

Introduction to Computer Applications

**CISY 1225
Chapter 11**

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Last updated: June 2014

Good Morning

Projects and exercises

- All are due on June 16, 2014
 - Before computer final exam
- Excel (6 Projects)
- Access (4 Projects)

This week

- Today's class
 - Chapter 11 and 12 (Selected topics)
 - Only Exercises
 - Will not come in written exam
- Wednesday
 - Chapters 2 and 4
 - Review of Final exam

Next week

- Monday
 - Computer Exam
 - Chapters 5 to 12 inclusive
- Wednesday
 - Written Exam
 - Chapters 1, 2, 4, 5, 6, 9, 10

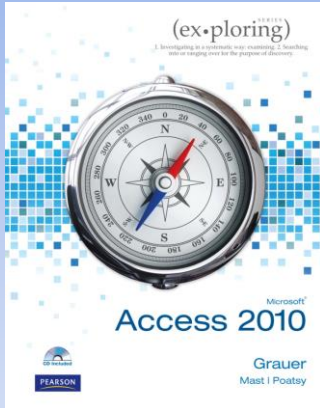
CISY 1225 Custom book

Chapter 11

Customize, Analyze, and Summarize Query Data

Exploring Microsoft Access 2010

by Robert Grauer, Keith Mast, Mary Anne Poatsy



Chapter 3 Customize, Analyze, and Summarize Query Data

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Objectives

- Understand the order of operations
- Create a calculated field in a query
- Create expressions with the Expression Builder
- Use built-in functions in Access
- Perform date arithmetic
- Add aggregate functions to datasheets and queries

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Order of Operations

- Parentheses ()
 - Exponentiation (^)
 - Multiplication (*)
 - Division (/)
 - Addition (+)
 - Subtraction (-)
- An easy way to remember the order is with the sentence:
- Please Excuse My Dear Aunt Sally
(PEMDAS)

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Creating a Calculated Field in a Query

- Expressions
 - a formula used to calculate new fields from the values in existing fields.
- Elements used in expressions
 - Identifiers (field names)
 - Operators (arithmetic instructions)
 - Functions (built-in functions like Date())
 - Constants (e.g. 30, .5)

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Creating a Calculated Field in a Query

- Expressions must use a correct Syntax
- Syntax
 - Example:
EmployeePay: [HourlyRate] * [HoursWorked]

Verify Calculated Results

- After you run a query
- Compare Access calculated results by:
 - Manually calculating results
 - Copying some or all of the datasheet into Excel

Saving a Query Containing Calculated Fields

- When in Design View,
 - saving queries saves the query design
- When in Datasheet View,
 - saving updates underlying data
- Calculated fields cannot be updated
- Use Zoom (Shift +F2) to view long expressions

Expression Builder, Functions, and Data Arithmetic

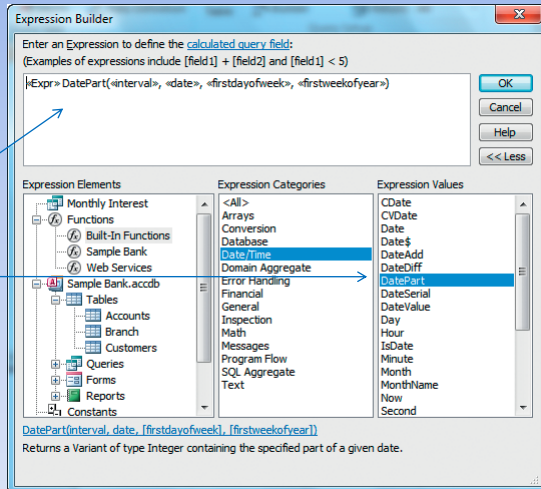
- Expression builder:
 - Helps to create expressions
 - Provides access to built-in Access functions
 - Allows you to perform date arithmetic

Creating Expressions with the Expression Builder

- Launching the Expression Builder

Double-click a value to add it to the expression box

Expression box



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Creating an Expression

- Expression Elements
- Expression Categories
- Expression Values
- Creating an expression manually

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Using Built-In Functions in Access

