University Information
Technology Services

Microsoft Access 2010

Level 2

University Information Technology Services

Training, Outreach, Learning Technologies and Video Production

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Introduction

Microsoft Access allows people to effectively and efficiently organize data. This document, Level 2, has been developed to show you how to use multiple tables in Access. The various sections presented in this document will help you build a solid knowledge foundation of the software.

When you have mastered the objectives in this document, you can expand upon your knowledge of Microsoft Access by checking out the Level 3 documentation.

Objectives

The following objectives are covered in this document:

- Understanding the concept of relationships as they relate to tables.
- Knowing how to define data types for relationships.
- Having the ability to create a relationship.
- Understanding relationships and forms.
- Knowing how to create a form for a two table relationship.
- Knowing how to create a tab form for a multi-table relationship.

Relationships and Tables

The power of Access is the software's ability to create and maintain multiple tables. Access allows multiple tables to work together thereby giving you strong database management capabilities.

Level 1 Booklet/Workshop

In the Level 1 booklet/workshop, a foundation was created by presenting the use of one table in Access. In Level 1, the following table was created for an airline:

Airline Reservation System
Transaction Number
Transaction Date
First Name
Last Name
Departure City
Destination City
Meal
Ticket Cost
Departure Date
Departure Time

Figure 1 – Table for an Airline Reservation System

Using Multiple Tables in the Access Database

Users of Access begin to utilize the full strength of the system when they use multiple tables to manage data. For example, the following are two tables that could be used by a retail store that sells products to customers.

Customer Information
Customer Number
First Name
Last Name
Address
City
State
Zip Code
Phone Number
Email

Purchases
Purchase ID
Customer Number
Product Name
Quantity
Unit Price

Figure 2 – Two Tables for a Retail Store Database

It would be ineffective to attempt to include all of the fields presented in *Figure 2* in one table. It is much more efficient to create two tables and categorize the various fields within these tables.

An effective database used in the "real world" by a business, educational facility, governmental agency, etc. would ultimately have many tables.

Relationships Explained

When developing a database with multiple tables, it is important to understand relationships. Relationships allow the different tables to communicate with each other. When creating different tables, there must be one field that is common to the different tables. *Figure 3* shows that the *Customer Number* field is common to both tables.

Customer Information
Customer Number
First Name
Last Name
Address
City
State
Zip Code
Phone Number
Email

Purchases
Purchase ID
Customer Number
Product Name
Quantity
Unit Price

Figure 3 – Two Tables for a Retail Store Database

Relationships and Data Types

When developing multiple tables, the *Data Type* for the common field will be defined differently in the various tables. For example, *Figure 4* shows that the *Data Type* for *Customer Number* is defined as *AutoNumber* in the *Customer Information* table because this table is where the number is created. Notice that this number is also the *Primary Key*.

Customer Information

Field Name	Data Type
Customer Number	AutoNumber
First Name	Text
Last Name	Text
Address	Text
City	Text
State	Text
Zip Code	Text
Phone Number	Text
Email	Text

Figure 4 – *Customer Number* Defined as an *AutoNumber*