access key

A key pressed while holding down the ALT key that allows the user to open a menu**,** carry out a command, select an object, or move to an object. For example, ALT+F opens the File menu.

active window

The window that appears in the foreground with a highlighted title bar or border to distinguish it from other visible windows.

add-in

A customized tool that adds capabilities to the Visual Basic development environment. You select available add-ins using the Add-In Manager dialog box accessible from the Add-Ins menu.

application

A collection of code and visual elements that work together as a single program. Developers can build and run applications within the development environment, while users usually run applications as executable files outside the development environment.

assignment statement

A statement, for example `Text1.Text = "My Name,"` that assigns a value to a variable or property. You must use the **Set** statement to assign an object reference.

binary format

Machine-readable form. This format is different from ASCII or ANSI formats, which encode data as text.

bit

A binary digit; the smallest unit of data a computer can store. Bits are expressed as 1 or 0.

bitmap

An image represented by pixels and stored as a collection of bits in which one or more bits of color information corresponds to each pixel. A bitmap usually has a .BMP file name extension.

bitmask

A value used with bit-wise operators (**And**, **Eqv**, **Imp**, **Not**, **Or**, **Xor**) to test, set, or reset the state of individual bits in a bit-field value.

Calls button

A debugging tool on the toolbar. When the Calls button is clicked during break mode, a dialog box that lists all called procedures that have not run to completion is displayed.

cascading event

A sequence of events caused by an event procedure directly or indirectly calling itself; also referred to as an event cascade or recursion. Cascading event procedures often result in run-time errors, such as stack overflow.

check box

A control (**CheckBox**) used to represent an option (on/off, **True**/**False**) that the user can set or clear by clicking. An X in a check box indicates it is selected, set to on, or has a value of **True**.

collection syntax

For a **Things** collection that contains **Thing** objects, the collection itself would be referred to as

object.**Things**

while an individual **Thing** object would be referred to as

object.**Things**.**Item(***index***)**

or

object.**Things(***index***)**

where *index* is an integer denoting a specific element in the collection.

compile error

An error that occurs during compile time as the result of incorrectly constructed code.

compound document file

A file that can contain data in different formats, for example, as spreadsheets, text, and bitmaps.

controlling application

An application, for example Visual Basic, that uses objects provided by ActiveX components. Also called an Automation controller.

cross hair

A cross-shaped pointer displayed when you select a control from the Toolbox and move the mouse pointer over a form. For the **MousePointer** property, this pointer setting is called Cross.

ActiveX control

A file with a .OCX filename extension or an insertable object that, when added to a project using the Components dialog box, extends the Toolbox. The **Treeview** and **StatusBar** controls are examples of ActiveX controls.

default color box

A box in the Color palette that displays the currently selected foreground and background colors for the form or control.

destination

In an active link of a dynamic data exchange (DDE), the application, form, or control that requests data from the source application.

device context

A link between a Windows-based application, a device driver, and an output device such as a display, printer, or plotter.

dialog box

A special window displayed by the system or application to solicit a response from or provide information to the user.

drag-and-drop operation

A combination of features that allow the user to drag an object and drop it onto a form or other object using the mouse. An object can be a source (an item the user drags) or a target (an item on which the user drops a source).

editing key

The INSERT, DELETE, or BACKSPACE key.

embedded object

An object that is created in another application and then embedded in a Visual Basic application. When you create an embedded object, all the data associated with the object is copied to and contained in the Visual Basic application.

error trapping

The process of intercepting an error using error-handling features in Visual Basic.

event

An action recognized by an object, such as clicking the mouse or pressing a key, and for which you can write code to respond. Events can occur as a result of a user action or program code, or they can be triggered by the system.

event procedure

A procedure automatically invoked in response to an event initiated by the user, program code, or system. Event procedures are private by default.

executable file

A Windows-based application that can run outside the development environment. An executable file has an .EXE filename extension.

flag

A variable you use to keep track of a condition in your application. You can set a flag using a constant or combination of constants.

form

A window or dialog box. Forms are containers for controls. A multiple-document interface (MDI) form can also act as a container for child forms and some controls.

form module

A file in a Visual Basic project with an .FRM filename extension that can contain graphical descriptions of a form; its controls and their property settings; form-level declarations of constants, variables, and external procedures; and event and general procedures.

