This cheatsheet is created out of regard, but also in spirit of the KISS – Keep it simple, stupid – principle.

Which means: lower complexity, lower word-count on this cheatsheet – but hopefully a broader utilization.

overarching principles:

**KISS: simplicity.**

translated to many subprinciples. But in general meaning: few words, more expressive words, simple structure, a lot of documentation ..

.. probably a general bias towards too much complexity (someone different than you who’s tired and not good in the programming language) / too much laziness and little empathy.

.. like driving cars: if it gets exciting, the number of crashes grows significantly.

**Focus on ease of understanding**

.. dumb mistakes get visible, if problems and structures are expressed understandably

**follow the conventions**

.. software development is a lot about cooperation. Make it easier for others to read and understand you.

**empirically:**

**technical debt:**

* can be a useful to speed things up in the short term
* long term – especially with code that has to be changed quite some time: you potentially pay high interest on it.
* bias of economics / management people not to be aware of it / not recognize its significance

**subprinciples of KISS:**

* prevent over-configurability
* kill useless code
* avoid negative conditionals
* avoid early optimization
* avoid over-configurability
* divide et impera: make use of substructures, methods, abstracts, etc…

**subprinciples from understanding**

* expressive and precise naming. If not possible: document!
* no magic numbers
* explanatory variables (kind of a documentation of every substep)
* apply your style and your principles consistently

**subprinciples of ‘conventions’:**

* exceptions are exceptions ☺
* nesting
* Don’t repeat yourself -> outsource with parameters
* lots of patterns here: SOLID and others. A big focus on the Single Responsibility thing here!

**inversion / ‘smells’: what not to do**

* needless repetition
* rigidity / fragility: code is hard to change (because the different parts are too enmenshed

**mitigation:**

* refactoring patterns

other cheatsheets with a ‘higher’ information resolution:

<https://www.planetgeek.ch/wp-content/uploads/2014/11/Clean-Code-V2.4.pdf>

<https://gist.github.com/wojteklu/73c6914cc446146b8b533c0988cf8d29>