

GLOSSARY

The glossary defines terms common to all of the MiniMINC manuals. A term is defined here if its use in the MiniMINC manuals deviates from its standard dictionary definition.

Algorithm

A fixed series of well-defined procedures that solves a problem in a finite amount of time. Programmers generally construct an algorithm as an outline for writing a new program.

Analog

Relating to the representation of a physical attribute such as voltage by an analogous phenomenon, such as the deflection in a graph.

Application

The particular task or set of related tasks for which you use a computer.

Application program

A program that performs a task specific to your needs. Usually, application programs are those programs not part of the system itself.

Argument

A variable or constant value or expression used with a command, statement, or routine that controls its action, specifically its location, direction, or range. An argument can also be any variable or constant value used by a function.

Array

An ordered arrangement of subscripted variables derived from a common variable. For instance, an array J might contain the subscripted variables J(0), J(1), J(2), and J(3).

ASCII

The American Standard Code for Information Interchange; a standard code for upper- and lower-case letters, numbers, punctuation, and special communication control characters.

Assembly language

A symbolic programming language that normally translates directly into a machine language.

Autoscaling

A MiniMINC feature that automatically adjusts the axis units of a graph to the minimum and maximum numerical values of a set of data.

Bad Block

A damaged block existing on your volume that the system cannot access. Blocks become damaged from wear or abuse.

BASIC

Beginner's All-purpose Symbolic Instruction Code; BASIC is an interactive, "algebraic" type of computer language developed at Dartmouth College, Hanover, N.H., by Kemeny and Kurz that combines English words and decimal numbers. It is a widely available, standardized, simple beginner's language capable of handling industrial, laboratory, and business applications. MINC BASIC is a special version of this standard language.

Binary

The number system with a base of two, used by the internal logic of most digital computers.

Block

A unit of space, or capacity, on a storage volume. A block can hold 512 characters.

Branching

A programming technique that transfers control to a program statement independent of its sequence in the program. Branching allows you to construct programs containing specialized parts that execute only if a particular condition exists.

Brand

A small vertical line on a graph used to mark the exact horizontal location of data.

Bug

Any error existing in a program.

Chain

A connected series of separate programs or program parts. Chaining is the simplest way in MiniMINC to prepare separate programs for parts of a complex task and then run them together.

Channel

A logical pathway used in MINC BASIC for the sending and receiving of data. There are 12 MiniMINC file channels available through the OPEN statement that allow programs to access files for data.

Character mode

The stylistic features shared by characters appearing on a terminal screen. MiniMINC character modes consist of boldface, underline, reverse video, flashing, or normal elements. You can specify character modes alone or in combination.

Column

The vertical position on the MiniMINC terminal screen in which a character is displayed. Compare with Row.

Command

A word, mnemonic, or character which, by virtue of its syntax and its position in an input line, causes a computer to perform a predefined operation. In MINC BASIC, commands can be used only in immediate mode.

Compile

To convert an ASCII file into its smaller binary form. A compiled MINC BASIC program requires less storage space and less time for handling by MiniMINC.

Computer

An electronic device that stores, retrieves, and processes data through the execution of programmed instructions.

Computer system

A combination of devices, programs, and documentation designed for automatic problem solving following or concurrent with human intervention.

Concatenation

The joining of two strings of characters to produce a longer string.

Conditional branch

Branching within a program that involves testing for a condition before executing some statement or series of statements.

Conditional transfer

The action resulting from a conditional branch.

Constant

An invariable and unchanging value. Compare with variable.

Control character

The product of pressing the CTRL key and a letter key on the MiniMINC keyboard simultaneously. A control character sometimes appears on the terminal screen as a caret (^) next to the appropriate letter.

Control command

A command that alters a current user or computer activity. Unlike other commands that work only when READY is displayed on the screen, you can give a control command at almost any time to establish your "control" over the computer.

Cursor

A unique symbol that marks your current position on a video terminal screen. Whatever character you type will appear at the cursor. With the MiniMINC terminal, you can use either a flashing

box or a flashing underscore as the cursor symbol.

Data

A term used to denote any or all facts, numbers, letters, and symbols forming basic elements of information that can be processed by a computer.

Debug

To detect, locate, and correct errors in a program.

Default

An option or argument value assumed by a program if a specific value is not supplied by the user.

Define

To assign a value to a variable or to assign an expression to a user function.

Device

A piece of equipment such as a line printer or diskette drive unit.