function key

Any of the keys labeled F1 through F12. Function keys often provide shortcuts for frequently carried out commands and actions. You can assign a function key as a shortcut key.

general procedure

A procedure that must be explicitly called by another procedure. In contrast, an event procedure is invoked automatically in response to a user or system action.

graphics method

A method that operates on an object such as a **Form**, **PictureBox**, or **Printer**, and performs run-time drawing operations such as animation or simulation. The graphics methods are **Circle**, **Cls**, **Line**, **PaintPicture**, **Point**, **Print**, and **PSet**.

in-place activation

The process of activating an object provided by an ActiveX component. By double-clicking the object, a user can interact with the application supplying the object without switching to a different application or window. Also called visual editing.

index

A number that identifies an element in an array, control array, or collection.

instance

Any one of a set of objects sharing the same class. For example, multiple instances of a **Form** class share the same code and are loaded with the same controls with which the **Form** class was designed. During run time, the individual properties of controls on each instance can be set to different values.

internal area

The area in a multiple-document interface (MDI) form used to display MDI child forms. The internal area excludes the MDI form's title bar, border, menu bar, and aligned controls on the MDI form. Also called the client area.

intrinsic constant

A constant provided by an application. Visual Basic constants are listed in the Visual Basic (VB) object library and can be viewed using the Object Browser.

linked object

An object that is created in another application and linked to a Visual Basic application. When you link an object, you insert a placeholder in your application. Unlike an embedded object, a linked object's data is actually stored in and managed by the application that created it.

list box

A control (**ListBox**) that displays a list of choices.

master copy

The most recent version of a file stored in the version control program's database, as opposed to the local copy of a file in your working directory.

Maximize button

A button in the upper-right corner of a window that enlarges the window to fill the entire screen.

MDI child

A form contained within an MDI form in a multiple-document interface (MDI) application. To create a child form, set its **MDIChild** property to **True**.

MDI form

A window that makes up the background of a multiple-document interface (MDI) application. The MDI form is the container for any MDI child forms in the application.

memory object

A block of memory allocated using the Windows API GlobalAlloc() that contains data in a format indicated by the **Format** property setting of the **OLE** container control.

metafile

A file that stores an image as graphical objects (lines, circles, polygons) rather than as pixels. There are two types of metafiles, standard and enhanced. Standard metafiles usually have a .WMF filename extension. Enhanced metafiles usually have a .EMF filename extension. Metafiles preserve an image more accurately than pixels when the image is resized.

Minimize button

A button in the upper-right corner of a window that shrinks the window to an icon.

modal

Describes a window or dialog box that requires the user to take some action before the focus can switch to another form or dialog box.

modeless

Describes a window or dialog box that does not require user action before the focus can be switched to another form or dialog box.

ActiveX component

An application that provides its objects to other applications. You can use any of these objects in your Visual Basic application. Also called an Automation server.

object variable

A variable that contains a reference to an object.

OLE

Object linking and embedding: The technology that enables you to create applications that contain components from various other applications.

Automation

A technology that enables applications to provide objects in a consistent way to other applications, development tools, and macro languages.

Automation controller

An application, for example Visual Basic, that uses objects provided by ActiveX components. Also called a controlling application.

option button

A control (**OptionButton**) used to display an option or, more typically, a group of related options from which you can select only one.

parent form

A form containing controls.

Paste Link command

A command that inserts Clipboard contents copied from one Windows-based application to another. This command creates a link between the applications so that copied data is updated automatically.

pen

The graphical characteristics, such as color, specified by a **Line**, **Point**, or **Circle** statement or by the current **ForeColor** or **FillColor** setting.

persistent graphic

The output from a graphics method that is stored in memory. Persistent graphics are automatically retained when certain kinds of screen events occur, for example, when a form is redisplayed after being hidden behind another window. Graphics are persistent if they are drawn when the **AutoRedraw** property is set to **True**.

pixel

Short for 'picture element,' a dot that represents the smallest graphic unit of measurement on a screen. A pixel is screen-dependent; that is, the dimensions of screen elements vary with the display system and resolution.

point

In typography, a point is 1/72 of an inch. The size of a font is usually expressed in points.

poke

In dynamic data exchange (DDE), to send data from a destination application to a source application. A form's **LinkMode** property must be set to Source to allow a destination application to send data to controls on the form.

pop-up menu

A floating menu that is displayed over a form, independent of the menu bar. Right-clicking usually causes a pop-up menu to be displayed. The items on the menu depend on the pointer location when the menu is displayed. Also called a context menu.

position indicator

An indicator that shows the position of the selected form or control relative to its container. For forms, position is always shown in twips. For controls, position is shown in the units of measure specified in the **ScaleMode** property of the container.

procedure call

A statement in code that tells Visual Basic to execute a procedure.

procedure template

The beginning and ending statements that are automatically inserted in the Code window when you specify a **Sub**, **Function**, or **Property** procedure in the Insert Procedure dialog box.

project file

A file with a .VBP filename extension that keeps track of the files, objects, project options, environment options, EXE options, and references associated with a project.

