Week7 Paper Summary——Reflection

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This weeks' paper shows us the idea of reflection in LISP which is quite an amazing method to implement some crazy methods such as dynamically loading class, library by providing the name during running name.

According to Smith's paper, reflection is the ability of a program to manipulate itself as data during execution. An entity's integral ability to represent, operate on, and otherwise deal with its self in the same way that it represents, operates on and deals with its primary subject matter. Besides, Smith also introduced us two dialects which are called 2-LISP and 3-LISP which became famous in the functional domain and then inspired a lot of related work.

As far as I am concerned, Reflection helps programmers make generic software libraries to display data, process different formats of data, perform serialization or deserialization of data for communication, or do bundling and unbundling of data for containers or bursts of communication. Effective use of reflection almost always requires a plan: A design framework, encoding description, object library, a map of a database or entity relations. Just as this week's assignments, they are all about reflection especially 19.1 which shows the great power of reflection by dynamically loading plugins. Reflection is one of my favorite virtues of a programming language and due to the fact of that I prefer choosing JAVA , C# and so on which support reflection when I plan to give user the freedom to modify the code during running time. I deem the essence of software engineering is to provide more freedom to users without bringing security problems and reflection is a good way to do so.