Digital

A term referring to numbers represented as discrete units. A digital computer interprets electronic signals as discrete digits (0 or 1), while an analog computer interprets them as analogs of a wider range of numbers.

Directory

A table that contains the name, size, and location of every file on a mass-storage volume.

Diskette

A thin, flexible, magnetic, oxide-coated disk resembling a 45 rpm record and permanently enclosed in an 8-inch square envelope. Diskettes are random-access, mass-storage volumes.

Display mode

An attribute of the entire terminal screen. MiniMINC display modes determine the background color of the screen, the width of character lines, and the scrolling method.

Distribution medium

Any volume or material used in distributing copies of system programs. Distribution media are generally diskettes or magnetic tape.

Drive

A unit that holds and manipulates a mass-storage medium such as a diskette or magnetic tape.

Dummy argument

An argument inside the definition of a function that holds the place for the formal argument.

E notation

Method of representing numbers in MiniMINC greater than 999999 or less than .01. The letter E appears between the mathematical expression and the exponent in lieu of the "x10" used in scientific notation. 1.0×10^{-4} becomes 1.0E-4 in E notation.

Edit

To arrange and/or modify the format of data and programs, including insertion and deletion of text.

Editor

The program you use to create and edit files within a computer. Editors manipulate characters without regard for their significance.

Element

The smallest unit of storage within an array. For example, N(12) represents an element in the array N.

Error message

A brief message MiniMINC displays on your terminal when an error occurs. Error messages identify the nature of user and computer errors and sometimes suggest a corrective action.

Execute

To carry out an instruction or run a program on the computer.

Expression

A combination of variables, constants, and operators (as in a mathematical expression).

Field

A specified area of a mass-storage volume, statement, command, or terminal screen used for a particular category of data.

File

A logical collection of data treated as a unit, which occupies one or more blocks on a mass-storage volume, and has an associated file name and type.

File allocation

The MiniMINC practice that determines the placement of a file on a diskette. The MiniMINC system stores a file in the first available area that is large enough to hold the file. In some cases, MINC BASIC requires that the available space be twice as large as the file before allocating space.

File Number

A channel number associated with a file that you use when referring to the file within a program.

File spec

See File specification.

File specification

The part of a command or statement that identifies a file's name and type and the device where it can be found.

File Type

The one-to-three character string assigned to a file either by the user or the computer. The file type follows the file name and is preceded by a period. The file type serves to further identify the kind of file as in PROGRAM.BAS where PROGRAM is a BASIC program.

Flow (of control)

The order in which a program's statements are executed.

Form Feed

An ASCII character that delimits pages within a file. On some printing equipment, a Form Feed causes a skip to the next page.

Formatting

An ungrammatical term that has come to mean the recording of timing information on magnetic, mass-storage volumes. The timing information is necessary for drive units to be able to find information stored on the volumes.

Function

A subprogram that performs commonly used operations (for example, the square root calculation function). The name of the function takes on the value of the calculation and can be used as a program variable. Some functions exist as part of MiniMINC and others can be user-defined.

Graph number

A label (0, 1, or 2) used in graphic routines to specify each graph individually or both in a two-graph display.

Graph region

The portion of a terminal screen reserved for graphic display. MiniMINC has three graph regions: upper, lower, and full screen.

Graphic memory

The memory area of a MiniMINC terminal that preserves graphic data. The graphic memory allows you to display the same data in more than one graphic format.

Graphic program

Programs that compute data and construct diagrams for the display of that data on a graphic display terminal.

Graphic routine

A statement that performs a routine task associated with graphic display.

High-level language

A programming language (for example, BASIC, FORTRAN, and COBOL) whose statements are problem-oriented and typically translated into more than one machine language instruction.

Immediate mode

The mode in which a computer executes statements as soon as you type them, without requiring a program.

Infinite loop

A program segment that, when executed, repeats endlessly because it lacks any provision for termination.

Initialize

To prepare a new mass-storage volume for use with a computer or to erase a used volume in preparation for reuse. Initialization sets up an empty file directory on a volume.

Input

The act of placing information inside a computer, or the information itself.

Integer variable

A variable representing only whole numbers within some range (for example, -32768 to +32767).

Intelligence

The capacity of a machine for mimicking activity, such as reasoning or learning, normally attributed to human intelligence.

Interlacing

A feature of the MiniMINC terminal. Interlacing is the placing of additional scan lines between the normal ones in the terminal's screen. This increases character density by reducing the amount of undefined space within each character. Interlacing is useful whenever you photograph the screen.

