

purpose, we list the following characteristics of Pascal:

1. Declaration of variables is mandatory.
2. Certain key words (e.g., `begin`, `end`, `repeat`) are “reserved” and cannot be used as identifiers.
3. The semicolon (;) is considered as a statement separator.
4. The standard data types are those of whole and real numbers, the logical values, and the (printable) characters. The basic data structuring facilities include the array, the record (corresponding to Cobol’s and PL/I’s “structure”), the set, and the (sequential) file. These structures can be combined and nested to form arrays of sets, files of records, etc. Data may be allocated dynamically and accessed via pointers. These pointers allow the full generality of list processing. There is a facility to declare new, basic data types with symbolic constants.
5. The set data structure offers facilities similar to the PL/I “bit string”.
6. Arrays may be of arbitrary dimension with arbitrary bounds; the array bounds are constant (i.e., there are no dynamic arrays.)
7. As in Fortran, Algol, and PL/I, there is a `goto` statement. Labels are unsigned integers and must be declared.
8. The compound statement is that of Algol, and corresponds to the `DO` group in PL/I.
9. The facilities of the Algol `switch` and the computed `goto` of Fortran are represented by the `case` statement.
10. The `for` statement, corresponding to the `DO` loop of Fortran, may only have steps of 1 (to) or -1 (downto) and is executed only as long as the value of the control variable lies within the limits. Consequently, the controlled statement might not be executed at all.
11. There are no conditional expressions and no multiple assignments.