

LIBRARIES AND TOOLS

Java Parser

Initially this parser was developed by Sreenivasa Viswanadha and Julio Vilma Gesser which is now inactive and it was supporting only Java 1.5. Later this project was taken by open source community like Apache and they extended this software to support even Java 1.8 and now it's available under LGPL license.

This parser is entirely developed in Java and parse only Java Files. This package comes with capabilities of generating AST – Abstract Syntax Tree and Visitor support which enables the clients to parser over the Tree and extract information. AST records the source code structure, Javadoc and comments. It also enables the clients to change AST nodes and add new nodes to modify the source code. Working Flow when this library is used:

1. Give Java Source file as an input to Java Parser.
2. It will create a Compilation Unit – which is AST.
3. Client has to extend VoidVisitorAdapter and pass the Compilation Unit, and visitor will visit each and every node and invoke the respective visit method of each child node.

Recently Java Parser is also used to create Walkmod which is a tool to automatically correct the violation of code. This is because of modifiable AST feature of Java Parser.

Plant UML

Plant UML is a library developed in Java used to generate UML Diagrams which is built with plethora feature set. Diagrams are defined using simple and intuitive language. Input to this library is a simple text based language which is also called as Plant UML dependency code. Plant UML takes the text input converts it into an intermediate language that can be understood by Graphviz whose responsibility is to generate diagrams.

Plant UML also has some pre-processor capabilities similar to C language pre-processor using which one can include files which contain the definition of class (like methods and fields) and relations will be defined in the main file which includes class file, include URL's to include file from Internet/Intranet, macros can be defined for defining components, conditional statements to have conditional drawings etc. With these many features Plant UML provides very friendly interface to work with.

Plant UML with number of feature's set along with documentation of each and every feature supported by large developer community makes it one of the best choice to use.

Dependencies of Plant UML:

- Graphviz
 - It's an Open source graph visualization software which helps in representing structural information as diagrams of abstract graphs and networks. It has applications in diverse fields.
 - Input to this tool is simple text language, which is created by Plant UML in my usage.
 - This tool can generate images only in few formats like PNG or SVG for web pages, so clients using this tool should add extra functionality if they require in different formats.