SonarQube:

Web-based application.

Give reports

Track and reduce technical debt

Updated technical debt is beyond a threshold

Code Quality

Why to measure?

When to measure?

What to measure?

The 7 Axes of code quality:

1. Architecture and Design:

Minimize the dependencies

Design should not be complex

Easy to scale

1. Duplications: - Key point

Don’t Repeat Yourself

Isolates and refines duplications

Percentage of code that us duplicated

Counts by duplicated lines of code, blocks and files

1. Unit tests: - Key point

Calculate test coverage

Success and failure statistics

Matrix of time to run test cases

1. Complexity: - Key point

It calculates complexity of code

Per method

Per class

Per files

Eliminates complexity if possible

Complexity takes more time to execution of code

1. Potential bugs:

Eliminate code violations to prevent vulnerabilities

Avoid such bugs while coding

1. Coding rules:

Coding standards for all language

For example, for Java language

Class, Interface, Method must be there

Setter- gather function must be there

1. Comments: - Key point

Percentage of commented code

Percentage of public API that are not documented

It counts lines/ blank lines

Comment must have in code, which clears the purpose of code

Provide documentation especially for the public API, and source code details

Technical Debt:

Debt grow large enough, eventually the company will spend more on servicing its debt that it invests in increasing the value of other function.

Installation of SonarQube

SonarQube made of 3 components

1. Web server
2. Database
3. Analyzers to analyze projects

Install java8 or more

Install mysql database

wget http://repo.mysql.com/mysql-community-release-el6-5.noarch.rpm

rpm -ivh mysql-community-release-el6-5.noarch.rpm