**Complexity Metrics -** Luís Abreu, nº60157

CogC: Calculates the Cognitive Complexity of each non-abstract method. The metric is similar to Cyclomatic Complexity, but is intended to explicitly measure understandability, which can be quite different from testability. Cognitive Complexity is increased with each control structure used and is higher the more nested control structures are.

To put it in a simple way, Cognitive Complexity is a measure of how difficult the code will be to read and understand .

Uma imagem com mesa

Descrição gerada automaticamente

ev(G):Calculates the Essential Complexity of each non-abstract method. Essential Complexity is a graph-theoretic measure of just how ill-structured a method's control flow is. Essential Complexity ranges from 1 to v(G), the Cyclomatic Complexity of the method.Uma imagem com mesa

Descrição gerada automaticamente

iv(G): Calculates the design complexity of a method. The design complexity is related to how interlinked a methods control flow is with calls to other methods. Design complexity ranges from 1 to v(G), the cyclomatic complexity of the method. Design complexity also represents the minimal number of tests necessary to exercise the integration of the method with the methods it calls.

Uma imagem com mesa

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v(G): Calculates the Cyclomatic Complexity of each non-abstract method. Cyclomatic complexity is a measure of the number of distinct execution paths through each method. This can also be considered as the minimal number of tests necessary to completely exercise a method's control flow. In practice, this is 1 + the number of if's, while's, for's, do's,switch cases, catches, conditional expressions, &&'s and ||'s in the method.

To put it in a simple way, Cyclomatic Complexity determines how difficult your code will be to test.

Uma imagem com mesa

Descrição gerada automaticamente

The graphic of cognitive complexity, as we can see above, shows that most methods have values of cognitive complexity between 0 and 10, which is good, once that cognitive complexity at a method level has 15 as a recommended maximum.