- Functions
- Arguments
- <<placeholder text>>

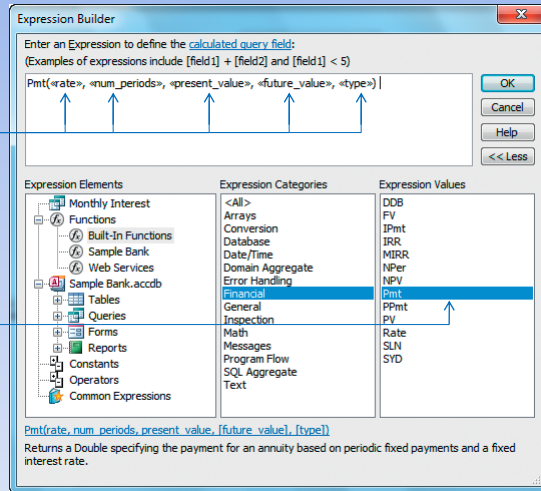
The Pmt Function

- Calculates the monthly loan payment given
 - the monthly interest rate,
 - term of the loan in months, and
 - the original value of the loan (the principal).

Pmt Example

Pmt Function has five arguments

Pmt Function



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Creating Conditional Output with the IIF Function

- Function syntax
 - IIF (expression, true part, false part)
 - Examples
 - Iif(Balance>=10000, .035, .015)
 - Iif([State]="CA", "CA", "Out of State")
- Nested IIF statement
 - Example
 - Iif(Date() - [DateListed]<=30, "New Listing", Iif(Date() - [DateListed]>=180, "Stagnant", "For Sale"))

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Performing Date Arithmetic

- Date formatting
- Date arithmetic

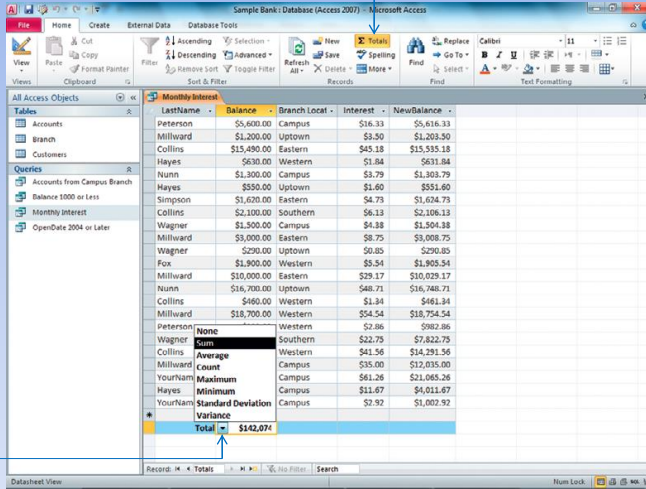
Aggregate Functions

- Perform calculations on an entire column of data and return a single value
- Examples:
 - Average
 - Count
 - Maximum
 - Minimum
 - Standard Deviation
 - Sum
 - Variance

Adding Aggregate Functions to Datasheets

Click Totals to add the totals row

Click the Total row arrow to show aggregate functions

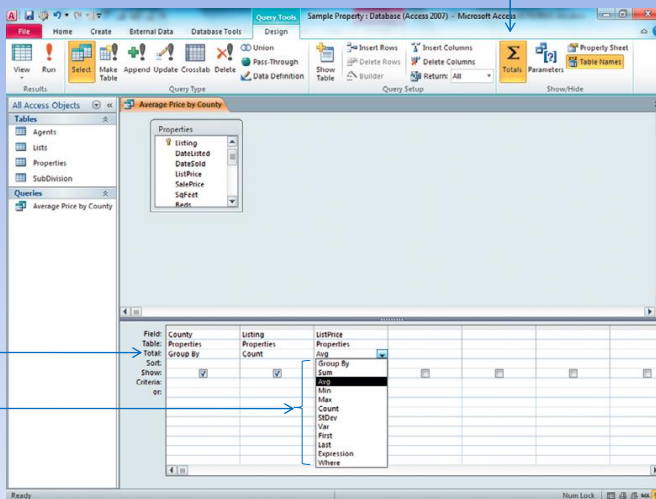


Adding Aggregate Functions to Queries

Click Totals to add query totals

Total row

Aggregate Functions



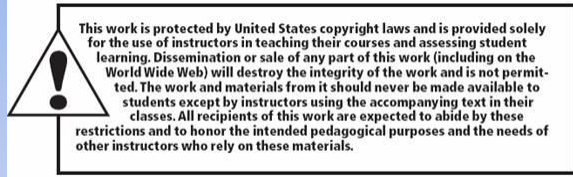
Summary

- In this chapter, you learned about the order of operations, how to create a calculated field in a query, and create expressions using the Expression Builder.
- You also learned how to use built-in functions in Access, perform date arithmetic, and use aggregate functions do datasheets and queries.

Questions



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