

An attribute grammar approach to specifying Halstead's metrics

ABSTRACT

Attribute grammars have been used in defining programming languages and constructing compilers. Since these are concerned with the syntax and static semantics of the source code of the language, attribute grammars can be effectively used to define source code metrics on it. Most of the source code metrics are based on measuring models of the source code. However, there is no formal way of specifying the mapping of the source code onto the models. This paper attempts to provide an approach using an attribute grammar to demonstrate how Halstead's metrics may be specified in an unambiguous manner on the source code itself.

Keyword: Attribute grammar; Halstead's metrics; Source code models