Property list

A two-column list in the Properties window that shows all the properties and their current settings for the selected object.

Property procedure

A procedure that creates and manipulates properties for a class module. A **Property** procedure begins with a **Property Let**, **Property Get**, or **Property Set** statement and ends with an **End Property** statement.

read-only file

A file marked as read-only in its file attributes. Such a file can be viewed in an appropriate text editor, but cannot be modified. The version control program generally marks the file as read-only during check in and when you use the **Get** command.

recursion

The process that occurs when a procedure calls itself. Uncontrolled recursion usually results in an `Out of stack space` error message.

resource file

A file in a Visual Basic project with an .RES filename extension that can contain bitmaps, text strings, or other data. By putting this data in a separate file, you can change the information without having to re-edit your code. Only one resource file can be associated with a project.

separator bar

A bar that divides commands into logical groups on a menu.

size indicator

The indicator that shows the size of a selected form or control. For forms, size is always shown in twips. For controls, size is shown in the units of measure specified in the **ScaleMode** property of the container.

shadowing

The act of being accessed in preference to something else. For example, when two variables have the same name but different scopes, the more local variable always shadows the less local variable.

shortcut key

A function key or key combination (such as F5 or CTRL+A) that executes a command. You can set shortcut keys in the Menu Editor.

source

The application, form, or control that sends information and commands when two or more programs that support dynamic data exchange (DDE) are running simultaneously.

split bar

The thin bar that divides a window into two separate areas called panes.

stack

A fixed amount of memory used by Visual Basic to preserve local variables and arguments during procedure calls.

standard control

A control included in the Toolbox and contained within the Visual Basic .EXE file; for example, a **CommandButton** or **Frame** control. Standard controls are always included in the Toolbox, unlike ActiveX controls or insertable objects, which can be removed from or added to the Toolbox.

startup object

The first form displayed in your application, which is usually the first form you create in the development environment. You can change the startup form using the Startup Object option on the General tab of the Project Properties dialog box.

Static

A Visual Basic keyword you can use to preserve the value of a local variable.

submenu

A menu opened from another menu that displays its own list of commands.

syntax

The prescribed order and punctuation for putting programming language elements into statements that are meaningful to Visual Basic.

system modal

Describes a window or dialog box that requires the user to take some action. This term means the same as "modal" except that the focus can't switch to any other form or dialog box in any other running applications.

tab order

The order in which the focus moves from one field or object to the next as you press TAB or SHIFT+TAB.

twip

A screen-independent unit used to ensure that placement and proportion of screen elements in your screen application are the same on all display systems. A twip is a unit of screen measurement equal to 1/20 of a printer's point. There are approximately 1440 twips to a logical inch or 567 twips to a logical centimeter (the length of a screen item measuring one inch or one centimeter when printed).

two's complement

A type of base-2 notation used to represent positive and negative in which negative values are formed by complementing all bits and adding 1 to the result. Complementing is done by changing all 1s to 0, and all 0s to 1.

Unicode

A character-encoding scheme that uses 2 bytes for every character regardless of whether or not it is an ASCII character. This scheme is supported by the Microsoft Windows NT platform and used by 32-bit ActiveX technology.

user-interface negotiation

The process of placing the menus and toolbars of a Visual Basic application (or Automation controller) and those of an ActiveX component together on a container form.

verb

Specifies an action that can be performed on an object, such as Edit.

visual editing

The process of activating an object provided by an ActiveX component. By double-clicking the object on a container form, a user can interact with the application supplying the object without switching to a different application or window. Also called in-place activation.

