

# Code Metrics - Team 9

## General Metrics:

- a. Lines of code
- b. Cyclomatic complexity
- c. Coupling
- d. Cohesion
- e. Maintainability Index

## Tools for Metric Evaluation :

JS Lint: JavaScript syntax checker and validator.

ES Lint

Plato : Visualization for JS code

## Metrics to ensure code quality -

- **Maintainability Index** - measures how maintainable (easy to support and change) the source code is.

$V$  = Halstead Volume

$G$  = Cyclomatic Complexity

$LOC$  = count of source Lines Of Code (SLOC)

$CM$  = percent of lines of Comment

$$MI = 171 - 5.2 * \log_2(V) - 0.23 * G - 16.2 * \log_2(LOC) + 50 * \sin(\sqrt{2.4 * CM})$$

; where MI is maintainability index

- **Number of global variables used**
- **Comment per LOC**

## References -

1. [https://en.wikipedia.org/wiki/Maintainability#Software\\_Referenceengineering](https://en.wikipedia.org/wiki/Maintainability#Software_Referenceengineering)
2. [http://www.projectcodemeter.com/cost\\_estimation/help/GL\\_maintainability.htm](http://www.projectcodemeter.com/cost_estimation/help/GL_maintainability.htm)