

MOOD METRICS

REPORT

This report is about Mood Metrics. The Mood metrics are used to guide and assess object-oriented design quality and potential productivity gains. The given plugin presented me with many columns.

These were AHF (attribute hiding factor), AIF (attribute inheritance factor), CF (coupling factor), MHF (method hiding factor), MIF (method inheritance factor), PF (polymorphism factor).

The AHF corresponds to the percentage of invisibility of attributes in the project. It is obtained by dividing the number of visible attributes in a diagram by the number of all the attributes.

The AIF represents the percentage of effective Inheritance of attributes. It is obtained by dividing the number of all inherited attributes of all classes by the sum of all attributes available.

The CF represents the percentage of couplings amongst classes, not calculable to inheritance. Concerning the maximum probable number of couplings in the class diagram. It is obtained by dividing the number of associations between all classes by the number of classes squared minus the number of classes.

PF represents the actual number of possible different polymorphic circumstances concerning the maximum number of likely distinct polymorphic circumstances. The PF is computed by dividing the total number of overridden methods in all classes by the result of multiplying the number of new methods times the number of descendants for all classes, respectively.

The MHF depicts the percentage of invisibility of methods in a class. It is obtained by dividing the number of all visible methods in all classes by the number of all methods in the classes.

The MIF expresses the same principle as AIF, but it is the percentage of effective Inheritance of methods. It is calculated by dividing the number of all inherited methods in all classes by the sum of all methods available of all classes.

IDENTIFICATION OF POSSIBLE TROUBLE SPOTS IN THE CODEBASE

Analyzing the values of the columns, I can conclude a few things.

The ideal value of the AHF should be 100%. Our value of 78.33%, which indicates that most of the attributes are hidden and only accessible to the correspondent class methods. Ideal

An exemplary value for the AIF should be around 0% and 48%, so I would say our value is acceptable. The ideal should be zero because all methods should be private.

In regards to CF, its value should not exceed 12%. Our value is 0,68%, which means the coupling between classes is great.

The model range of the MHF is 8% to 25%, meaning that the design includes a high proportion of specialized methods that are not available for reuse.

The perfect value of MIF would be around 20% and 80%. Our value is below this range. This can be caused by a child that redefines the methods of its parents or by a class that has no children.

In regards to PF, the value should not be too high or too low. A value of 50% is excellent.

RELATION WITH CODE SMELLS

Using these metrics I could not find a relation with the identified code smells.