EXAMPLES NEEDED FOR TRAINING

Slide 16: Perform an advanced query on a work order as instructed in the exercise.

Slide 18: Create a Backlog view using an advanced query.
1. Assign each student a crew backlog.
2. Make sure each student backlog contains at least (3) work orders that have a **Status** of COMPLETED and the **Equipment** number field is blank.
SUBJECTS COVERED IN THIS UNIT:

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INTRODUCTION

What are advanced queries?

- Used when conventional screen queries don’t give you the data you need

- Allows you to specify parameters on any field – including fields not shown on a form

- An advanced query allows you to enter your query statement in a pop-up box from the form you wish to query
Syntax is the grammar used to define an advanced query. There are rules for entering the query that must be followed or the advanced query will fail.

When creating an advanced query, your statement will be comprised of **three** basic parts.

1) Field Name (or column name): The name COMPASS has assigned to track the data (work order status = wo_status).
2) Comparison Operator: Used when comparing a field name with a value.

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Equal to</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or equal to</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Not equal to</td>
</tr>
<tr>
<td>like</td>
<td>Match a character pattern</td>
</tr>
<tr>
<td>between (...and...)</td>
<td>Between two values (inclusive)</td>
</tr>
<tr>
<td>in</td>
<td>Match any of a list of values</td>
</tr>
<tr>
<td>is null</td>
<td>Is a null value</td>
</tr>
</tbody>
</table>
### BASIC QUERY SYNTAX

3) **Value:** What you want to compare to the chosen field.

Examples of Basic Query Syntax....

<table>
<thead>
<tr>
<th>FIELD NAME</th>
<th>OPERATOR</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>wo_status</td>
<td>&lt;&gt;</td>
<td>‘CLOSED’</td>
</tr>
<tr>
<td>crew</td>
<td>like</td>
<td>‘EBTM%’</td>
</tr>
<tr>
<td>building</td>
<td>between</td>
<td>‘201’ and ‘205’</td>
</tr>
<tr>
<td>maint_type</td>
<td>in</td>
<td>(‘REPAIR’, ‘CORRECTIVE’)</td>
</tr>
<tr>
<td>equipment</td>
<td>is null</td>
<td></td>
</tr>
</tbody>
</table>

1. If the value is a text value, it must be enclosed within single quotes.
2. COMPASS is case sensitive; use UPPERCASE for all text values.
3. When using the IS NULL operator, no value is needed.
4. Wildcards (% and _) can be used with the LIKE operator.
The Date Format is **DD-MMM-YYYY**

When querying with dates, the best operators to use are: between, <, >, or =

Examples of Date Queries...

<table>
<thead>
<tr>
<th>FIELD NAME</th>
<th>OPERATOR</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>start_date</td>
<td>between</td>
<td>‘01-APR-2001’ and ‘30-APR-2001’</td>
</tr>
<tr>
<td>wo_close_date</td>
<td>&gt;=</td>
<td>sysdate – 90</td>
</tr>
</tbody>
</table>

Fyi, sysdate is the current date. Using the sysdate and a value like -30, your results will be all records within the last 30 days without having to change the date range in the advanced query every day you run the query.
A logical operator is used to combine the results of two statements, thus creating one result.

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>and</td>
<td>Returns a record if BOTH statements are TRUE</td>
</tr>
<tr>
<td>or</td>
<td>Returns a record if EITHER statement is TRUE</td>
</tr>
<tr>
<td>not</td>
<td>Returns a record if the statement is FALSE</td>
</tr>
</tbody>
</table>
QUERYING WITH LOGICAL OPERATORS

Examples of Queries with Logical Operators...

SITE = ‘01’  AND  BUILDING = ‘074’
Returns records that match both criteria.

SITE = ‘01’  OR  BUILDING = ‘320’
Returns records that match one or the other criteria.

SITE = ‘01’  NOT  BUILDING = ‘074’
Returns all records equal to the first criteria, but doesn’t match the second criteria.

When putting two statements together using a logical operator, they must be put within parenthesis, especially with OR statements. (SITE = ‘03’ and BUILDING = ‘074’)
DISPLAY ORDER OF RECORDS

- Use the ORDER BY clause to change the display order of records you are querying from the default order of ‘ascending’ to the optional order of ‘descending’.

- Place the ORDER BY clause at the end of the query.

- Then choose the record order: DESC (descending).

ORDER BY  field name(s)  DESC

FYI
Adding the ASC or DESC is not required. If it is not added, the system will default to ascending.
DISPLAY ORDER OF RECORDS

Examples of Display Orders...

