BI/Query User & BI/Query Reports Fundamentals
BI/Query User/Reports Fundamentals

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This workbook is produced by Human Resources Training and Development. We welcome your feedback about this document. Please email or call Vic Kiel at Vic.Kiel@wwu.edu or (360) 650-7418

Western Washington University
Training and Development
July 2006
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1 INTRODUCTION

Welcome to this BI/Query User/Reports Fundamentals course. The primary objective of the course is to introduce the user to the basic operations of Hummingbird BI/Query User and BI/Query Reports. Detailed objectives are listed later in this section.

1.1 Course Prerequisites

- No previous experience in using BI/Query or any other data warehouse management program is required in this introductory course. It is assumed, however, that you have:
  - Knowledge of personal computer fundamentals.
  - Experience in working within the Microsoft Windows environment.
  - A reasonable degree of keyboard proficiency.
  - Experience in using a mouse.

- You will also need the following to complete this course:
  - A personal computer.
  - Microsoft Windows and Hummingbird BI/Query properly installed.
  - A VGA or higher-resolution video adapter.
  - An installed pointing device (mouse) that is supported by Microsoft Windows 95 or later.
  - An installed printer that is supported by Microsoft Windows 95 or later.
  - This training manual.
  - A BI/Query and data warehouse account (username and password).
1.2 Course Objectives

After participating in this course, you should be able to:

• Start BI/Query User
• Log in to BI/Query User and the Data Warehouse
• Select a Data Model
• Identify the elements of the BI/Query User Application window
• Examine BI/Query User windows
• Display Help Information
• Exit from BI/Query User
• Identify data objects, relationships, and attributes
• Create a new query
• Apply column ordering and row sorting to a query
• Apply a qualification to a query using the qualification tree
• Run a query
• Publish and Retrieve (save/load) a query
• Format an attribute
• Query multiple data objects
• Create and apply prompts in a query
• Apply multiple qualifications in a query
• Combine qualifications in a query
• Manipulate query results
• Start BI/Query Reports
• Send results of a query to BI Query Reports
• Use the Presentation Designer
• Create a table presentation
• Use a predefined style for a table presentation
• Arrange data
• Reorder columns
• Resize columns
• Change titles
• Change how data is displayed
• Publish and Open (save and open) a report.
• Refresh the data in a report
• Delete a report
1.3 **Course Conventions**

A number of conventions are used in this manual. Please be sure that you understand them.

The course is divided into **sections**. Most sections consist of an **introduction** and various **subsections**.

Most **subsections** include an **overview** of the topic to be presented and an **exercise** headed by the word **Objective**. The exercise is often preceded by a section headed **PREPARATION**, which includes one or more preliminary instructions. **Be sure to follow any directions under this heading**.

**Exercises** are presented in two columns, with each step clearly numbered. Your instructions are in the column headed **ACTION (You Do)**; the second column headed **COMPUTER RESPONSE / Comments** describes the program response and/or may include other comments. **Be sure to complete each step in the order shown**.

**Instructions** of an exercise may be a combination of selecting a command (or command sequence), typing information and/or pressing one or more keys. Typical examples are given below:

**Example 1**

2. Choose the **File** command.
   
   This means that you should select the **File** command on the Menu bar.

**Example 2**

4. Choose the **File, Open** command.
   
   This means that you should first select the **File** command on the Menu bar and then select the **Open** option on the File menu.

**Example 3**

When a shortcut button is available for a command sequence, that button is usually indicated.

6. Click on the **Print** button.
   
   This means that you should position the mouse pointer on the **Print** button and then click the mouse button. (When clicking on any command, button or other screen object or when dragging a screen object, use the **left** mouse button unless otherwise instructed.)

**Example 4**

8. Type: **JONES**
   
   Press [**ENTER**].
   
   This means that you should type the word **JONES** and then press the [**ENTER**] key. (In such instructions, special keys, such as [**ENTER**], [**ESC**] and [**F1**], can be easily identified because they are always enclosed in square brackets.)

**Example 5**

When you are required to press two keys at the same time, the **+** sign is used.