Left-justified

An arrangement of text where every line begins at the same distance from the lefthand margin.

Line

A string of characters terminated with a vertical tab, form feed, or line feed/carriage return combination.

Line printer

A printing device that composes a line of characters before printing it. The term is sometimes erroneously used to mean a character printer.

Literal

A language element that permits the explicit representation of values in expressions. In most languages, a character string literal is enclosed in single or double quotes, while a numeric is not. In either case, the value is what it appears to be, not the name of a value.

Load

1. To insert a program or data into memory.
2. To place a removable disk in a disk drive and start the drive.

Logical expression

An expression having one of two possible values—true or false.

Loop

A sequence of programming statements that, when executed, repeat continuously until an end condition is met.

Machine language

The binary language used by a computer when performing operations.

Mass storage

Pertaining to a volume that can store large amounts of data readily accessible to the computer.

Master volume

A single-purpose, mass-storage volume dedicated to the creation of system, demonstration, and user volumes.

Memory

The part of a computer that temporarily stores programs and data

intended for immediate use.

Mixed mode

Arithmetic operations involving a combination of integer and real operands.

Modem

A modulator/demodulator apparatus that permits long distance transmission of digital data.

Multiple branch

A program statement that transfers program control to one of several possible locations.

Multiway branch

Same as a multiple branch.

Nesting

Including an executable operation within a larger one of the same or similar type. BASIC allows you to override operator priorities (^, *, /, +, - descending order from left to right) by nesting expressions with parentheses. BASIC also allows nesting of programming loops, where the internal loop must be totally contained within the external loop.

Nonprogram file

A sequential or virtual array file containing anything but a program.

Nonsystem volume

A volume capable of storing programs and data, but lacking the structure and programs necessary for starting and maintaining the system.

Null

An ASCII character whose numeric code is 0.

Numeric variable

A computer storage location reserved for a numeric value.

Octal

Pertaining to the number system with a base of 8.

One-dimensional array

An array with one subscript.

Operation

The act specified by a single computer instruction. A program step undertaken or executed by a computer (addition, comparison, and multiplication, for example).

Option

An element of a command, command string, statement, or routine that enables you to select from among several associated alternatives.

Output

1. The result of a process.
2. The transfer of data from internal to external storage or to the terminal screen.

Overlay

The practice of merging a program segment with statements existing apart from that segment.

Owner name

Name indicating ownership of a volume. The user assigns this name to a volume during its initialization or its adaptation by a master volume. The owner name appears whenever the user requests a volume's directory.

Page

That portion of a text file delimited by form feed characters and generally 50-60 lines long.

Plotter

A device using an automatic pen or pencil to construct visual representations of data. Plotters sometimes receive plotting coordinates from digital computers.

Point

A single data value.

Precision

The resolution of a number's representation by a computer. MiniMINC's precision extends to six significant digits for real numbers and four (plus) digits for integers.

Print zone

An assumed horizontal subdivision of the terminal screen. MiniMINC acts as though the terminal's screen is divided into five print zones of 14 columns each, skipping to the next zone whenever it encounters a comma in a PRINT statement.

Program

A set of computer instructions or symbolic statements combined to perform some task.

Program file

A program stored on a volume. A program file has a file name and type.

Program flow

The order in which a program's statements are executed. Also known as flow of control.

Programming language

A computer-oriented language used in writing programs.

Prompt

A word or message printed by the system that requests or suggests some action on your part.

Random access

Access to data in which the next location from which data is to be obtained does not depend on the location of the previously obtained data. Diskettes are examples of random access storage media. Contrast with Sequential access.

Raster unit

A fixed unit of linear measure used in determining bar width for

MiniMINC bargraphs. The MiniMINC terminal screen measures 240x512 raster units.

Read

To copy data from one form of storage to another, usually from an external device to internal storage such as memory.

Real number

Commonly understood to be any positive or negative number, excluding imaginary or complex numbers. However, computers impose limits on the range (approximately $.29 \times 10^{-38}$ through $1.7 \times 10^{+38}$) and precision of real numbers. Consequently, all irrational and many rational numbers are excluded from the working definition of a real number.

Real variable

A variable for real numbers.

Relational operator

A symbol representing the relationship of one value to another. The relational operators in MINC BASIC are = (equal to), < (less than), < = (less than or equal to), > (greater than), > = (greater than or equal to), and < > (not equal to).

Right-justified

An arrangement of text where every line ends at the same distance from the right-hand margin.

