MS Access – Part 1

(One Day Workshop)

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MS Access - Contents

- Overview of MS Access
- Basics of Access
- Working with Wizards

What is MS Access

- Database Management & Application development System
- Small Scale DBMS System
- Works great for small-scale single user applications (gets complex for multi-user)
- Easy to build applications
- Provides various Wizards and built-in commands for quick application development
- Uses VBA for application development
- Access Database can be accessed from any other application using Access DB drivers

Other MS DBMS

- MSDE – MS SQL Server Desktop Engine
- SQL Server – enterprise RDBMS

Access Objects

- Tables
  - Data Containers
- Queries
  - Window to view, change and analyze data
- Forms
  - User interface windows that can data display, data input etc
- Reports
  - Data Reports for Print etc
- Macros
  - Set of one more actions
- Pages
  - Webpage published from access
- Modules
  - VBA code collected under a module; declarations, statements and procedures

Queries

- Allow to View, change and analyze data
- Types of Queries
  - Select Queries
    - Retrieves data from one or more tables
  - Parameter queries
    - Query with parameters that prompts at run time
  - Crosstab queries
    - Used for calculations and restructuring for easy analysis (sum, avg etc)
  - Action queries
    - Used to perform database operations on bulk data (delete, update, make-table, append)
  - Sql queries
    - Developed using SQL statement

New Access DB

- Access provides Template to create new database
- Wizards allows customization
- Saves lot of time if your application has any similarities any template
- Available templates
  - Event management
  - Inventory Management
  - Order Management
  - Time and Billing
  - Asset Tracking
  - Contact Management

Wizards

- Database Design (from template)
- Table Design
- Query Design
- Report Design
- Form Design
- Page Design etc

Study of Northwind - Sample Database

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Creating a Switchboard

- Switchboard / startup window
- Provides the access to all application functions or any set of objects
- For eg: Contact Management Application
  - Add Contact
  - Delete Contact
  - Update Contact
  - Search Contact
  - Reports
  - Exit Application etc

Application Object

- High level object that hold all other objects and starts the application
- Access from Tools->Startup

Forms

- Forms can be used to view data, capture data or any thing else
- Forms are built using GUI controls like Command button, labels, pictures, data tables etc
- Each control responds to events
- Events can be attached with
  - Expression, Macro or Script
- Custom script or the built-in function can be attached to event

Expressions & Macros

- Expression are built using Expression Builder
- Single line expression and Return some value
- Macro is set of one more built-in actions with name
- Repeating actions can be collected into Macros and reused

Macro Vs VBA Script

- Macros are simpler with limited programming support; VBA Script is complete programming language with error handling all other constructs
- VBA Code is faster than Macro with large number of actions
- Limited actions are available to build Macros where VBA Script can be developed to virtually anything
- VBA Script provides ability to communicate with external applications; There are no actions for Macros
- VBA supports XML
- VBA can access any external Components

Common controls & Common Events

- Image

VBA Script

- Me
  - Reserved word that refers to the parent object that the script is in
  - Very useful
  - Eg:

    Me.Visible = False

    // better code that using the object name
- Refering to the control

  Eg: Me!Name = “Joe”

VBA Script …cont

- Refering to subform or reports

  Eg: Me!subform.Form!controlName

  Me – parent object

  Subform – subform name

  Form – is keword and must since its FORM within Form

- Refering to the parent object
  - Me.Parent.ddd
- DoCmd
  - Execute specific action
  - Eg: DoCmd.Close (closed the form where is coded)