

MICROSOFT ACCESS PROGRAMMING

Course 2657

4 Days

Description

This course teaches programming concepts and how to add simple functionality to a Microsoft Access 2002 database by using Microsoft Visual Basic® for Applications.

Prerequisites

- Ability to design a relational database
- Ability to use Microsoft Access to create a database with multiple tables, forms, and reports, and to create queries

Course Outline:

Module 1: Introduction to Programming

- Using Visual Basic Help
- Writing Procedures
- Working with Variables
- Controlling Program Flow
- Calling Procedures

After completing this module, students will be able to:

- Use Visual Basic Help.
- Use the Visual Basic Editor to add code to applications.
- Declare and use variables.
- Use built-in functions to obtain values from users.
- Create and call Sub procedures.
- Use conditional statements to control the flow of programs.

Lab 1.1: Introduction to Programming

Module 2: Responding to User Actions

- Overview of the Class Application
- Adding Event Procedures

- Working with Events
- Using Objects, Properties, and Methods
- Using the DoCmd Object

After completing this module, students will be able to:

- Create an event procedure.
- Add an event procedure to a form.
- Respond to user actions programmatically.
- Perform specific tasks by using the DoCmd object.

Lab 2.1: Responding to User Actions

Module 3: Validating Data

- Overview of Data Validation
- Validating Data Without Using Code
- Validating Data by Using Code

After completing this module, students will be able to:

- Differentiate between data validation at the table level, form level, and code level.
- Use the built-in validation tools in Microsoft Access.

Lab 3.1: Validating Data

Module 4: Using Functions and Understanding Scope

- Using Functions
- Understanding Scope

After completing this module, students will be able to:

- Describe the appropriate use of functions.
- Call built-in and custom functions in an application.
- Create a custom function.
- Describe the different levels of scope available to variables and procedures.
- Define variables at the appropriate level of scope.
- Define procedures at the appropriate level of scope.

Lab 4.1: Using Functions and Understanding Scope

Module 5: Using Debugging Tools

- Stepping Through Code
- Viewing Variables

After completing this module, students will be able to:

- Set breakpoints to stop program execution.
- Run selected portions of code.
- Test data and procedures in the Immediate window.
- Monitor variable values in the Locals window.
- Add and edit watch expressions.

Lab 5.1: Using Debugging Tools

Module 6: Handling Run-Time Errors

- Types of Errors
- Adding Error Handlers

After completing this module, students will be able to:

- Trap run-time errors.
- Create error handlers.
- Use the Err object.

Lab 6.1: Handling Run-Time Errors

Module 7: Looping Through Code

- Overview of Looping Structures
- For Loops
- Do Loops

After completing this module, students will be able to:

- List the different looping structures available in Visual Basic for Applications.
- Write a For...Next loop to perform execution of code statements a fixed number of times.
- Write a Do...While and a Do...Until loop to perform execution of code statements a variable number of times.
- Describe the difference between beginning-of-loop and end-of-loop evaluation methods, and write code statements to accomplish each type of evaluation.

Module 8: Working with Records

- Overview of Recordsets
- Retrieving Data
- Structured Query Language (SQL)
- Manipulating Data

After completing this module, students will be able to:

- Define recordsets.
- Access data in tables by using ADO recordsets.
- Retrieve data by using SQL and ADO recordsets.
- Manipulate data by using SQL and ADO recordsets.

Lab 8.1: Working with Records

Module 9: Working with XML

- About XML
- Importing XML
- Exporting XML
- Transforming XML
- Modifying XML using the DOM

After completing this module, students will be able to:

- Describe XML and related technologies.
- Import XML into Access.
- Export XML from Access.
- Transform XML by using the Extensible Stylesheet Language for Transformations (XSLT).
- Modify XML by using the DOM.

Module 10: Finalizing Your Application

- Reviewing Your Application
- Enhancing the User Interface
- Packaging for Delivery

After completing this module, students will be able to:

- List four good coding practices and describe why you should use them.
- Describe the testing criteria for an application.
- Customize a switchboard.
- Hide code by creating an MDE file.
- Describe how to use the Compact and Repair utility to maintain your database application.
- Describe why and how to use the Database Splitter utility.
- Describe when and how to use the Packaging Wizard to prepare an application for distribution.

Lab 10.1: Finalizing Your Application