Windows API

The Windows API (Application Programming Interface) consists of the functions, messages, data structures, data types, and statements you can use in creating applications that run under Microsoft Windows. The parts of the API you use most are code elements for calling API functions from Windows. These include procedure declarations (for the Windows functions), user-defined type definitions (for data structures passed to those functions), and constant declarations (for values passed to and returned from those functions).

Windows OpenFile function

The Windows OpenFile function searches for a matching file in the following directories in the following order:

1. The current directory.
1. The Windows directory, whose path the **GetWindowsDirectory** function retrieves.
2. The Windows system directory, whose path the **GetSystemDirectory** function retrieves.
3. The directory containing the executable file for the current task; the **GetModuleFileName** function obtains the path of this directory.
1. The directories listed in the PATH environment variable.
2. The list of directories mapped in a network.

working directory

A specified directory on your local computer used to store files when they are checked out of the version control program's database. You make changes to files in the working directory, then check the modified files back into the version control program for version tracking.

collection

A named group of related components. For example, a collection named Tax Preparation Objects might contain objects such as EndOfYear, RoyaltyCalc, and ExemptionCalc.

collection list

A list of named groups of related collections. For example, Tested Components might be a list of all components that have been tested.

component

Any software that supports Automation, which means it can be used programmatically in a custom solution. This includes ActiveX controls, Visual Basic-based Automation servers, and Visual C-based Automation servers.

component catalog

A sharable database of information that describes and manages components – generally ActiveX components. A component catalog does not contain the objects themselves, but contains references to where the objects reside on a computer or network.

tag

An association between a component and the property values of a catalog. For example, a component named TaxPreparation might have the Royalty Calculations search tag value for the Calculation property.

ODBC

Open Database Connectivity. A specification for an Applications Programming Interface (API) that defines a standard set of routines with which an application can access data in a data source. Applications can use ODBC by referencing API functions directly, or by using Data Access Objects (DAO) or Remote Data Objects (RDO).

HTML

Hypertext Markup Language. The language in which Web documents are written. This includes intranet and Internet pages.

data source name

DSN. Name of a registered data source.

data source

The data the user wants to access and its associated operating system, DBMS, and network platform (if any).

FTP

File Transfer Protocol. An Internet client-server protocol for transferring files between computers.

ODBC driver

A dynamic-link library (DLL) used to connect a specific Open Database Connectivity data source with another (client) application.

query definition

A formalized instruction to a database to either return a set of records or perform a specified action on a set of records as specified in the query. For example, the following SQL query statement returns records:

SELECT CompanyName FROM Publishers WHERE State = 'NY'

record source

The underlying source of data (a table, query, or SQL statement) for a form or report.

remote data

Data stored on a server.

SQL statement

A complete phrase in SQL that begins with a keyword and completely describes an action to be taken. For example, SELECT * FROM Orders. SQL statements should not be confused with statements.

table

The basic unit of data storage in a relational database. A table stores data in records (rows) and fields (columns) and is usually about a particular category of things, such as employees or parts.

class module

A module containing the definition of a class (its property and method definitions).

multiple document interface (MDI)

An application that can support multiple documents from one application instance. MDI object applications can simultaneously service a user and one or more embedding containers.

single document interface (SDI)

An application that can support only one document at a time. Multiple instances of an SDI application must be started to service both an embedded object and a user.

Recordset

A logical set of records. The three types of Recordset objects are dynaset, snapshot, and table.

ANSI character set

American National Standards Institute (ANSI) 8-bit character set used by Microsoft Windows that allows you to represent up to 256 characters using your keyboard. The first 128 characters correspond to the letters and symbols on a standard U.S. keyboard. The second 128 characters represent special characters, such as letters in international alphabets, accents, currency symbols, and fractions.

array

A set of sequentially indexed elements having the same intrinsic data type. Each element of an array has a unique identifying index number. Changes made to one element of an array do not affect the other elements.