Routine

A statement that performs some routine task. Routines return their results through arguments, unlike functions that return values within their names.

Row

The horizontal strip on the terminal screen in which a line of text can be displayed. The MiniMINC terminal has 24 rows. Text coordinates are given in rows and columns, whereas graph coordinates use X and Y.

Run

To execute a program.

Save

To store a program or data as a file on a volume. Information not saved is erased when you shut off the computer or use MiniMINC's workspace for another operation.

Scientific notation

Method of representing real numbers as a number from 1-10 multiplied by an appropriate power of 10. For example, 56930 becomes 5.693×10^4 in scientific notation. See E notation.

Scrolling

The upward movement of data on a terminal screen to accommodate new data. The oldest line of data disappears from view at the top of the screen when the new line appears at the bottom.

Scrolling area

The region on a terminal screen where scrolling takes place. The

scrolling area normally occupies 24 rows.

Search

In MiniMINC, the keypad editor's examination of a file or part of a file for a designated string.

Search model

The string you type as the object of a search.

Sequential access

Access to data in which the next location from which data is to be obtained sequentially follows the location of the previously obtained data. Contrast with Random access.

Sequential file

A file that must be accessed sequentially. MiniMINC looks for information in a sequential file by checking one position after another in a linear direction.

Serial

A mode of data transmission in which the components of each data word are transmitted according to a prescribed protocol, one after another (serially) along a single pair of lines from a sending to a receiving device.

Serial line unit

One of six ports on the back of the chassis dedicated to hookups with serial line devices. Such devices include your terminal and printers. Often referred to as an SLU.

SLU

Same as a Serial line unit.

Statement

An element of a program. Programs are sequential arrangements of statements.

Storage medium

Any type of sequential-access or random-access volume used for storing files.

String

A connected sequence of characters.

String variable

A variable used for any ordered collection of numeric, alphabetic, and special characters up to 255 in length.

Strip chart mode

The dynamic display of data in graphic form. This MiniMINC feature lets you see a large number of points plotted in a continuous flow across the screen, resembling the action of a strip chart. Also called move mode.

Subroutine

A group of statements arranged within a program so that program control can pass to the subroutine and back to the program again. Subroutines usually perform tasks required more than once by the program.

Subscript

A number appended to a variable name to uniquely identify specific elements of an array. Subscripts are enclosed in parentheses.

Substring

Any contiguous part of a larger string.

System file

Any one of a group of files containing the programs and data that, together with the equipment and documentation, comprise a computer system.

System volume

The storage medium that contains the system files.

Syntax

The structure of expressions in a language and the rules governing that structure.

Terminal

The primary communication device between you and the computer system. A terminal has a keyboard and a display mechanism.

Timesharing

A method of allocating resources to multiple users so that the computer, in effect, processes a number of programs concurrently.

Tone

The sound signal emitted by the MiniMINC terminal whenever an editor operation fails or you type to the end of a line.

Two-dimensional array

An array requiring two subscripts (commonly portrayed as a matrix).

Unconditional branch

A programming technique that transfers program control to the statement you specify without regard for sequence.

Unconditional transfer

Same as Unconditional branch.

User volume

The storage medium reserved for user files and the HELP text file.

Variable

1. A computer storage location that can contain a value that changes during computation.
2. The symbolic representation of a variable (for example, F, F%, and F\$).

Virtual array file

A file containing information directly accessible by MiniMINC. The system can retrieve any piece of data without first examining the information preceding it. The file is virtual because it appears in the program as an array even though it is a file stored on a volume.

Vol id

See Volume identifier.

Volume

A logical storage medium — but not any particular one. A generic term used for general reference.

Volume identifier (Vol id)

Identifying name assigned to a volume by a user during the volume's initialization or its adaptation by a master volume. The volume identifier appears whenever the user requests a volume's directory.

Window

The relationship for a single graph that defines placement of coordinates at physical screen positions, so called because the graph is like a window through which you view a portion of the X-Y coordinate space.

Word

The number of characters treated as a unit in the workspace. MiniMINC words can contain 2 characters, 1 integer, or one half of a real number.

Workspace

MiniMINC's storage area for temporarily holding a program you type and its associated values.

Wrap symbol

The two-character symbol displayed by the keypad editor whenever a file line is longer than a screen row. Indicates that the preceding line does not end with a line terminator.

Wrapped line

Any line that is continued onto the next row because it is too long to fit in a single row.

Write

To copy data from internal storage to an external device or to insert data into a storage location.