10. Press [**CTRL**] + [**O**].
   
   This means you should press the [**CTRL**] key and, while holding it down, press the letter **O**.
   
   This course assumes that you are using a mouse. Basic mouse techniques are listed below.
Symbols Used in This Workbook

To help you identify the information you need, the symbols below represent different types of information.

- **Actions.** Direct “how-to” information.
  - Notes to supplement the main text.
  - Warnings. The advice pointed to by these symbols will steer you away from common pitfalls.
  - Tips. These are helpful hints that will save you time and grief.
  - Technical tips. The information found here is directed at those who are familiar with SQL programming.

<table>
<thead>
<tr>
<th>ACTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Point</td>
<td>Position the mouse pointer on the specified screen item.</td>
</tr>
<tr>
<td>2. Click</td>
<td>Press and release the left mouse button.</td>
</tr>
<tr>
<td>3. Double-click</td>
<td>Press and release the left mouse button two times in rapid succession.</td>
</tr>
<tr>
<td>4. Right-click</td>
<td>Press and release the right mouse button.</td>
</tr>
<tr>
<td>5. Drag</td>
<td>Move the mouse pointer from its initial position to another area of the screen while holding down the left mouse button.</td>
</tr>
</tbody>
</table>
2 GETTING STARTED

2.1 Introduction

This section begins with a brief discussion of logging into BI/Query User and selecting the Data Model. It then covers the fundamentals of using BI/Query User in the Windows environment.

In this section, you will learn how to:

- Start BI/Query User
- Log in to BI/Query User and the Data Warehouse
- Select a Data Model
- Identify the elements of the BI/Query User Application window
- Examine BI/Query User windows
- Display Help Information
- Exit from BI/Query User

2.2 Starting BI/Query User

**Objective**

In this exercise, you will start BI/Query and display the opening BI/Query User Application window.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select Start, ALL Programs, Hummingbird BI, Hummingbird BI Query, BI Query User</td>
<td>The BI Server Log On window is displayed.</td>
</tr>
</tbody>
</table>

![Hummingbird BI Server Log On](image)

2. Type in your **User Name** and **Password** (this is your Outlook user name and password), enter **wwu** for the Domain and then click **OK**.

The Data Model selection window is displayed.

Choosing Work Offline means you won’t have access to the repository. It doesn’t affect your ability to connect to the database; you can still run queries and work with the results. If you need to publish, retrieve, schedule, or secure your work, you can log on to the repository at any time; choose **File, Work Online**.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Click on the <strong>Repository Data Model</strong> button.</td>
<td>The Retrieve Data Model window is displayed.</td>
</tr>
<tr>
<td>![Image]( Hummingbird BI Query User](Hummingbird BI Query User)</td>
<td></td>
</tr>
<tr>
<td>4. Select <strong>AA_DATW</strong> in the left pane and <strong>Dataw</strong> in the right pane and click <strong>OK</strong> (or double click the icon).</td>
<td>The Security window is displayed.</td>
</tr>
<tr>
<td>5. Read the <strong>Code of Responsibility Agreement</strong> and click the <strong>I Agree</strong> button.</td>
<td>The Data Model Selection (Menu) window is displayed.</td>
</tr>
</tbody>
</table>

**Repository Data Model**

- **Portfolio**
  - **AA_DATW**
  - **AA_RETAIL_GOLF**

**Retrieve Data Model**

- **Contents of 'AA_DATW'**
  - Date: 7/01/2003 12:48:40 PM
  - Type: DataModel
  - Author: Humbird Software
<table>
<thead>
<tr>
<th><strong>ACTION (You Do)</strong></th>
<th><strong>COMPUTER RESPONSE / Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Click on the <strong>Student Information</strong> link.</td>
<td>The Student Tables window is displayed,</td>
</tr>
</tbody>
</table>

*Image: A screenshot of a computer interface showing a Data Warehouse System with a menu for Systems Selection. The highlighted option is the Student Information link.*
2.3 The BI/Query User Application Window

The BI/Query User Application window includes the following elements:

<table>
<thead>
<tr>
<th>Title Bar:</th>
<th>This displays the name of the program (BI/Query User), the Data Model in use (Dataw.qqu) and the window navigation controls (minimize, restore, close)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu Bar:</td>
<td>This displays the program’s primary commands. The available options depend on the particular object with which you are working as well as the particular task you are performing.</td>
</tr>
<tr>
<td>Toolbar:</td>
<td>This displays a number of shortcut buttons for performing common BI/Query User operations. When you position the mouse pointer on one of these buttons, a ScreenTip (the name of the button) appears next to the pointer. BI/Query User includes several different toolbars. The toolbar that appears depends on the object with which you are working as well as the particular task you are performing. In some cases, more than one toolbar may be displayed.</td>
</tr>
<tr>
<td>Desktop:</td>
<td>This area, which occupies the majority of the screen, is used to display your work. The desktop currently displays the Tables window.</td>
</tr>
<tr>
<td>Status bar:</td>
<td>This displays helpful information as you use the program. The “Ready” indicator, which appears at the left side of the Status bar, lets you know that the program is ready for input.</td>
</tr>
</tbody>
</table>

![BI/Query User Application Window Diagram]
2.4 BI/Query User Windows

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Click the <strong>Queries</strong> button on the left of the Model window.</td>
<td>The Queries menu window is displayed. A menu with submenus of pre-designed queries is listed.</td>
</tr>
<tr>
<td><img src="image1.png" alt="Queries Window" /></td>
<td></td>
</tr>
<tr>
<td>2. Click the <strong>Reports</strong> button on the left of the Model window.</td>
<td>The Reports menu window is displayed. A menu with submenus of pre-designed reports is listed.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Reports Window" /></td>
<td></td>
</tr>
<tr>
<td>ACTION (You Do)</td>
<td>COMPUTER RESPONSE / Comments</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>3.</strong> Click the <strong>Help</strong> button on the left of the Model window.</td>
<td>The Help window is displayed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WWU Data Warehouse</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reports</strong></td>
<td><strong>Help</strong></td>
</tr>
<tr>
<td>Reports Tailored to Departments</td>
<td>Frequently Asked Questions</td>
</tr>
<tr>
<td>Departmental Majors</td>
<td>How to create a basic query</td>
</tr>
<tr>
<td>Student Transcript &amp; History</td>
<td>How to create a BI Query Report from a query result</td>
</tr>
<tr>
<td>Misc. Enrollment/Schedule Info</td>
<td>How to make a button to export a query result to MS Excel</td>
</tr>
<tr>
<td>Mailing Labels</td>
<td>How to print mailing labels in MS Word from a query result</td>
</tr>
<tr>
<td><strong>Student Systems</strong></td>
<td>Getting Started with BI Help</td>
</tr>
<tr>
<td>Reports Tailored to Advisors</td>
<td>For further assistance, contact the Administrative Computing Help Desk, x4444</td>
</tr>
<tr>
<td>Academic Standing Issues</td>
<td></td>
</tr>
<tr>
<td>Student Transcript &amp; History</td>
<td></td>
</tr>
<tr>
<td><strong>Woodring College</strong></td>
<td></td>
</tr>
<tr>
<td>Reports Menu</td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Research</strong></td>
<td></td>
</tr>
<tr>
<td>Institutional Research</td>
<td></td>
</tr>
<tr>
<td>External Surveys</td>
<td></td>
</tr>
<tr>
<td><strong>Extended Education &amp; Summer Programs</strong></td>
<td></td>
</tr>
<tr>
<td>Current Year Reports</td>
<td></td>
</tr>
<tr>
<td>Historical Reports</td>
<td></td>
</tr>
<tr>
<td><strong>Registrar’s Peak Reports</strong></td>
<td></td>
</tr>
<tr>
<td>Official Team Reports</td>
<td></td>
</tr>
<tr>
<td>Enrollment by Level/Class Size</td>
<td></td>
</tr>
<tr>
<td>Student Credit Hour Reports</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Peak Reports</td>
<td></td>
</tr>
<tr>
<td><strong>Graduate School</strong></td>
<td></td>
</tr>
<tr>
<td>Reports Menu</td>
<td></td>
</tr>
</tbody>
</table>

