

Concepts of Programming Languages

Chapters 1 - 6

- Know and understand the Language Evaluation Criteria.
- Understand the relationships between programming language design and computer architecture and programming methodologies.
- Know and understand the basic Language Categories.
- Understand the operation of compiled and interpreted languages.
- Understand and be able to apply the basic formal concepts for describing language syntax: regular expressions, grammars, BNF, EBNF, productions, derivations, syntax diagrams, parse trees, etc.
- Understand and be able to apply the concepts of lexical and syntax analysis: state diagram transition and parsers.
- Know and understand attribute grammars and know about the various methods for describing the dynamic semantics of a programming language.
- Understand the concepts of binding, type checking, strong typing, type compatibility, scope, and lifetime.
- Know and understand the basic characteristics of various primitive and other data types.