Announcements

Exercises 11-14 are posted online:

Exercise 11 is due Friday, February 22
Exercise 12 is due Wednesday, February 27
Exercise 13 is due Friday, March 1
Exercise 14 is due Wednesday, March 6
MS Access & Relational Databases

What is a Database?
- A database is an organized collection of data. The data is typically organized to model relevant aspects of reality…in a way that supports processes requiring this information (http://en.wikipedia.org/wiki/Database - 02/13/13)

What is a Relational Database?
- A database where data are stored in more than one table, each one containing different types of data. The different tables can be linked so that information from the separate files can be used together (http://www.hscripts.com/tutorials/mysql/overview.php - 02/20/12)
MS Access & Relational Databases

• What is MS Access?
  – A component of MS Office 2013/16 Professional
  – A relational database management program (often referred to as a DBMS, or database management system)
  – A program useful for managing small- to moderate-sized databases
MS Access & Relational Databases

Record – a row of data in a DBMS

Field – a column of data in a DBMS
MS Access & Relational Databases

- tblFormulas Table
- View Toggle
- Sort Tools
- Filters
- Find Tool
MS Access & Relational Databases

- Objects Pane
- tblFormulas Table

- Navigate To Category
- Object Type
- Tables and Related Views
- Created Date
- Modified Date
- Filter By Group

- Tables
- Queries
- Forms
- Reports
- All Access Objects
MS Access & Relational Databases

- Create Ribbon
- Query Wizards
- Existing Queries
- Navigation Pane
### Query Results in Datasheet View

<table>
<thead>
<tr>
<th>Specimen_Num</th>
<th>Mineral_Name</th>
<th>Crystalline</th>
<th>Variety</th>
<th>Size</th>
<th>Locality_Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>M040</td>
<td>Hematite</td>
<td>Siltstone</td>
<td></td>
<td>2&quot; x 3&quot;</td>
<td>Vladivostok</td>
</tr>
<tr>
<td>M057</td>
<td>Hematite</td>
<td>Specularite</td>
<td></td>
<td>1&quot; x 1&quot; - 1&quot; x 2&quot;</td>
<td>Utrecht</td>
</tr>
<tr>
<td>M061</td>
<td>Hematite</td>
<td>Aclular</td>
<td></td>
<td>1&quot; x 4&quot;</td>
<td>Ishpeming</td>
</tr>
</tbody>
</table>
Query Structure in Design View
MS Access & Relational Databases

Create Ribbon

Existing Form

Form Wizards
MS Access & Relational Databases

Data Entry Form in Datasheet View
MS Access & Relational Databases

Form Tools

Data Entry Form in Design View
MS Access & Relational Databases

Objects Pane

Existing Report

Report Wizards
### MS Access & Relational Databases

![Image of MS Access with a report in Datasheet View](image)

#### Report in Datasheet View

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>Formula</th>
<th>Locality Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerium Oxide</td>
<td>CeO2</td>
<td>Nice</td>
<td>Italy</td>
</tr>
<tr>
<td>Chromium Oxide</td>
<td>Cr2O3</td>
<td>Happy Camp</td>
<td>USA</td>
</tr>
<tr>
<td>Corundum</td>
<td>4H2O</td>
<td>Corning</td>
<td>Canada</td>
</tr>
<tr>
<td>Corundum</td>
<td>4H2O</td>
<td>Corning Corundum Mine</td>
<td>Canada</td>
</tr>
<tr>
<td>Copper</td>
<td>CuO</td>
<td>Desert Nine</td>
<td>Utah</td>
</tr>
<tr>
<td>Copper Oxide</td>
<td>CuO2</td>
<td>Pure Copper</td>
<td>USA</td>
</tr>
<tr>
<td>Copper Oxide</td>
<td>CuO2 &amp; Cu</td>
<td>Morenci Mine</td>
<td>Utah</td>
</tr>
<tr>
<td>Fossils with Dolomite</td>
<td>CaC2O4 &amp; BaC2O4</td>
<td>Fossils</td>
<td>USA</td>
</tr>
<tr>
<td>Galapagos</td>
<td>ZnC2O4</td>
<td>Galapagos</td>
<td>USA</td>
</tr>
<tr>
<td>Diopside</td>
<td>TiO2</td>
<td>Rio Tinto</td>
<td>Spain</td>
</tr>
<tr>
<td>Diopside</td>
<td>TiO2</td>
<td>St Ildefonso</td>
<td>Sweden</td>
</tr>
<tr>
<td>Diopside</td>
<td>TiO2</td>
<td>Velbert</td>
<td>Russia</td>
</tr>
<tr>
<td>Diopside</td>
<td>TiO2</td>
<td>St Ildefonso</td>
<td>Canada</td>
</tr>
<tr>
<td>Diopside</td>
<td>TiO2</td>
<td>St Ildefonso</td>
<td>Canada</td>
</tr>
<tr>
<td>Magnetite</td>
<td>Fe3O4</td>
<td>Lake Superior</td>
<td>Canada</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Oxford</td>
<td>UK</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Lake</td>
<td>USA</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Oxford</td>
<td>UK</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Lake</td>
<td>USA</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Oxford</td>
<td>UK</td>
</tr>
<tr>
<td>Pyroxene</td>
<td>NiO2</td>
<td>Lake</td>
<td>USA</td>
</tr>
</tbody>
</table>

Monday, February 27, 2012

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MS Access & Relational Databases

Report in Design View

Report Tools
MS Access & Relational Databases

Display Relationships through Database Tools Ribbon

Table Relationships