**4. Click on** Descriptions of Student Reports-SADMC0001 A description of the report is listed. Report item include fields, prompts, sorts by, type and last revised. If you are not connected to the Data Warehouse, the "Enter Connection Information" window is displayed.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Enter the requested information</td>
<td>The Table Statue Report – Student System Tables is displayed.</td>
</tr>
</tbody>
</table>

**Western Washington University**  
**Dataw Student Reports**  

<table>
<thead>
<tr>
<th>CODE:</th>
<th>TITLE:</th>
<th>FOUND UNDER:</th>
<th>TYPE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIR0066</td>
<td>5-Year Freshman Graduation Rate</td>
<td>Student Reports/Institutional Research</td>
<td>Table</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>Show graduation rate as a percentage during a five-year period for all Freshmen and for Minority Freshmen.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIR0066</td>
<td>Academic Performance Summary</td>
<td>Student Reports/Academic Standing Issues</td>
<td>Table</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>Listing of students by advisor, with academic standing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIR0069</td>
<td>Class List by Course Number Labels</td>
<td>Mailing Labels</td>
<td>Table</td>
</tr>
<tr>
<td><strong>Sorts by:</strong></td>
<td>Advisor, Student's Last Name</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prompts:</strong></td>
<td>Term, Department, Advisor ID, Advisor Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fields:</strong></td>
<td>Advisor, Student name, ID, Class, Ethnicity, Credits, Academic Standing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Last Revised:</strong></td>
<td>Sep 19, 2003</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 6. Close the ZZ_All DataW Reports_SADMC0001.rep report without saving and close the Results window. | The Help window is displayed in the Desktop. |
| 7. Click on the Tables button. | The Tables window is displayed in the Desktop. |
## 2.5 Displaying Help Information

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Choose the <em>Help</em> command</td>
<td>The Help menu commands are displayed.</td>
</tr>
<tr>
<td><img src="image" alt="Help Menu" /></td>
<td><img src="image" alt="Help Menu" /></td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contents...</strong></td>
<td><strong>F1</strong></td>
</tr>
<tr>
<td><strong>Installed Modules...</strong></td>
<td><strong>About BI Query User...</strong></td>
</tr>
</tbody>
</table>

| 2. Click on *Contents* | The main Help Topics window is displayed. |

| ![Help Topics Window](image) | ![Help Topics Window](image) |

| 3. Click on the "+" left of *Building Queries* link. | The Query section is expanded. |

| ![Building Queries](image) | ![Building Queries](image) |

| 4. Click on the *Building Queries* icon | Information about building queries is displayed along with links to related topics. |

| ![Building Queries Icon](image) | ![Building Queries Icon](image) |

*Hummingbird BI Query* is a query and reporting tool that provides a comprehensive solution for accessing, analyzing, and presenting data stored in enterprise databases. BI Query lets you extract the information you need using a data model—a graphical representation of the database. Using BI Query's graphical approach, you can form queries without needing to know SQL (Structured Query Language—the language used for retrieving data from most databases).

**For Administrators**: BI Query provides the flexibility to tailor information access to the exact needs of business users. The administrator makes business-critical information available while maintaining data security, quality, and integrity.

**For Business Users**: BI Query provides an easy-to-use, visual way to query databases, integrate data with other applications, and generate reports.

**Related Topics**
- BI Query Applications
### Section 2 - Getting Started

#### ACTION (You Do)

5. Click on the **Close** button on the Title bar of the Help window.

#### COMPUTER RESPONSE / Comments

The Help window is closed and the Help system is exited.

---

#### 2.6 Exiting from BI/Query User

When you finished using BI/Query User, you can exit from the program either by choosing the File, Exit command or by clicking on the Close button on the Title bar of the Application window. If you have not saved changes in the model, you will be prompted to indicate whether or not you wish to save those changes prior to exiting.
3 BUILDING QUERIES

3.1 Introduction

This section begins with a brief discussion of data objects, relationships and attributes. It then covers the fundamentals of building, modifying, running, publishing or saving and retrieving or loading queries.

