Compiler Construction
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LLVM tutorial

A Compiler Developer tool

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Description :

LLVM was originally an acronym for low level virtual machine. The LLVM Project is a set of reusable and modular compiler and toolchain technologies. LLVM, despite its name, has nothing in common with traditional virtual machines. The name "LLVM" itself is not an abbreviation; it is the complete name of the project.

LLVM began as a university research project with the purpose of delivering a modern, SSA-based compilation technique capable of enabling both static and dynamic compilation of arbitrary programming languages. Since then, LLVM has evolved into an umbrella project with a number of subprojects, many of which are utilised in production by a wide range of commercial and open source projects, as well as in academic research. Code in the LLVM project is licensed under the "Apache 2.0 License with LLVM exceptions"

Significance :

LLVM is a compiler and a toolkit for creating compilers, which are programmes that translate instructions into a form that a computer can read and execute.

The LLVM project is a set of reusable and modular compiler and toolchain technologies. LLVM aids in the development of new computer languages as well as the enhancement of current ones. Many of the tough and unpleasant procedures associated with language creation are automated, such as porting the result code to numerous systems and architectures. LLVM can serve as the middle layers of a comprehensive compiler system, accepting intermediate representation (IR) code from a compiler and producing an optimised IR. This new IR can then be transformed and linked into platform-specific assembly language code.