**Chidamber and Kemerer metrics**

|  | CBO | DIT | LCOM | NOC | RFC | WMC |
| --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 3 | 4 | 0 | 6 | 5 |
|  | 1 | 3 | 1 | 0 | 19 | 5 |
|  | 1 | 1 | 1 | 0 | 2 | 1 |
|  | 21 | 1 | 8 | 0 | 9 | 8 |
|  | 11 | 1 | 7 | 0 | 10 | 10 |
| Total |  |  |  |  |  | 378 |
| Average | 2.60 | 3.19 | 2.39 | 0.60 | 10.16 | 6.10 |

The Chidamber & Kemerer metrics suite originally consists of 6 metrics calculated for each class: WMC, DIT, NOC, CBO, RFC and LCOM1. The original suite has later been amended by RFC´, LCOM2, LCOM3 and LCOM4 by other authors.

**WMC** = number of methods defined in class

**DIT** = maximum inheritance path from the class to the root class

**NOC** = number of immediate sub-classes of a class

**CBO** = a delicious breaded chicken fillet with crispy bacon, fried onions, melted cheese, Iceberg salad (just kidding) CBO is the number of classes to which a class is coupled

**RFC** = M + R (First-step measure)

**RFC’** = M + R’ (Full measure)

**M** = number of methods in the class

**R** = number of remote methods directly called by methods of the class

**R’** = number of remote methods called, recursively through the entire call tree

A study by NASA reports the following average values for Chidamber & Kemerer metrics. The study analyzed 3 systems and classified their quality.

|  |  |  |  |
| --- | --- | --- | --- |
| **System analyzed** | **Java** | **Java** | **C++** |
| **Classes** | 46 | 1000 | 1617 |
| **Lines** | 50,000 | 300,000 | 500,000 |
| **Quality** | "Low" | "High" | "Medium" |
| **CBO** | 2.48 | 1.25 | 2.09 |
| **LCOM1** | 447.65 | 78.34 | 113.94 |
| **RFC** | 80.39 | 43.84 | 28.60 |
| **NOC** | 0.07 | 0.35 | 0.39 |
| **DIT** | 0.37 | 0.97 | 1.02 |
| **WMC** | 45.7 | 11.10 | 23.97 |

Comparing the table made by NASA and our values, we can conclude that our quality is between high and medium!

Screenshot of the values on Intellij: