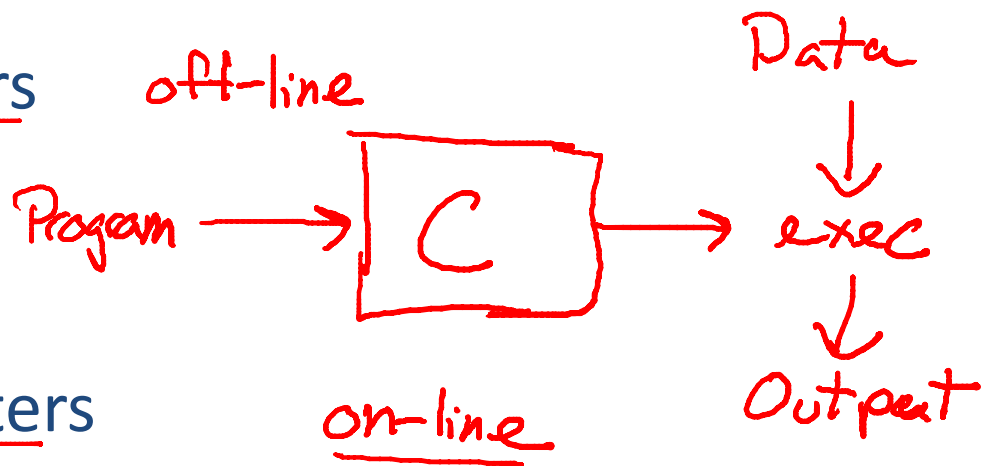




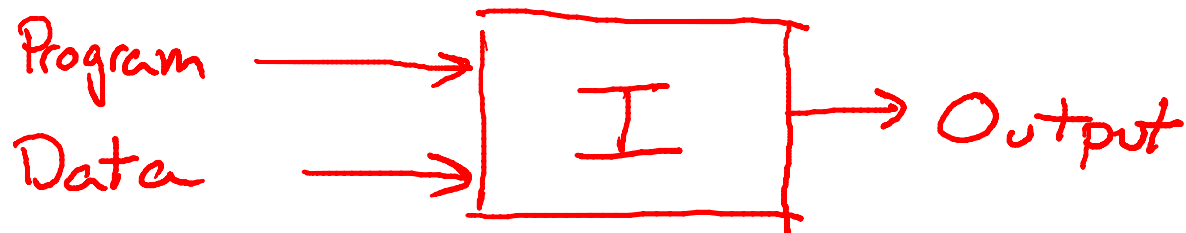
Compilers

Introduction

- Compilers



- Interpreters



- 1954 IBM develops the 704
 - Successor to the 701

software > hardware



- “Speedcoding”

1953

10-20x slower
300 bytes = 30% Memory



John Backus

- FORTRAN I

FORMULAS TRANSLATED

1954-1957

1958 50% programs in FORTRAN



John Backus

- The first compiler
 - Huge impact on computer science
 - Led to an enormous body of theoretical work
- Theory + Practice
- Modern compilers preserve the outline of FORTRAN I

1. Lexical Analysis

2. Parsing

3. Semantic Analysis

4. Optimization

5. Code Generation

Syntactic

Types, scope

Translation