In this section, you will learn how to:

- Identify data objects, relationships, and attributes
- Create a new query
- Apply column ordering and row sorting to a query
- Apply a qualification to a query using the qualification tree
- Run a query
- Format an attribute
- Query multiple data objects
- Create and apply prompts in a query
- Apply multiple qualifications in a query
- Combine qualifications in a query
- Manipulate query results
- Publish/Save a query
- Retrieve/Load a query

3.2 Data Objects

Data objects are rectangular or graphical icons that represent the tables stored in the database. Each data object includes categories of information found in that table. For example, the SCHEDULE data object represents a table in the database that contains such categories as the term, term description, course number, course title, and credit hours. These information categories are called attributes.

3.3 Relationships

The lines connecting the data objects indicate relationships among data objects. Data objects connected by a relationship have at least one category in common. Relationships may be shown with a diamond icon and a name as well as a line.

You can turn on or off the diamond relationship icons and relationship names. Choose Tools, Preferences, then select/deselect Show Relationships to turn on/off the diamond relationship icons. If you want to turn on/off the relationship names as well, also select/deselect Show Relationship Names.

3.4 Attributes

You specify the categories of information you want from the database by selecting attributes in a window that opens from the data object.
3.5  Create a Basic Query

- Clearly define the problem and expected results
- Start a new query using the toolbar button, or Query, New
- Double click on the icon representing the object you wish to acquire data from (its attributes are then displayed in an attribute window)
- From the attribute window select the attributes to be returned by clicking on the attribute name (the attribute will become bold and a bullet will appear next to it). The order in which attributes are selected determines the order the columns will appear in your result set
- To select all available attributes type Ctrl+A
- To deselect an attribute, click the attribute name a second time
- Apply conditions such as column order, sort order and qualifications (optional)
- Run (submit) the query using the button, or the Query, Run menu option.
- View or manipulate results
- Make any additions or corrections to query
- Publish/Save your query

Defining a Query

In order to retrieve information using the data objects and relationships in a data model, you must first frame a question, called a query. When defining your query, have a general idea of what kind, and how much, data should be returned. Review your results and make sure the data returned is what you expect. You can be confident that the data is trustworthy, but be careful that your method of acquiring it is correct. If you are unsure if the data you received is representative of what you expect, try writing your query in another way (possibly selecting extra attributes to clarify your results), you can always hide or remove unwanted columns later.

Once you frame the question, you can begin to build the query. The first step is selecting attributes from at least one data object. For some queries, that may be all you need to do. For most, however, you will go on to qualify, or restrict, the query in various ways in order to see just the information that interests you.

It is important to remember that the data you can pull out of your warehouse is only as good as the data that has been put into Banner. When creating your queries try to take common data entry errors and abbreviations into account.

Objective

In this exercise, you will create a query from the SCHEDULE data object that will display the courses available for the current quarter. You will then run the query and run/retrieve the query.

1. Select the Student Tables window (if it is not currently displayed).
1. Click the **New Query** button. You can only work with one query at a time. Choose *Query*, *New* or click the **New Query** button to remove the current query and start a new one.

2. Double click the **SCHEDULE** data object. The SCHEDULE data object attribute window is displayed.

3. In the **Attribute** list on the left side of the window, click on **TERM_DESC**. The TERM_DESC attribute is selected.

4. Using the procedure above, select the following attributes (in the indicated order): **SUBJECT** **COURSE_NUMBER** **TITLE** **CREDIT_HRS** **MAX_ENROLL** The attributes selected are indicated by attribute name being bolded and a dot added to the left of the attribute name.

