

Audit Commander

Extraction Criteria

Purpose

Explain the types of data extraction and selection which can be performed. This applies to both Excel, Access and other data sources.

Overview.

Data extraction and selection is a very commonly performed audit task. Examples include selecting a subset of records for testing, identification of potential error conditions and obtaining data for further analytical review purposes.

This document explains how that process can be performed using the Audit Commander. Almost every form in the system provides the option to enter selection criteria. If the selection criteria are left blank, then all records are processed. However, if the selection criteria is specified, then only records which meet those criteria are considered.

Column Names

Generally most column names can be used for processing. However, there are some restrictions which apply:

1. If a column name contains embedded blanks, then it must be enclosed in brackets, e.g. [Asset Cost]
2. A column name cannot contain special characters such as apostrophes, commas, quotation markets, brackets or parentheses

Possible Errors

The system attempts to detect any possible errors in the criteria specified before processing them. However, the system can not detect all possible errors. Examples of the types of errors which are detected include the following:

1. Column name not found (misspelled or doesn't exist)
2. Unbalanced parentheses – must have same number of left and right parentheses
3. Unbalanced brackets – must have the same number of left and right brackets
4. Unbalanced apostrophes – must be evenly divisible by two
5. Unbalanced quotes – must be evenly divisible by two
6. Commas not allowed as separators in numeric values

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Compound (complex) conditions

It is possible to test for fairly complex conditions by using the “AND”, “OR” and “NOT”. For example:

1. Condition-1 AND Condition-2 will only be selected if both conditions are true.
2. Condition-1 OR Condition-2 will only be selected if one or both conditions are true.
3. Not Condition-1 will only be selected if condition-1 is FALSE.

Conditions may also be further enclosed and grouped within parentheses for more complex conditions. For example:

Condition-1 OR (Condition-2 AND Condition-3)

Comparison Operators

There are six comparison operators which may be used either for text, numbers or dates:

1. < Is less than
2. > Is greater than
3. = Is equal to
4. <= Is less than or equal to
5. >= is greater than or equal to
6. <> is not equal to

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Text Operators

Text can be tested using the following criteria

1. Left(text, text length)
2. Right(text, text length)
3. Mid(text,start position, length)
4. Like(text)
5. Instr(text)
6. LCase(text)
7. UCase(text)

Examples

Description	Example
Left two characters of the store code are 'AB'	left(storecode,2) = 'AB'
Rightmost two characters on the store code are 'AB'	Right(storecode,2) = 'AB'
Character in position 2 and 3 of store code is 'AB'	Mid(storecode,2,2) = 'AB'
Store code begins with A	Storecode like 'A%'
Text contains the specific characters 'ABC'	Instr(storecode,'ABC') > 0
Location code expressed as lower case is 'ab'	Lcase(location) = 'ab'
Location code expressed as upper case is 'AB'	Ucase(location) = 'AB'
Store code starts with A, then followed by F-Z then anything	Storecode like 'A[F-Z]%'

Date Operations

Date literals must be enclosed with #. For example, acquisition_date > #6/30/2005# tests for acquisition date greater than June 30, 2005. To test a range, use the 'BETWEEN' operator. For example dates within the fiscal year ended May 31, 2008 could be extracted using the statement [date of interest] between #6/1/2007# and #5/31/2008# where [date of interest] is a date column.

The following date operators are supported:

weekday

Examples



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Description	Example
Date is on a Sunday	Weekday(acqdate) = 1
Date is on a weekend	Weekday(acqdate) between 1 and 2

Math Functions

Math functions include the following:

<u>Description</u>	<u>Example</u>
Absolute value	Abs(cost) > 100
Logarithm	Log(cost) > 3
Round	Round(cost,2) > 98
Random	Rnd()
Integer portion is 500	Int(cost) = 500