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CM 1411

Lab 8 – Metrics

1. The only metric with values outside of the optimal range is Number of Parameters metric. The method responsible for this is the constructor for the TwitterClient object which takes 7 parameters.

2. In order to bring the Number of Parameters into the optimal range (below 5) I would remove the parameters used to make credentials (maxTrackKeywordsPerCredentials and maxFollowIdsPerCredentials) and relocate them as part of the createCredentials method in order to handle the logic.

3. The maximum cyclomatic complexity on this code is a 10, therefore it meets the heuristic.

4. The backOff method has a cyclomatic complexity of 3. The first possible path is if backOffMillis is equal to zero. The second path is when backOffMillis is less than or equal to capMillis (but not equal to 0), and the third occurs when backOffMillis is greater than capMillis.

5. Afferent Coupling shows the number of other packages that depend upon a package. Efferent coupling is the number of other packages that a package relies on. These two metrics can be used to monitor the amount of coupling within a system.

6. Top Level Design effectiveness = 806 / (154 + 928) = 74.5%

7. Low Level Design effectiveness = (761 + 806) / (154 + 928 + 948) = 77.2%

8. Overall removal effectiveness = 1 – (126 / 3526) = 96.4%