## Compiler

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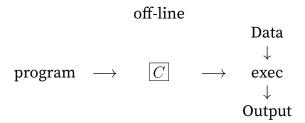
## **Abstract**

This a note for Stanford Online course named Compiler. I'd like to share my note with you guys. After three months of intership. I find the importance of Compiler when you meet any problem strange. Thus, learning makes me feeling better.

## 1 Week 1: Introduction & the Cool Programming Language

## 1.1 Introduction

Compilers



1954 IBM develops the 704 software > hardware "Speedcoding"

- 10-20x slower
- 300 bytes = 30% memory
- Interpreters

$$\begin{array}{ccc} & \text{on-line} \\ \text{program} & \longrightarrow & \\ & & \boxed{I} & \longrightarrow & \text{Output} \\ \text{Data} & \longrightarrow & \end{array}$$

FORTRAN 1(Formulas Translated) 1954-1957 1958 50% program in FORTRAN 1

The outlines of FORTRAN 1

1. Lexical Analysis

- 2. Parsing
- 3. Sematic Analysis
- 4. Optimization
- 5. Code Generation