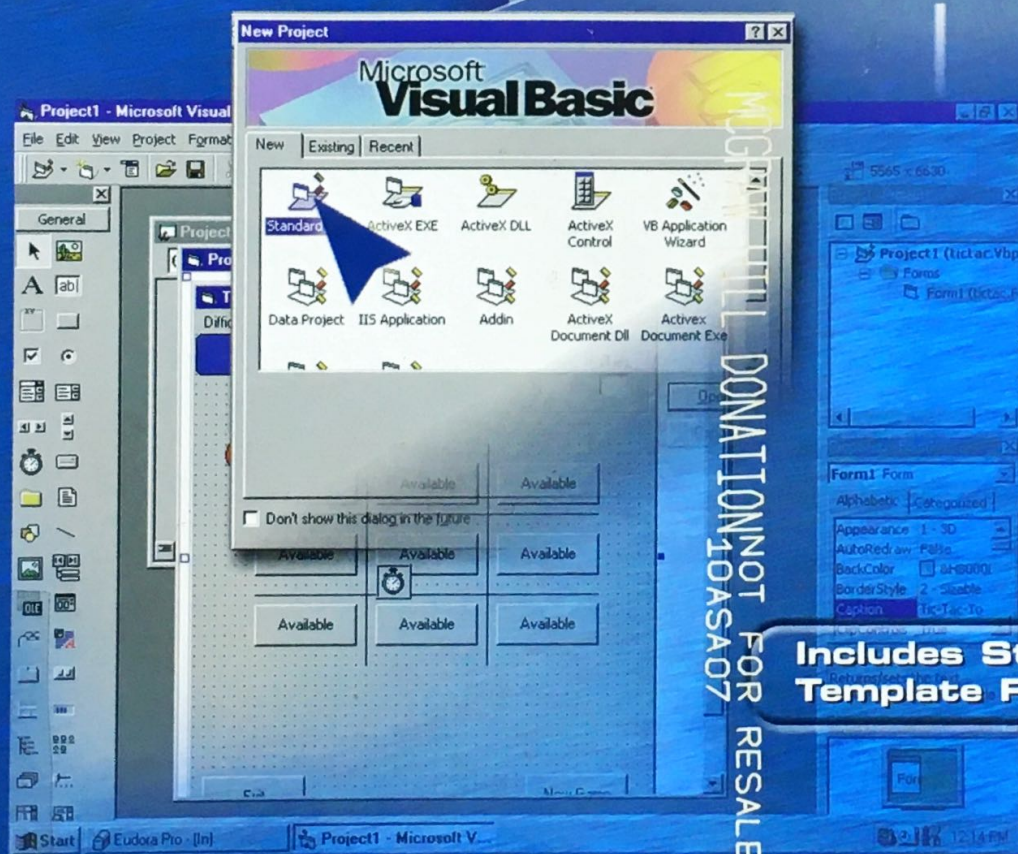


Visual Basic 6.0

brief course



**Includes Student
Template Files**

Emmett A. Dulaney

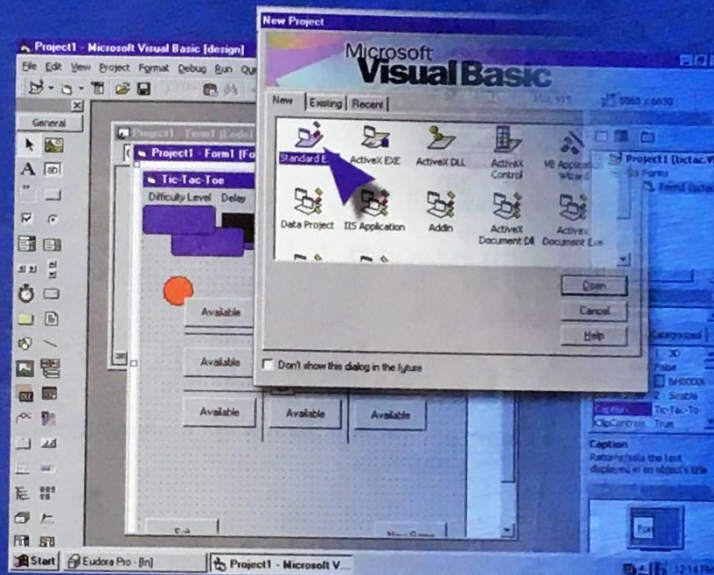


GIFT OF THE ASIA FOUNDATION
NOT FOR RE-SALE

QUÀ TẶNG CỦA QUỸ CHÂU Á
KHÔNG ĐƯỢC BÁN LẠI

Visual Basic 6.0

brief course



Emmett A. Dulaney



Glencoe
McGraw-Hill

New York, New York Columbus, Ohio Woodland Hills, California Peoria, Illinois

CONTENTS



Preface v

Introduction xiv

What Is Basic? xiv

What Is Visual Basic? xv

What Is Visual Basic 6? xvi

Chapter 1

Working with Forms 2

Getting Started 4

Referencing Me 6

Form Properties 7

Working with Methods 11

Lab 12

Summary and Exercises 14

Chapter 2

All About Controls 16

Understanding Controls 18

Common Properties 26

Coding Controls 30

Labs 36

Summary and Exercises 41

Chapter 3

Adding Menus 44

Creating Menus on a Form 46

Creating Popup Menus 51

Coding Menu Choices 53

Adding Dividers 53

Dynamically Modifying Menus 55

Something New the Ampersand 56

Lab 57

Summary and Exercises 61

Case Study One 65

Chapter 4

Working with Variables 70

What are Variables? 72

Declaring Variables 72

Converting Between Data Types 76

String Manipulation 77

Number Manipulation 83

Lab 84

Summary and Exercises 87

Chapter 5

Input and Feedback 90

What are Message Boxes? 92

Printing Variable Values 98

Printing the Form 99

Lab 99

Summary and Exercises 103

Chapter 6

Loops and Logic 108

What is Logic? 110

Do Loops 118

For Next 121

Select Case 125

GoTo and GoSub 127

Labs 128

Summary and Exercises 134

Chapter 7

Arrays, Dates, and Randomization 138

What is an Array? 140

List Boxes Revisited 150

Working with Dates 157

Randomization 159

Labs 160

Summary and Exercises 164

Case Study Two 168

Chapter 8

Working with Procedures 176

What is a Procedure? 178

Exiting Out 182

Calling Procedures and Functions 183

Working with Forms 184

Lab 187

Summary and Exercises 188

Chapter 9

MDI Forms, Modules, and Miscellany 192

Working with MDI Forms 194

What is a Module? 201

Miscellany 204

Lab 206

Summary and Exercises 207

Chapter 10

Accessing Data 212

Files and File Types 214

Reading Existing ASCII Files 214

Creating New ASCII Files 217

Appending to a Text File 219

Related Data 221

Combining Multiple Files 223

Summary and Exercises 226

Chapter 11

Advanced Data Access 230

Reading and Writing to Files Simultaneously 232

Random Access Mode 232

Modifying Records 235

Binary Records 244

Lab 244

Summary and Exercises 245

Case Study Three 250

Appendix A

ASCII Character Table 270

Appendix B

Key terms by Chapter 272

Index 274

Introduction

This is a book on a programming language known as Visual Basic 6.0—one of the most popular languages for many of the most popular operating systems. To understand what we are going to discuss in the remainder of this book, we must dissect the product name and see what it is actually saying.

WHAT IS BASIC?

Programming languages have been around for since computers—they are the methods by which the computers are told how to handle situations. For example, if a user gives you “5” and “7” then the language will tell the computer to multiply, divide, factor, or do some other operation with the numbers.