Boolean expression

An expression that evaluates to either True or False.

bound control

A data-aware control that can provide access to a specific field or fields in a database through a **Data** control. A data-aware control is typically bound to a **Data** control through its **DataSource** and **DataField** properties. When a **Data** control moves from one record to the next, all bound controls connected to the **Data** control change to display data from fields in the current record. When users change data in a bound control and then move to a different record, the changes are automatically saved in the database.

collection

An object that contains a set of related objects. An object's position in the collection can change whenever a change occurs in the collection; therefore, the position of any specific object in the collection may vary.

container

An object that can contain other objects.

constant

A named item that retains a constant value throughout the execution of a program, as opposed to a variable, whose value can change during execution. Each host application can define its own set of constants. Additional constants may be defined by the user with the **Const** statement. Constants can be used anywhere in your code in place of actual values. A constant may be a string or numeric literal, another constant, or any combination that includes arithmetic or logical operators except **Is** and exponentiation. For example:

```
Const A = "MyString"
```

control array

A group of controls that share a common name, type, and event procedures. Each control in the array has a unique index number that can be used to determine which control recognizes an event.

current record

The record in a **Recordset** object that you can use to modify or examine data. Use the Move methods to reposition the current record in a recordset. Use the Find methods or the **Seek** method to change the current record position according to specific criteria.

Only one record in a **Recordset** can be the current record; however, a **Recordset** may have no current record. For example, after a dynaset-type **Recordset** record has been deleted, or when a **Recordset** has no records, the current record is undefined. In this case, operations that refer to the current record result in a trappable error.

ActiveX control

A file with an .OCX file name extension or an insertable object that, when added to a project using the Custom Controls dialog box, extends the Toolbox. The **ProgressBar** and **StatusBar** controls are examples of ActiveX controls.

data type

The characteristic of a variable that determines what kind of data it can hold. Data types include **Byte**, **Boolean**, **Integer**, **Long**, **Currency**, **Single**, **Double**, **Date**, **String**, **Object**, **Variant** (default) and user-defined types, as well as specific types of objects.

design time

The time during which you build an application in the development environment by adding controls, setting control or form properties, and so on. In contrast, during run time, you interact with the application like a user.

device context

A link between a Windows-based application, a device driver, and an output device such as a display, printer, or plotter.

executable file

A Windows-based application that can run outside the development environment. An executable file has an .EXE file name extension.

expression

A combination of keywords, operators, variables, and constants that yield a string, number, or object. An expression can be used to perform a calculation, manipulate characters, or test data.

focus

In the Microsoft Windows environment, only one window, form, or control can receive mouse clicks or keyboard input at any one time. The object that "has the focus" is usually indicated by a highlighted caption or title bar. The focus can be set by the user or by the application.

handle

A unique integer value defined by the operating environment and used by a program to identify and switch to an object, such as a form or control.

icon

A graphical representation of an object or concept; commonly used to represent minimized applications, shortcuts, or objects in a folder in Microsoft Windows. An icon is a bitmap with a maximum size of 32 x 32 pixels. Icons have an .ICO file name extension.

named argument

An argument that has a name that is predefined in the object library. Instead of providing values for arguments in the order expected by the syntax, you can use named arguments to assign values in any order. For example, suppose a method accepts three arguments:

DoSomeThing *namedarg1*, *namedarg2*, *namedarg3*

By assigning values to named arguments, you can use the following statement:

```
DoSomeThing namedarg3 := 4, namedarg2 := 5, namedarg1 := 20
```

Note that the arguments need not be in the positional order defined in the syntax statement.

numeric expression

Any expression that can be evaluated as a number. Elements of the expression can include any combination of keywords, variables, constants, and operators that result in a number.

object expression

An expression that specifies a particular object. This expression can include any of the object's containers. For example, your application can contain an **Application** object that contains a **Document** object that contains a **Text** object.

object library

A file with the .OLB extension that provides information to Automation controllers (like Visual Basic) about available Automation objects. You can use the Object Browser to examine the contents of an object library to get information about the objects provided.

registry

In Windows version 3.1, OLE registration information and file associations are stored in the registration database, and program settings are stored in Windows system initialization (.INI) files. In Windows 95, the Windows registry serves as a central configuration database for user, application, and computer-specific information, including the information previously contained in both the Windows 3.1 registration database and .INI files.

run time

The time when code is running. During run time, you interact with the code as a user would.

source

The application, form, or control that sends information and commands when two or more programs that support dynamic data exchange (DDE) are running simultaneously.

string expression

Any expression that evaluates to a sequence of contiguous characters. Elements of the expression can include a function that returns a string, a string literal, a string constant, a string variable, a string **Variant**, or a function that returns a string **Variant** (**VarType** 8).

title bar

An area at the top of a window that displays the window's caption or name.

ToolTip

The word or short phrase that describes the function of a toolbar button or other tool. The ToolTip appears when you pause the mouse pointer over an object.

z-order

The relative order that determines how controls overlap each other on a form.