueror). V feature.'

Name	Value
CHM File	
HHC Location	
Generate CHI	NO
Binary TOC	NO
TOC Expand	NO
Disable Index	NO
Enum Values per Line	4
Generate Tree View	YES
Tree View Width	250

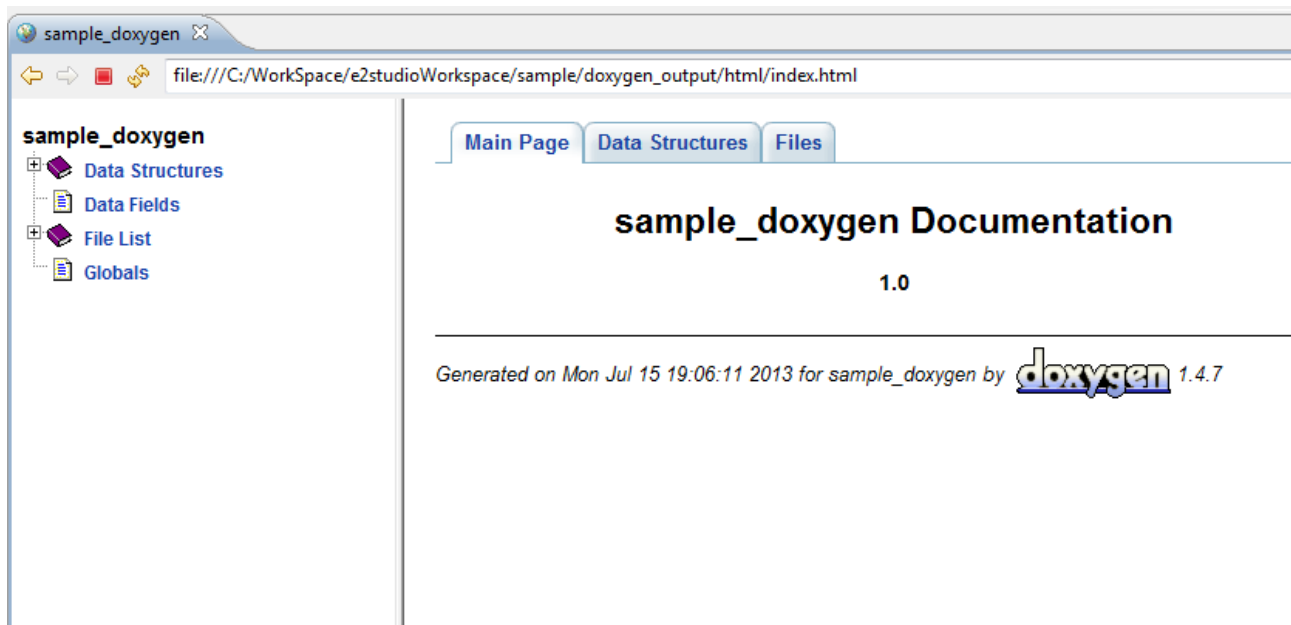
3.2.4 Generate code documentation

To generate code documentation:

1. On the 'Project Explorer' view, right click the doxyfile which you want to generate code documentation.
2. Select 'Build Documentation', and then wait for building successfully.



3. Output file will be generated.



4. Reference Information

4.1 Web Site

Eclox home page URL:

<http://gna.org/eclox/>

Doxygen home page URL:

<http://www.doxygen.org/>

Graphviz home page URL:

www.graphviz.org/

Website and Support <website and support,ws>

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1. Handling of Unused Pins

Handle unused pins in accord with the directions given under Handling of Unused Pins in the manual.

- The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible. Unused pins should be handled as described under Handling of Unused Pins in the manual.

2. Processing at Power-on

The state of the product is undefined at the moment when power is supplied.

- The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the moment when power is supplied.

In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the moment when power is supplied until the reset process is completed.

In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the moment when power is supplied until the power reaches the level at which resetting has been specified.

3. Prohibition of Access to Reserved Addresses

Access to reserved addresses is prohibited.

- The reserved addresses are provided for the possible future expansion of functions. Do not access these addresses; the correct operation of LSI is not guaranteed if they are accessed.

4. Clock Signals

After applying a reset, only release the reset line after the operating clock signal has become stable.

When switching the clock signal during program execution, wait until the target clock signal has stabilized.

- When the clock signal is generated with an external resonator (or from an external oscillator) during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Moreover, when switching to a clock signal produced with an external resonator (or by an external oscillator) while program execution is in progress, wait until the target clock signal is stable.

5. Differences between Products

Before changing from one product to another, i.e. to a product with a different type number, confirm that the change will not lead to problems.

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