

### *Training Course Specification*

**Course:** Introduction to Programming and Development in Access

**Duration:** Three Days (this course can be tailored for a shorter duration)

**COURSE OBJECTIVES:** To give delegates a firm grounding in the principles and procedures of Access database programming.

**WHO SHOULD ATTEND:** Potential database programmers and database support analysts committed to databases built on Microsoft Access architecture.

**EXPERIENCE NEEDED:** This course assumes a reasonable level of database programming and/or VB or SQL programming principles and database design principles.

#### **COURSE CONTENTS:**

##### **Events**

- Events and Event Properties
- Running an event procedure for an event on a form, report or control
- Finding out when events occur
- Order of events for controls on forms
- Order of events for records on forms
- Order of events for forms and subforms
- Order of events for keystrokes and mouse clicks
- Order of events for reports and report sections
- Events used for data validation
- Order of validation for controls and fields
- Setting the value of a control or property in response to an event

## Reports

- Creating mailing and other types of labels
- Sorting records in a report
- Grouping records in a report
- Changing sorting and grouping order in a report
- Inserting an additional sorting or grouping field or expression in a report
- Deleting a sorting or grouping field or expression in a report
- Keeping the data in a group together on a page or in a column in a report
- Starting each group in a report in a new row or column
- Resetting page numbers for each group in a report
- Repeating a group header on another page or column
- Hiding duplicate data in a report
- Calculating a total for one record in a report
- Calculating a total or average for a group of or all records in a report
- Calculating a running sum in a report
- Calculating percentages in a report
- Computing a total for a calculated control on a report
- Numbering each detail record in a report
- Counting the number of records in a report as a whole
- Counting the number of records in each group in a report
- Combining text values from multiple fields on a report
- Combining text values from fields when some fields contain no data
- Printing the first few characters of a value as a group header in a report

## Reports – Part II

- Subreports
  - Creating a subreport in an existing report
  - Adding an existing report to another existing report to create a subreport
  - How a main report and subreport are linked
  - Linking a main report and a subreport
- Creating a multiple-column report
- Creating a crosstab report with fixed-column headings

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## Controls

- Tab Control
- Creating a form with multiple pages or tabs
- Properties you can use to customize a tab control
- Toggle button
- PivotTable Form
- Editing a PivotTable Form
- Updating the data in a PivotTable Form

## Macros

- Macros
- Creating Macros
- Opening a Macro
- Adding an action to a Macro
- Opening the Macro or Module windows from a form or report
- Creating a Macro
- Creating a Macro Group
- Setting action arguments in a macro
- Entering an expression in a macro action argument
- Using conditions in a macro
- Running a macro
- Running a macro from another macro or from a Visual Basic procedure

## Data Access Pages

- Creating a data access page by using AutoPage
- Creating a data access page by using a Wizard
- Making an existing Web page into a data access page
- Form vs report vs report snapshot vs data access page
- Strategies for creating data access pages
- Grouping records on a data access page
- Connecting a data access page or other Web page to a database
- Types of data sources for a data access page
- Types of data sources for Microsoft Office Web components on a data access page
- Opening a page in Design view or Page view
- Switching between views of a data access page
- Adding data to a data access page by using the field list
- Refreshing a data access page's field list to display new tables or queries
- Defining a new relationship between record sources in a data access page

- Selecting a data access page, section, control or other element
- Setting document properties such as title, subject, and author for a data access page
- Setting properties for a data access page, section or control
- Calculating a total or other value for one record on a data access page used for data entry
- Calculating a total or other value for one record on a grouped data access page
- Calculating a total, average or other aggregate for a group of records in a data access page
- Calculating a grand total or other aggregate for all records on a data access page
- Themes
- Choosing a default theme for new data access pages

