Access 2013/2016 Programming with VBA

Overview

Students learn the Visual Basic for Applications language as well as the Access classes and objects needed to create VBA scripts to automate Access. Participants create procedures and functions using the VBA language and Access objects.

Target Audience

Appropriate introductory and advanced courses plus several weeks of practice. No programming experience is required.

Course Objectives

Students learn the Visual Basic for Applications language as well as the Access classes and objects needed to create VBA scripts to automate Access. Participants create procedures and functions using the VBA language and Access objects. As well, debugging and error handling techniques are reviewed.

Course Outline

Getting Started

Introduction to Programming in Access
Why Program in Access?
Understanding the Development Environment
Using Visual Basic Help

Working with Procedures and Functions

Understanding Modules
Creating a Standard Module
Understanding Procedures
Creating a Sub Procedure
Calling Procedures
Using the Immediate Window to Call Procedures
Creating a Function Procedure
Naming Procedures
Organizing Code and Procedures
Working with the Code Editor
Understanding Objects

Understanding Classes and Objects
Navigating the Access Object Hierarchy
Understanding Collections
Using the Object Browser
Working with the Application Object
Understanding the Form Object
Working with Properties
Using the With Statement
Working with Methods
Understanding the DoCmd Object
Working with Events
Understanding the Order of Events

Using Expressions, Variables, and Intrinsic Functions

Understanding Expressions and Statements
Declaring Variables
Understanding Data Types
Working with Variable Scope
Working with Variable Lifetime
Considering Variable Scope and Lifetime Together
Using Intrinsic Functions
Understanding Constants
Using Intrinsic Constants
Using Message Boxes
Using Input Boxes

Controlling Program Execution

Understanding Control-of-Flow Structures
Working with Boolean Expressions
Using the If...End If Decision Structures
Using the Select Case...End Select Structure
Using the For...Next Structure
Using the For Each...Next Structure
Using the Do...Loop Structure
Guidelines for use of Branching Structures

Working with Recordsets

Declaring and Creating Object Variables
Working with the DAO Recordset Object
Debugging Code

- Understanding Errors
- Using Debugging Tools
- Setting Breakpoints
- Setting Break Expressions
- Using Break Mode during Run Mode
- Stepping through Code
- Determining the Value of Expressions

Handling Errors

- Understanding Error Handling
- Understanding VBA's Error Trapping Options
- Trapping Errors with the On Error Statement
- Understanding the Err Object
- Writing an Error-Handling Routine
- Working with Inline Error Handling