Access 101

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Today’s Topics

- Access or Excel?
- Access Stats
- Database Terminology
- A “Good” Database
- Database Design
- Getting Started
  - Northwind Trader Sample Database
  - Database Templates
Today’s Topics (cont.)

- Access Components – Tables, Relationships, Queries, Forms, Reports
- Final Thoughts
- References
Access or Excel?
Access or Excel?

- Excel
  - You need to create a one-time, formatted report
  - The relationships/fields won’t change
    - Once you put the report together, the structure of the data won’t change
  - The report format won’t change
Access or Excel?

- **Access**
  - You need to store complex, dynamic data and report on it
    - Data and its interrelationships will change over time
  - You need to create custom reports on the fly
  - You need to store your data for a period of time
Access Stats

- Desktop & Small Workgroup Database
- How many people need to use the database *at the same time*?
- How much data does the database need to hold?
- Performance
Database Terminology

- Database
- Tables
  - Columns
  - Rows
- Relationships
- Normalization
- Primary Key
A “Good” Database

- A database is only as good as:
  - Its design
  - The quality of the data in it
  - How well it’s maintained
Database Design

- Determine the “mission” of the database
- Determine the Requirements
  - Interviews
  - Business Forms & Documents
  - Existing Systems
- Data Modeling
  - Identifying tables, fields, and relationships
Getting Started – Northwind Traders Database

- Sample order tracking database that ships with Access
- Where is it?
  - Program Files/Microsoft Office/Office 10/Samples/Northwind.mdb
Getting Started – Templates

- **Built-In Database Templates**
  - File → New → General Templates → Database tab

- **Download new templates from Microsoft**
  - File → New → Templates on Microsoft.com
Tables

- Where the data is stored
- Views – Design & Datasheet
- Caution – Live Data!

<table>
<thead>
<tr>
<th>Category ID</th>
<th>Category Name</th>
<th>Description</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Beverages</td>
<td>Soft drinks, coffees, teas, beers, and ales</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Condiments</td>
<td>Sweet and savory sauces, relishes, spreads, and seasonings</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Confections</td>
<td>Desserts, candies, and sweet breads</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>-</td>
<td>Dairy Products</td>
<td>Cheeses</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Grains/Cereals</td>
<td>Breads, crackers, pasta, and cereal</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Meat/Poultry</td>
<td>Prepared meats</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Produce</td>
<td>Dried fruit and bean curd</td>
<td>Bitmap Image</td>
</tr>
<tr>
<td>+</td>
<td>Seafood</td>
<td>Seaweed and fish</td>
<td>Bitmap Image</td>
</tr>
</tbody>
</table>

(AutoNumber)
Relationships

- Relationships View
- Types
  - One to One
  - One to Many
  - Many to Many
Queries

- Allow you to use and interact with the data without affecting the way the data is stored.
- Query By Example (QBE) grid.
Forms

- How you get your data into the tables
  - User-friendly way of working with data
Reports

- How you present information to the audience
  - Report Designer
  - Export to Word or Excel
    - Tools → Office Links
Other Access Components

- Data Access Pages
  - Creates data-enabled web pages (DHTML)
- Macros
  - Kept for backward compatibility
- Modules
  - VBA 6.0 Editor
Final Thoughts

- Plan
- Plan
- Plan
- Build
- Document
- Maintain
References

Books

- Petersen, John W., Absolute Beginner’s Guide to Databases, Que Publishing, 2002***
References

- CBTs – CSC Learning Place
  - Access CBTs
    - Introduction to Access 2002
    - Intermediate Access 2002
    - Advanced Database Design in Access 2002
    - Advanced Database Features in Access 2002
  - Database Design CBTs
    - Search for “Database Design”
References

- Internet Resources
  - Utter Access Discussion Forums
    http://www.utteraccess.com/
  - Official Microsoft Access Website
  - Microsoft Support Newsgroups
    http://msdn.microsoft.com/office/community/newsgroups/
  - Office Watch
    http://office-watch.com/access/