   ![Attribute window](image)

   *Note: The MAX_ENROLL attribute is selected but not shown above.*
3.6 Ordering Columns

- Select Query, Reorder Attributes from the menu
- Reorder the columns in the resulting dialog box by using the First, Last, Up and Down buttons on the bottom right

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select Query, Reorder Attributes… from the menu bar</td>
<td>The Reorder Query Attributes dialog box is displayed.</td>
</tr>
<tr>
<td>2. Select the TERM_DESC attribute and click the Last button.</td>
<td>The TERM_DESC attribute is moved to the end of the list.</td>
</tr>
<tr>
<td>3. Click OK</td>
<td>The SCHEDULE attribute window is redisplayed.</td>
</tr>
</tbody>
</table>

3.7 Sorting Rows

To set the sort order for your query:

- In the attribute window click the sort box for each attribute you wish to sort by (a sort order icon (AZ) and a sort sequence number is displayed in the box indicating the sort order and sort sequence); the sort defaults to ascending order
  - Sort Order: Ascending - '↑': Descending - '↓'
- To remove an attribute from the sort, click the sort box a second time

To change the sort order for your query:

- Single click the attribute sort box. The sort order rotates from no sorting to ascending order to descending order
- Double click the sort box for any selected attribute (or use the Query, Sort Order menu option) to display the Sort dialog box
  - In the resulting dialog box, move the desired attributes from the Available attributes (or unsorted) pane to the Sort rows by pane
3.8 Qualifying Queries

Qualifications allow you to place conditions on what data is returned by your query. When implementing qualifiers you can:

- Add qualifications by clicking the Qualify box for the chosen attribute
- Place qualifications on attributes that are not selected
- Choose from a list of available operators
- Use pattern matching
- Apply negative operators (e.g., not equal to)

To insert a qualification into your query:

- In the attribute window, Click the Qualify Box for the attribute you wish to qualify
- Choose an appropriate Operator
- In the Qualification Text Box, enter the value(s) you wish to qualify on (or use the Data Values Box to select value(s) from the resulting list)

When a Qualify box is chosen, a qualification tree appears in the lower windowpane of the attribute window. Each time you click a Qualify box, a branch is added to this tree. The resulting tree will be visible from all objects within the model. (See the Qualification Tree diagram)
To delete a qualification from your query:
- Select the Qualification box for the qualification you want to delete and press the Delete key on your keyboard.

Once a qualification has been added to the tree, clicking elsewhere on the screen before entering data into the Qualification Text box will cause the qualification branch to disappear.

**Condition Box:** By clicking on the Condition box you can select the qualifier. Once selected a qualification can be deleted, negated or combined with another qualification.

- **Attribute:** Selected Attribute is displayed
- **Operator List:** Clicking on the Operator list brings up a list of available operators. Select the operator you wish to use from this list and it will appear in the Operator list.
- **Qualification Text Box:** Populate the Qualification text box with the value(s) you wish to qualify on.
- **List Button:** Clicking on the list button allows you to view the chosen value(s), add additional values, or delete all values, currently in the Qualification text box.
- **Data Values Button:** Clicking on this button will allow you to acquire a list of possible data values for the selected attribute, insert a prompt or use a variable.

A few of the available operators do not allow for multiple values in the qualification text box. These operators are <, >, <=, and >=.

If the qualification tree is too large to be seen in the window, resize the qualification section by clicking and dragging the blue divider upwards until the whole qualification tree can be seen.

**Basic Operators**

The basic operators provided by BI/Query include:
- < (Less than)
- > (Greater than)
- = (Equal to)
- <= (Less than or Equal to)
- >= (Greater than or Equal to)
- != (Not Equal to)
Applying Negative Operators

Each of the operators mentioned above can be negated. BI/Query provides a list of these negative operators in the operators list box, these are:

- \(!\) = (Not Equal)
- Does not begin with
- Does not end with
- Not In
- Not Between

Each of these operators will return the opposite of what is returned by their positive counterparts.

Selecting the handle and choosing Query, Qualification, Negate Clause from the menu can negate any qualifier. However, it is best to use the predefined negative operators whenever possible.

All available operators can be used to compare any data type including:

- Numbers
- Strings
- Characters
- Dates

Matching Character Patterns

Pattern matching allows you to qualify on sections of data. This is useful for selecting data when you are unsure what the data looks like in its entirety. It is also useful for selecting data that has not been entered into Banner in a consistent format. For example: if you want to return all employees with a current job title of “Information Analyst” you would also want to be sure to include employees with a current job title of “Info Analyst”.

