

CHAPTER 2

The Concept of Data: Simple Data Types

Data is the general term describing all that is operated on by a computer. At the hardware and machine-code levels, all data are represented as sequences of binary digits (bits). Higher-level languages allow the use of abstractions that ignore the details of representation — by developing the *data type* concept.

A data type defines the set of values a variable may assume and the operations which may be applied to it. Every variable occurring in a program is associated with one and only one type. Although data types in Pascal can be quite sophisticated, each must be ultimately built from unstructured, simple types.

Pascal also provides facilities for creating collections of data types in the form of structured types and pointer types. These types are described in Chapters 6 through 10.

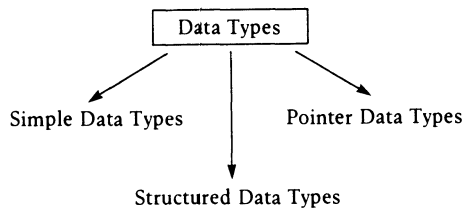


Figure 2.a Type taxonomy of data types