

## WEEK 17 – Metrics



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[31. May 2021 < https://plandora51897980.wordpress.com/2021/05/31/week-17-metrics/>](https://plandora51897980.wordpress.com/2021/05/31/week-17-metrics/)



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In order to find problem spots in our code we started using metric tools and refactored some spotted issues. Since there are not many adequate tools that support Kotlin programming language, we ended up using a test trial of codacy.

You can find a link to our codacy dashboard [here < https://app.codacy.com/gh/nf3lix/Plandora/dashboard?branch=master>](https://app.codacy.com/gh/nf3lix/Plandora/dashboard?branch=master). As you can see in [this exemplary pull request < https://github.com/nf3lix/Plandora/pull/50/checks?check\\_run\\_id=2717769051>](https://github.com/nf3lix/Plandora/pull/50/checks?check_run_id=2717769051), the tool is also part of our CI.

Among other metrics, codacy is capable of tracking duplicated code as well as cyclomatic complexity ([codacy only calls it complexity < https://docs.codacy.com/faq/code-analysis/how-does-codacy-measure-complexity-in-my-repository/>](https://docs.codacy.com/faq/code-analysis/how-does-codacy-measure-complexity-in-my-repository/)).

Code duplication describes an absolute or relative value of repeatedly occurring lines of code that could potentially be transferred to a single method. Cyclomatic complexity is a measure of the number of linearly independent paths through the source code. A high value of code duplication or code complexity indicate an unstructured or a difficult-to-understand code base – causing poor maintainability, testability and reusability. Because of that the goal should be to keep these two measurements as low as possible.

In our case, codacy helped us spotting issues with our CreateEventAcitivity and EventDetailActivity class. Even though they fulfill very similar requirements they were implemented separately and had a high cyclomatic complexity. By defining an abstract super class and encapsulating other parts to separate classes, both metrics could be improved. That is also shown in the table below:

	cyclomatic complexity	Code duplications
CreateEventActivity before	36	5
CreateEventActivity after	25	2
EventDetailActivity before	64	5
EventDetailActivity after	53	2

Some code snippets before and after refactoring can be found here:

- **Metrics** < <https://app.codacy.com/gh/nf3lix/Plandora/commit?bid=23762710&cid=557359447>>
- **Git** < <https://github.com/nf3lix/Plandora/commit/5daaf6034ed05f490d56efc29cc6df848ed58ffc>>


Another spot where codacy suggests changes is the **EventController** < <https://app.codacy.com/gh/nf3lix/Plandora/file/57615469986/duplication/source?bid=23762710&fileBranchId=23762710>> class. Even though there are some duplicated blocks we decided to not refactor them in favor of a better comprehensibility of the single methods.


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