

Lab 10: Doxygen

CSE 2100-001

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April 22, 2017

Date Performed: November 2, 2016
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1 Objective and Description

Watch the video posted on YouTube for Lab-10 (Doxygen).

For this lab you will need to use the code that you have extended for the last Lab (Lab-9). In your main project directory, create a *doc* directory (similarly to the video) and place your *Doxyfile* and your documentation in this directory. Your task description is simple: document the entire code (all four source and header files) to create a complete documentation for Lab 9's code. Do not be afraid to look up Doxygen documentation do-s and don't-s on the Internet.

Once you think that you have provided sufficient documentation to the project, demonstrate your documentation to the TA.

Create a *.tgz* archive of your doc folder and turn it in together with the completed version of this document.

1.1 Definitions and Quick Questions

Code Documentation: is a written text or demonstration that accompanies a code or software. it is essential because it helps us remember what we did in sharing and modifying our code.

Commenting Code: is a readable explanation in the source code of a computer program. it helps us remember what a variable or function does.

Member function (C++): is a function that has its prototype or definition within the class definition like any other variable. .

2 Question-1 – Documentation vs. Commenting

What is the difference between commenting code and code documentation?

commenting code is an short explanation of what a section of code does while code documentation is a brief text explanation that you can refer to, to find out about what a code does rather than some comments that you have to look at the code to find.

3 Question-set-2 – Code Licenses

What are the three most used open source software licenses (re-search)?

Apache License 2.0, BSD 3-Clause "New" or "Revised" license and MIT license

Describe the main difference between these three licenses (include your references).

MIT license - is one of the simplest licenses. It allows the user perform what they desire with their code as long as they credit the original creator. Ruby on Rails is an example of this.

Apache - is somehow similar to the MIT license. however, it also requires that any software patents associated with the code must be licensed to any user of the code.

BSD 3-Clause - is mostly similar to the MIT license with the caveat that the user cannot add the original creator's name as a kind of endorsement of their final product.

<https://www.quora.com/What-are-the-important-differences-between-the-most-common-open-source-licenses>.

Which one of these licenses would you prefer, and why?

I would prefer to use MIT license. this is because it is very simple to use and in return I just have to give credit to the user.

4 Question-set-3 – Subdirectories

Let's assume that you have several subdirectories under your *src* directory that contain source code. Look into the Doxyfile; what setting should you change for all those source files to be part of the documentation process?

INPUT tag.

What can you do if you want all directories below *src* included except for *src/archive*?

FILE PATTERNS = *.cpp
meaning it only looks at all .cpp files and nothing more.