

# MS Access for Stock Plan People

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## Objective

- Remove “barriers to entry”
- When to use
- Areas to avoid
- Spark curiosity to seek greater understanding

## What is Access?

- Access is data management software, a relational database
- Files are .mdb (older) or .accdb (Access 2007 or later)
- At a minimum a database will contain data stored in Tables
- However a Table is one of several Access Objects:
  - Tables
  - Queries
  - Forms
  - Reports
  - Macros
  - Modules

## How does it differ from Excel?

- It is “smart” about data, great for handling large amounts of data, performing consistent calculations
- It is not good for output – formatting

## When use it?

- Analysis of large sets of data
- Good at joining sets of data (think vlookup, index match)
- Sorting, subtotaling
- Applying multiple criteria

## To Create a Database

- New in Windows Explorer, or
- Open Access, Blank Database
- Can have multiple databases open, behaves like Word not Excel

## Tables

- Make from Scratch (Create tab, Table, Design View), or
- Import other data
- Once data is in, Tables have 2 views – Design or Datasheet
- Each data element is a Field (grant type)

## Design View

- Data Types – important for Access to “know” the data
  - Text – alphanumeric, can get creative on field properties
  - Number – will not accept alpha, be sure to have the field size set to Double or Long Integer
  - Date/Time – can recognize most date formats
  - Boolean – Yes/No, True/False, On/Off

## Relationships between tables

- Will be more important when working with Queries
- 1 to 1: stock plan account data and employee HRIS record
- 1 to many: account data and grant data
- Many to many: old grant data and new grant data

## Looking at data in Tables

- Move columns
- Hide columns
- Freeze/unfreeze columns
- Search
- Filter
- Sort
- Record number, record count
- Can make changes, changes are automatically saved

## Queries

- A Query is a request for data or action
- Any joining of data, calculations, application of criteria, etc. is done in a query
- Query types
  - Select – used to retrieve data
  - Make Table – used to make new table from existing or calculated data
  - Append – used to add new records to an existing data set
  - Update – used to modify or add fields to an existing data set
  - Others: Crosstab, Delete, Union, Pass-through, Data definition

## Good Practice Tips

- Summary Tab at left
- Notes tab at left (if applicable)
- Formulas work left to right
- Totals and subtotals at the top
- Remove vlookups, other complex formulas (retain formula row at top if necessary)
- Add filters in row below column headings
- Stay consistent on font color, font size, colors
- Don't hard code numbers in formulas (or do only with comments)
- Learn keyboard shortcuts for navigation around a dataset (end+down, ctrl+end, shift+end+down, ctrl+home, etc.)

## Sample queries

Add name to exercises [check record count] [add criteria, last name begins with S\*, country is United Kingdom, last name begins with S\* and country is United Kingdom, last name begins with S or country is United Kingdom]

What countries had exercises in 2013? [add group by, add count of records, min Trans date, max Trans date]

What states had exercises in 2013? [state, num, where country "united states"]

First grant for each participant [min grant by participant id]

First grant for each participant with outstanding

What grants from 2013 were first grant for that individual [min grant is in 2013, count is 1]

Sum of outstanding by participant, count of grants

Sum of outstanding by participant, count of outstanding grants

States having some equity outstanding

States having some equity outstanding by plan type

Make sure everyone in US has a State [data clean up]

Make sure everyone with outstanding in US has a State

Make sure everyone who has a State is in US

Make sure everyone with outstanding who has a State is in US, by plan type

Update query – everyone in CA, change Country to Republic of California

Exercise without account (many to many)

## Sample query criteria:

- Like "United Kingdom"
- Not like "united kingdom"
- Is null, is not null
- >6/1/13 (becomes > #6/1/13#)
- Between 500 and 1000