ORDER BY  building
Lists the records in order by the smallest to the largest building number. Since ASC / DESC was not specified, the system defaults to ascending.

ORDER BY  building, enter_date
Lists records in order by building number and by entry date.

ORDER BY  building, enter_date  DESC
Lists records in order by smallest to largest building number (ASC), and within each building number group, they are further sorted by the oldest date entered to the most recent date entered.
FINDING FIELD NAMES

- Exact field names must be used in advanced queries or they will fail
- Click the cursor on the field you would like to look up
- Go to HELP>FIELD from the drop down menu
- The Properties of Item form appears and provides data related to the field

U005 Advanced Query Ver 2.4
## SAMPLE QUERIES

<table>
<thead>
<tr>
<th>WHAT YOU WANT TO DO</th>
<th>ADVANCED QUERY STATEMENTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All work orders NOT “closed”</td>
<td>wo_status &lt;&gt; ‘CLOSED’</td>
</tr>
<tr>
<td>All work orders NOT “closed” or “deferred”</td>
<td>(wo_status &lt;&gt; ‘CLOSED’ or wo_status &lt;&gt; ‘DEFERRED’)</td>
</tr>
<tr>
<td>All “completed” work orders that have labor costs against them and include a particular Team</td>
<td>(wo_status = ‘COMPLETED’ and act_labor &gt; 0) and crew like ‘HSTM5-L%’</td>
</tr>
<tr>
<td>Work orders closed within the last 30 days without equipment numbers</td>
<td>(wo_status = ‘CLOSED’ and wo_closed_date &gt;= (sysdate – 30) and equipment is null)</td>
</tr>
<tr>
<td>Purchase requisitions entered in April 2001</td>
<td>(enter_date between ‘01-APR-2001’ and ‘30-APR-2001’)</td>
</tr>
<tr>
<td>Work orders in all HEALTHSCI District crews</td>
<td>crew like ‘HS%’</td>
</tr>
<tr>
<td>Work orders in three STPAUL District crews</td>
<td>crew in (‘SPTM1-C1’, ‘SPTM2-C1’, ‘SPTM3-C1’)</td>
</tr>
</tbody>
</table>
HELPFUL TIPS

- Verify the field name: REQUESTOR not REQUESTER
- Use parenthesis ( ) when combining statements with logical operators
- Text in COMPASS is case sensitive; use CAPITAL letters
- To open the Query/Where window:
  1) Initiate the query (F7) from any COMPASS form
  2) Type a colon (:) in any non-date field
  3) Execute the query (F8)
CREATING ADVANCED QUERIES

**EXERCISE 1**

1. Access the *Work Order* form from the Navigator screen
2. Enter Query Mode
3. Type a colon (:) in any non-date field
4. In the *Type* field enter REPAIR

   Enter other query parameters on the form. This will narrow the query without the necessity of creating additional query statements.
CREATING ADVANCED QUERIES

5. Execute the query
6. The Query/Where screen appears
7. Enter (Equipment in('142-CHIL06', '142-CHIL08')) and click OK
8. Results of the query appear. Use the Pg up or Pg dn keys or the up or down arrows to scroll through the results.
CREATING ADVANCED QUERIES

EXERCISE 2

1. Access the Daily Schedule form from the Navigator screen
2. Access the crew you’ve been assigned for this exercise
3. Click the Backlog tab
4. Select ALL ACTIVE WORK ORDERS folder and click the Edit View... button
5. Click the **Duplicate View**... button on the *Edit View* form
6. For the New View Name enter **COMPLETED WOS WITH NO EQUIPMENT NUMBER**
7. When you are returned to the *Edit View* form, confirm you are on the *Display* tab.
8. Move the *Equipment* field up so that it is above the *Status* field
CREATING ADVANCED QUERIES

9. Click on the Filter tab to view the filter fields.
10. Click the Advanced Filter button and the Advanced Filter screen will appear.
11. Enter `(WO_STATUS = 'COMPLETED' AND EQUIPMENT IS NULL)` , then click OK
11. Click **OK** again
12. The backlog appears with only work orders that have a **Status** of **COMPLETED** and the **Equipment** field is blank
ERROR MANAGEMENT

Steps to follow when receiving error messages...

1. Use “Snag-It” to save the error message as an electronic file.
2. Attach it to an email addressed to: fmbas@umn.edu
3. Include a brief description of what you were doing when the error message appeared.
4. You may also try calling USITSS at 5-1830
The End!!! 😊