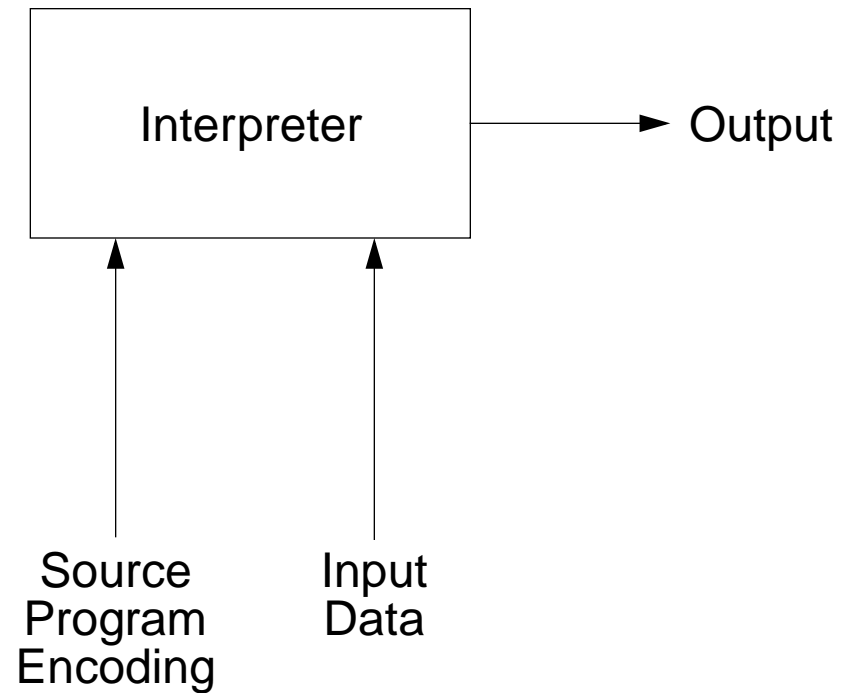
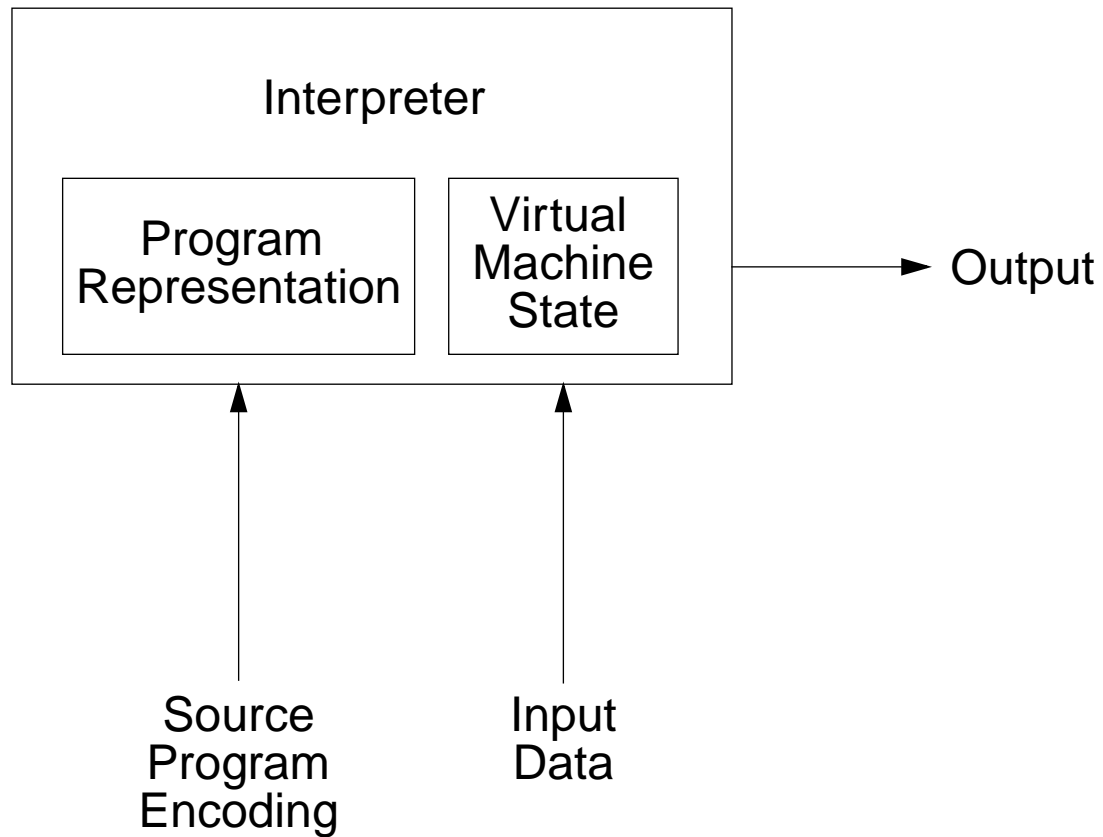


An Idealized View of an Interpreter



Internal Structure of an Interpreter



Program Representations

Syntax-Oriented:

- Postfix notation
- Abstract syntax tree

Data Structures:

- Lisp

Machine-code Style:

- Smalltalk (bytecodes)
- Prolog (WAM code)
- Snobol & Icon
- Java (Java VM)

Virtual Machine State

Simulation of a machine state requires two parts:

- memory state
- control state (“program counter”)

Simple version:

values accessible from symbol table

More general version:

provide and manage a “memory” for the virtual machine