# What is “High Quality Code”?

Programming code are the commands written by to programmer to “say” to the computer what it should do. The commands are logically ordered (and by the specifications of the programming language itself) so that the computer would solve some problem for the programmer or the user. There are set of “unwritten” rules that say how a code should be written. Code that follows these rules is said to be of higher quality. But why these rules even exist?

The programming code is written once, but then it can be read by the programmer that wrote it or by other developers. So the code should be understandable so that the ones who read it afterwards could easily understand its purpose and the idea of the developer for solving the problem. It helps finding a bug easier and also fixing it afterwards. That’s why there are conventions in different languages for what is “quality code”. These conventions say how the code should be written so that it’s more understandable, more bug free and more easily changeable. They help the developers to “talk” in the same language so that they can better understand each other. There are some principles that are the same in almost every programming language. For example:

* Variable naming: variables should have names that explain their purpose, so that you won’t have to write comments to explain the variables purpose.
* KISS (Keep It Simple Silly): Code should be simple. If some method is too complex it can be separated in separated methods. That would simplify the code and it would be easier to understand and change if you need to.
* DRY (Don’t repeat yourself): If some part of code needs to be repeated (copy-pasted) than you’re doing something wrong and you should change your code. Maybe this code should be in different method that you call in two or more places. That way if you find a bug you must change it only in one place and not in two or more. If there is code with the same bug in more than one place you can forget to change it in some of the places.
* Code order: It’s better to order your code in different logically separated parts. If you do that your code would be more understandable, because it follows some algorithm and it’s separated in different steps.
* Comment: If you write a more complex code that can’t be simplified and made in such a way that the code explains its idea behind it, you should comment. Write comments on specific parts of code that have a more complex idea. If some other developers read it and don’t understand it without the comments he can delete it and mess the whole project. That’s something you don’t want to happen and that’s why you make comments on the code.
* And etc.

Also, there are some specific rules for different types of programming languages. They specify what is high quality code for the different types of languages. There are some big organizations that they make their own conventions. For example: Microsoft wrote their specification for high quality C# code, because they are the initial developers of the language and they can specify their idea of high quality code principles.

If you start following these rules your code would be with “higher quality”. It would be more readable from you after some time and also by the others. It would also be easier to find and fix a bug. Summing up what I’ve said in this essay: If you want to be software developer you need to follow these rules.