

METHOD AND APPARATUS FOR TYPE INFERENCE OF PROGRAMMING LANGUAGE

ABSTRACT

This application provides a method and an apparatus for type inference of a programming language. The method includes: obtaining a to-be-inferred node in an abstract syntax tree during development of program code, where the to-be-inferred node indicates a to-be-inferred field in the program code, and the to-be-inferred field includes one of the following: a variable, a class, a function, or a parameter; obtaining a constraint related to the to-be-inferred node, where the constraint indicates a relationship related to the to-be-inferred node in the abstract syntax tree; and determining a type of the to-be-inferred node based on the constraint, where the type of the to-be-inferred node is one of the following: a number type, a sequence type, a mapping type, a set type, an iterator type, a context manager type, a module type, a metaclass type, a none type, or a callable type. The solutions of this application help reduce memory occupied for type inference.

Fig. 1