Abstract

In general, not everyone is an expert in every field, and therefore require the services of an expert. However, the number of experts sometimes not sufficient for users who seek the services. And this is what led to the development of expert systems. One method commonly used is case-based reasoning, but to be able to handle cases with hierarchy model that usually found in the case with many feature then this method can be developed into a hierarchical structured case-based reasoning. expert system consists of three main components, namely consultation interface, inference engine and knowledge base.

Inference engine act as the brain of an expert system that does the reasoning of cases encountered until a solution is found. This engine must be flexible and in its development can be added to the algorithms of other expert systems. However, for maintenance and development of this engine required an easier standard to determine the level of reliability of engines that can be obtained through the software measurement to see the code metrics that consists of Maintainability Index, cyclomatic Complexity, Depth of Inheritance, Class Coupling, and Lines of code.

The good code metrics value can facilitate developers an easy maintaining and developing, while a bad score tends to increase the potential risk that can degrade the quality of a software.

Keywords: *expert system, case-based reasoning, inference engine, code metrics*.