

Metric	Attribute	Detail
Coupling Between Objects (CBO)	Coupling, Modularity	<p>CBO is a count of the classes to which the class being inspected references.</p> <p>This metric is a measure of the number of other objects to which the class being considered is coupled. A high number can indicate poor encapsulation and lower modularity resulting in a low level of reusability.</p>
Depth of Inheritance tree (DIT)	Complexity	<p>DIT is calculated as the number of classes from that which is being measured to its top-level parent.</p> <p>This is a measure of design complexity, capturing the number of parent classes from which a class inherits. A high number may indicate excessive design complexity.</p>
Lack of Cohesion of Methods (LCOM)	Cohesion	<p>The LCOM is a count of method pairs whose similarity is 0 minus the count of method pairs whose similarity is not zero. The degree of similarity for two methods m_1 and m_2 in a class is given by:</p> $LCOM = \{v_1\} \cap \{v_2\}$ <p>$\{v_1\}$ and $\{v_2\}$ are the sets of instance variables used by M_1 and M_2.</p> <p>This metric is a measure the dissimilarity of methods in a class via instanced variables. A high number can point towards poorly designed classes that do not adhere to the “single responsibility principle”.</p>
Number Of Children (NOC)	Reuse	<p>NOC is the number of direct subclasses extending the class being measured.</p> <p>This metric is an indicator of reuse and abstraction. High numbers may indicate poor design or diluted abstraction.</p>
Response For a Class (RFC)	Complexity	<p>RFC is the number of methods within a class added to the number of methods invoked by any of those methods.</p> <p>This is a measure of the count of methods which may be executed in response to a message. High numbers may highlight objects with undue complexity.</p>
Weighted Methods per Class (WMC)	Complexity	<p>WMC is calculated as the number of methods in the class where each method complexity is considered to be ‘unity’ or equal to 1.</p> <p>This metric is the sum of the complexity of the methods of a class and is an indicator of the complexity of a class through its method count. A high number can indicate undue complexity and limited scope for re-use.</p>