### **Importing and Linking Data in MS Access**

- Exporting data and database objects to another database or file format
- Importing and linking data and importing database objects
- Reasons to import data into a table
- Reasons to link data from an external table
- ODBC data sources
- Differences between ODBC drivers and built-in drivers for external data
- Import/export specifications and Schema.ini files
- Exporting database objects to an existing MS Access database or MS Access Project
- Exporting a datasheet to a delimited or fixed-width text file
- Exporting a datasheet to a spreadsheet file
- Exporting a table or query to a Microsoft Word mail merge data source file
- Exporting a table or query to a Paradox or dBASE file
- Exporting a table or query to an SQL database table or other ODBC data source
- Loading the output of a datasheet, form or report into MS Excel
- Loading the output of a datasheet, form or report into MS Word
- Saving an object's output as a MS Excel or Rich Text Format file
- Merging data from a table or query by using the Microsoft Word Mail Merge Wizard
- Exporting a report to static HTML format
- Importing database objects from another MS Access database or MS Access Project
- Importing or linking tables from another MS Access database or MS Access Project
- Importing a Microsoft Works database
- Importing or linking a delimited or fixed-width text file

- Importing or linking data from a spreadsheet
- Importing or linking data from Microsoft Outlook or Microsoft Exchange
- Importing or linking dBase files
- Setting up ODBC data sources

### **Sharing an MS Access database on a Network**

- Sharing an Access database on a network
- Editing data in an Access database in a multiuser environment
- Saving design changes to a shared MS Access database
- Choosing a record-locking strategy in an Access database in a multiuser environment
- Optimizing multiuser performance in an Access database
- Sharing an Access database on a network server
- Sharing an Access database when a network server doesn't exist
- Splitting an existing Access database between its data and its objects
- Specifying whether an Access database opens in shared or exclusive mode by default
- Specifying whether an Access database opens in shared or exclusive Editing Access database objects in a multiuser environment
- Specifying the default record-locking strategy used in a multiuser environment in an Access database
- Specifying the locking level used in an Access database in a multiuser environment
- Avoiding data-locking conflicts in an Access database in a multiuser environment
- Specifying multiuser/ODBC update retry and refresh interval settings in an Access database
- Displaying the most current data in an Access database in Datasheet or Form view
- Changing how often data is updated automatically in an Access database in Datasheet or Form view

### **Data Access Objects (DAO)**

- DAO – Data Access Objects
- Capabilities with ODBCDirect
- Data Access Objects Overview
- Using the Microsoft Jet Workspace
- Using the ODBCDirect Object Model
- Data Access Objects and Collections

## ActiveX Data Objects

- ADO Programming Model
- Connection
- Command
- Parameter
- RecordSet
- Field
- Error
- Property
- Collection
- Events
- ADO Programming Model with Objects
- ADO Object Model Summary
- Solutions for Remote Data Access
- Basic RDS Programming Model
- RDS Programming Model
- RDS Programming Model with Objects
- RDS Object Model Summary
- ADO Features

## Working on the Web with MS Access

- Accessing the Internet from MS Access
- Web Pages created by MS Access
- How Web server processes server-generated HTML format
- Web Folders
- Creating a Web Folder
- Where to save on the Web
- Publishing a data access page to Web Folders or any Web server
- Sharing the database connected to a data access page
- Publishing server-generated HTML files to a Web server
- Publishing static HTML files to Web Folders or any Web server
- Saving a copy of a data access page to a Web server in Windows Explorer
- Saving a copy of a data access page to a Web server in Access
- Opening a data access page on a Web server in Access

## Replication

Replication in a Microsoft Access Project

Partial Replicas

Advantages of using Partial Replicas

Creating a Partial Replica with ActiveX Data Objects (ADO)

Creating a Partial Replica with Data Access Objects (DAO)

Partial Replicas and Referential Integrity

## Record Snapshots

Report Snapshots

Snapshot Viewer

Benefits of report snapshots and Snapshot Viewer

Using Report Snapshots

Using Report Snapshots on the WWW

Sending report snapshots in e-mail

Creating a report snapshot

Creating a report snapshot by using the OutputTo action and publish it to the Web

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