Software documentation

Documentation with Doxygen



Doxygen is an external, independent tool that lets us generate documentation for many programming languages, such as C#, Java or PHP, among others. You can download Doxygen from its official web site, in the *Downloads* section. Regarding Windows, it consists in running an installer.

Then, we must launch the Doxygen wizard (also known as *DoxyWizard*), which will show an initial screen like this one:

0 0 0	Doxygen GUI frontend +				
Step 1: Specify the working directory from which	n doxygen will	run			
/Users/tomjoht/projects/sample-java-project					Select
Step 2: Configure doxygen using the Wizard an	d/or Expert tal	o, then swite	ch to th	e Run tab to generate the docur	mentation
	Wizard	Expert	Run]	
Topics Project Mode	Provide som	ie informati	on abou	ut the project you are documenti	ng
Output	Project name: Sample Java Project				
Diagrams	Project synopsis:				
	Project version or id: 1.0				
	Pr	roject logo:	Sel	ect No Project logo selecte	əd.
2	Specify the directory to scan for source code				
	Source code directory: Select				
	Scan rec	ursively			
	Specify the directory where doxygen should put the generated documentation				
	Destinatio	n directory:	s/tom	joht/Desktop/doxygen_output	Select
	Previous				Next

In the upper text field we must choose the folder in which Doxygen has been installed (typically C:\Program Files\doxygen). In the lower text fields, we can just indicate the source folder to check the files (we can check the option to scan it recursively), and the destination folder to generate the documentation in.

ile Settings Help tep 1: Specify the work C:/Program Files/doxyg	ing directory from which doxygen will run	
tep 1: Specify the work C:/Program Files/doxyg	ing directory from which doxygen will run	
C:/Program Files/doxyg		
ton 7. Configure days	en Select	
tep 2: Configure doxyg	en using the Wizard and/or Expert tab, then switch to the Run tab to generate the documentation	
Wizard Expert		
lopics	Select the desired extraction mode:	
Mode	Documented entities only	
Output	All Entities	
Diagrams	Include cross-referenced source code in the output	
	Select programming language to optimize the results for Optimize for C++ output Optimize for C are output Optimize for C or PHP output Optimize for Fortran output Optimize for VHDL output Previous	

We usually choose to include *All Entities*, and then the programming language that we are using (in our case, *Optimize for Java or C# output*). Then we move to next step.

ep 1: Specify the wor :/Program Files/doxy	king directory from which doxygen will run gen Select Select
Wizard Expert	Run
Topics Project Mode Output Diagrams	Select the output format(s) to generate I HTML plain HTML with navigation panel prepare for compressed HTML (.chm) With search function Change color LaTeX a sintermediate format for hyperlinked PDF a sintermediate format for PDF a sintermediate format for PDF a sintermediate format for PDF
	Man pages Rich Text Format (RTF) XML Previous Next

Here we need to choose the output format. We usually check the HTML checkbox, and we can decide if we want to show a navigation panel or a search option. Then, we move to next step.

Last two steps consist in:

- Choosing if you want to generate class diagrams with the internal tool (or with a external tool called GraphViz)
- Run Doxygen

After running *Doxygen*, you will see the progress in the log text area, until a *Doxygen has finished* final message. Then, you can show the HTML output from Doxygen, or navigate to the chosen output folder.

Doxygen Example A001 Software Design Documentation					
Main Page Related Pages Modules Data Str	uctures Files				
File List Globals					
Doxygen_Example_1_8_10 > src > subdir >					
abc.c File Reference	Functions				
Doxygen C-file Example. More					
#include "foo.h"					
Include dependency graph for abc.c:	abc.c foo.h				
Go to the source code of this file.					
Functions					
void abc (void) This function is sensless. More					
Detailed Description					
Doxygen C-file Example.					
This file contains an example for the usage of Doxygen.					
Definition in file abc.c.					
	Generated on Tue Sep 1 2015 15:42:03 for Plexus Doxygen Example by				

Exercise 1:

Generate the documentation for Exercise 1 and 2 of this previous document using Doxygen