Basic was a programming language that began to flourish with the popularity of the personal computer. As its name implied, it was *very* basic and fairly easy to understand. Much of its simplicity came from the fact that it was an “interpreted” language—meaning that it needed something else to convert the lines the programmer wrote into commands the computer understood: that something else being the interpreter.

Some of the first versions of MS-DOS included GWBASIC to let users learn how to do more with their machines. Later versions of MS-DOS replaced this with QBASIC, which was much more powerful.

Most of the Basic routines begin with a line number used to identify the line and order the operations. For example:

```
10 input a
20 input b
30 print "That equals ", a*b
```

In this case, if the user enters 5 and then 7, the result is:

That equals 35

Gaps were always left in the numbering in case you needed to go back and add additional items later. For example:

```
10 input a
15 If a < 1 Then GoTo 10
20 input b
25 If b < 1 Then GoTo 20
30 print "That equals ", a*b
```

The above checks to make certain you have valid numbers to multiply before moving on. It might also be nice to give the user some sort of a prompt to let them know they are supposed to enter numbers:

```
9 print "Enter the first number:"
10 input a
15 If a < 1 Then GoTo 9
19 print "Enter the second number:"
20 input b
25 If b < 1 Then GoTo 19
30 print "That equals ", a*b
```

The language was very command-line driven and dependent, and became somewhat outdated when MS-DOS was replaced in the popular marketplace by a graphical operating system called Windows.

WHAT IS VISUAL BASIC?

As we move through history, Microsoft Windows replaced Microsoft DOS in the marketplace as the operating system of choice. DOS is/was a command-line driven operating system, while Windows is/was far more graphical—visual—in nature.

Visual Basic is a graphical implementation of the language that expands it into the Windows world. Released in 1991, it became an “event-driven” operating system where responses are built around events. Now, instead of prompting at the command line for a number, the user enters it into a text box and then presses a command button and your program performs the computation. All of this is done (mostly unseen) by communicating with the Windows Applications Program Interface (API). Rather than having to write to the API directly, Visual Basic provides the interpretation for you—thus still keeping the language very simple.

At first, the Visual Basic product numbers climbed very rapidly as this language adapted and grew to the Windows world. It stopped for a while at Visual Basic 3.0 and there was a longer time span than normal before Visual Basic 4.0 came out. The reason for this was that the change from VB3 to VB4 was not evolutionary, but rather revolutionary. VB4 was, indeed, a work of programming art.

There was another long lag between VB4 and VB5. Once again, the language did a revolutionary, rather than evolutionary change. Visual Basic 5