

VBA Programming: A Comprehensive Hands-On Introduction - 4 Days

Course 209 Overview

You Will Learn How To

- Develop customized solutions using Visual Basic for Applications (VBA)
- Apply the object models to program effectively in the Microsoft Office System
- Take full advantage of extensive built-in VBA functionality
- Exploit ActiveX controls to create functional and familiar user interfaces
- Troubleshoot code using VBA's debugging tools
- Secure your code and protect your users from macro viruses

Course Benefits

Effective business solutions do not come straight out of the box. With VBA, you can write code to enhance the off-the-shelf capabilities of Office and other products that support VBA. Using VBA, you can develop custom-built solutions. In this course, you learn the fundamentals of programming and VBA from the ground up. You gain the skills you need to automate repetitive tasks, build user interfaces and increase performance.

Who Should Attend

This course is valuable for anyone who wants to automate tasks through VBA programming. Some experience using the products in the Microsoft Office System is assumed. No previous programming experience is required.

Hands-On Training

Extensive hands-on exercises provide you with practical experience automating Office applications, such as Word, Excel and Outlook, with VBA programming. Exercises include:

- Building user interfaces with standard and custom controls
- Adding powerful subtotaling to an Excel workbook
- Creating form letters and Outlook mail with customized userforms
- Protecting users with digital signatures
- Retrieving Access and SQL Server data for use in Word and Excel
- Integrating the powerful features of Word and Excel

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Course 209 Outline

Introduction

The advantages of VBA

- An easy-to-use and versatile language
- Integrated with off-the-shelf products
- Minimizes development time and costs

Macros: the first step

- Recording and executing macros
- Limitations
- Enhancing with VBA code

Getting to Know the VBA Development Environment

The code design tools

- Project Explorer
- Help system
- Code Window
- IntelliSense
- Properties Window
- Object Browser
- Block commenting and uncommenting

The debugging tools

- Code stepping
- Immediate Window
- Breakpoints

Writing VBA Code

Event-driven programming

- The role of events in Windows
- How events are triggered
- Responding to events through event procedures

Putting objects to work

- Properties
- Methods
- Events
- Collections
- Using With...End With

Storing data in variables

- How and when to declare variables
- Selecting data types
- Fixed and dynamic arrays
- Constants
- The scope and lifetime of variables

Conditional branching

- If...Then...Else
- Select...Case

Looping through code

- Do...Loop, While and Until
- For...Next and For Each...Next

Building procedures

- Creating Sub and Function procedures
- Calling procedures
- Passing arguments to procedures

Empowering VBA through the Application Object Models

Understanding object model structures

- Exploring the hierarchy using the Object Browser and Help system
- Referencing specific objects

Writing application-specific procedures

- Key objects within Excel, Word and Outlook
- Creating templates and add-ins

Exploiting the power of Automation

- Controlling one Office application while working in another application
- Accessing data in databases using ActiveX Data Objects

Building Intuitive User Interfaces

Using intrinsic dialogs

- Communicating with the user through the message box
- Gathering user information with the input box
- Utilizing the FileDialog object and Dialogs collections

Creating customized dialogs with UserForm objects

- Command buttons
- List and Combo boxes
- Option buttons
- Check boxes
- Labels
- Text boxes
- Frames
- Adding more functionality with advanced ActiveX controls

Modifying menus and toolbars

- Simplifying user interaction with the CommandBar object
- Adding and removing CommandBarControl objects

Providing a Safe and Secure Environment

Handling runtime errors

- The On Error GoTo structure
- Classifying errors with the Err object
- Continuing execution with Resume, Resume Next or Resume label

Implementing security

- The dangers of macro viruses
- Macro security levels in Office
- Applying digital signatures to macros
- Password protecting your VBA code