Creating a Query

• A query allows you to “ask” for only the information you want vs. navigating through all the fields and records of large tables

• You can enter, edit and navigate data in a query datasheet just like a table datasheet

• Query = logical view of the data
Creating a Query

- One way to create a query is by using the Simple Query Wizard
- The Wizard asks you questions to determine the information you want
Simple Query Wizard: Selecting Fields
Using Query Design View

• Another way to create a query is by using Query Design View
• You also use Query Design View to edit an existing query
• Query Design View presents the fields you can choose from in Field Lists
Using Query Design View

• If 2 or more related tables are used, their relationship is shown with a join line
Switching Between Query Design View & Datasheet View

Datasheet View button
Click to switch between views

Query Design View button

Modifying Queries

• Work in Design View
• Upper pane of Design View window shows field lists
• Lower pane of Design View window is used to add, delete or change the order of fields
Modified Query
Sorting and Finding Data

• Works the same way for queries as it does for tables
• Data can be sorted by clicking the list arrow on a datasheet’s column heading, then click a sorting option
• Data can also be sorted by using the Sort and Find buttons on the Home tab
# Sort and Find Buttons

<table>
<thead>
<tr>
<th>Name</th>
<th>Button</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascending</td>
<td><img src="" alt="Ascending" /></td>
<td>Sorts records based on the selected field in ascending order (0 to 9, A to Z)</td>
</tr>
<tr>
<td>Descending</td>
<td><img src="" alt="Descending" /></td>
<td>Sorts records based on the selected field in descending order (Z to A, 9 to 0)</td>
</tr>
<tr>
<td>Clear All Sorts</td>
<td>![Clear All Sorts](attachment:Clear All Sorts.png)</td>
<td>Removes the current sort order</td>
</tr>
<tr>
<td>Find</td>
<td><img src="" alt="Find" /></td>
<td>Opens the Find and Replace dialog box, which allows you to find data in a single field or in the entire datasheet</td>
</tr>
<tr>
<td>Replace</td>
<td><img src="" alt="Replace" /></td>
<td>Opens the Find and Replace dialog box, which allows you to find and replace data</td>
</tr>
<tr>
<td>Go To</td>
<td>![Go To](attachment:Go To.png)</td>
<td>Helps you navigate to the first, previous, last, or new record</td>
</tr>
<tr>
<td>Select</td>
<td><img src="" alt="Select" /></td>
<td>Helps you select a single record or all records in a datasheet</td>
</tr>
</tbody>
</table>
Filtering Data

- Filters provide a temporary way to display a subset of records that match given criteria.
- Filters are not used to calculate sums, averages, counts, etc.
- Filters are removed when the datasheet is closed.
- Filters can, however, be saved as queries.
Filtering Data

- Filter By Selection: Filtering by a given field value. Filters records for an exact match.

- Filter By Form: Filters by comparative data
Wildcards

• Used to search for a pattern; represents any character
• Entered as criteria
• ? Used to search for a single character
• * Used to search for any number of characters
Applying AND Criteria

- AND criteria means **all** criteria must be true for the record to be selected.
- Created by entering 2 or more criteria in the **same** Criteria row of the query design grid.
Criteria Syntax

• Quotation marks (""") around text criteria and pound signs (#) around date criteria are automatically added by Access

• Criteria in Number, Currency, and Yes/No fields are not surrounded by any characters
Searching for Blank Fields

- 2 common criteria are **Is Null** and **Is Not Null**
- **Is Null** – Finds all records where no entry has been made
- **Is Not Null** – Finds all records where any entry has been made (even if zero)
Example of AND Criteria
## Comparison Operators

<table>
<thead>
<tr>
<th>operator</th>
<th>description</th>
<th>expression</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;</td>
<td>Greater than</td>
<td>&gt;500</td>
<td>Numbers greater than 500</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
<td>&gt;=500</td>
<td>Numbers greater than or equal to 500</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
<td>&lt;&quot;Braveheart&quot;</td>
<td>Names from A to Braveheart, but not Braveheart</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or equal to</td>
<td>&lt;=&quot;Bridgewater&quot;</td>
<td>Names from A through Bridgewater, inclusive</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Not equal to</td>
<td>&lt;&gt;&quot;Fontanelle&quot;</td>
<td>Any name except for Fontanelle</td>
</tr>
</tbody>
</table>
Applying OR Criteria

• OR criteria means any one criterion must be true for the record to be selected

• Created by entering 2 or more criteria on different Criteria rows of the query design grid

• Also created by entering 2 or more criteria in the same Criteria cell separated by OR
Applying OR Criteria
Formatting a Datasheet

• **Can**: Change font size, font face, colors, gridlines

• **Cannot**: Add custom headers, footers, images, subtotals
Example of Formatted Datasheet

Font size increased to 12, Description field resized, and Yellow alternate color applied
Summary

• Create queries to answer “questions” about your data
• Use table and query datasheets to view, sort, filter, and find data
• AND / OR criteria are used to filter data
• Filters are temporary; queries are permanent objects