To provide this ability the following operators are provided:

- **Begins with** – Selects all data that begins with the given string
- **Ends with** – Selects all data that ends with the given string
- **Contains** – Returns data that contains the given string (including those that begin or end with the string)
- **In** – The IN operator allows you to find all records that match any one item in the list.

**Examples**

- **Begins with** Account returns: Account, Accountant, Accountant Assistant...
- **Ends with** Assistant returns: Assistant, Office Assistant...
- **Country** IN France, Germany returns France and Germany
- **Contains** Assistant returns: Assistant, Office Assistant, Office Assistant I...
**Using Multiple Values for Comparison**

When multiple values are input into the edit box for the Contains operator you must specify **Match Any** or **Match All**. This can be set from the List Box portion of the qualification tree:

- Click on the List Box of the qualification tree
- Choose Match Any or Match All from the resulting menu

- **Match Any** – Will return all values that include any one of the input character sets
  - Ex: Contains U, 301 Match Any returns: UF301, CU301, UX401, CA301
- **Match All** – Will return values only if all input character sets can be matched.
  - Ex: Contains U, 301 Match All returns: UF301, UA301, CU301

**Data Values**

Data values provide you with the ability to retrieve a list of possible values for input into the edit box of a qualification. They can be used to retrieve a list from the database of all available values or to display only a portion of the available values.

The dynamic data values window shows you all possible values for a specific attribute. When you select Data Values from the Data Values Box, BI/Query runs a query to select all distinct values for that attribute from the underlying table. Therefore, any values not currently in use will not be returned. For example: if the validation table for Gender allows for three codes, ((M)ale, (F)emale, and (U)nknown), and no employee has a gender assignment of (U)nknown, the dynamic Data Values dialog box will only list the used values, ((M)ale and (F)emale).

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Click the Qualify box for the TERM_DESC attribute.</td>
<td>A check mark is displayed in the Qualify box for the TERM_DESC attribute and the qualification tree is displayed at the bottom of the attribute window.</td>
</tr>
<tr>
<td>2. Click the Data Values Button, Data Values.</td>
<td>The Data Values dialog box is displayed.</td>
</tr>
<tr>
<td>3. Select the current quarter (i.e. &quot;Spring 2006&quot;). Click the Insert button.</td>
<td>The qualification tree is redisplayed with the selected quarter in the qualification text box.</td>
</tr>
</tbody>
</table>
### 3.9 Running Queries

Once you’ve built a query, you can run it. The results of the query are displayed in a separate window.

**To Run a Query**

- Choose **Query, Run** or click the **Submit Query** icon on the Standard or Query toolbar.

**Limit the number of rows returned from a query**

You can use **Tools, Preferences, Governor Settings** to limit the number of rows to be returned from a query before BI/Query prompts you to retrieve more.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Choose Tools, Preferences</td>
<td>The Preferences dialog box is displayed.</td>
</tr>
<tr>
<td>2. Type <strong>500</strong> in the <strong>Rows retrieved before prompt</strong> box in the <strong>Governor Settings</strong> if necessary. Click <strong>OK</strong></td>
<td>The limit has been set and the attribute window is redisplayed.</td>
</tr>
<tr>
<td>3. Click the <strong>Submit Query</strong> icon</td>
<td>The query is run and the results are displayed in a separate window.</td>
</tr>
<tr>
<td>4. Close the <strong>Results</strong> window</td>
<td>The attribute window is redisplayed.</td>
</tr>
</tbody>
</table>
3.10 Publishing/Retrieving and Saving/Loading Queries

--- Publishing and Retrieving Queries is the Recommended Practice ---

By default, BI Query stores queries in the Queries folder for the data model. You can create subfolders in the Queries folder to organize your queries more efficiently. There are two Queries folders: one for administrator-layer queries and one for user-layer queries. (Only the BI Query administrator can create subfolders in the administrator-layer Queries folder.)

When you publish queries, the folder structure you have set up is preserved in the BI Server Repository. Similarly, when you retrieve queries, the folder structure in the Repository is reproduced on your computer. You can save queries either as personal queries or shared queries.

External Queries
You can save queries to any accessible location on your system. Queries that are not stored in the Queries folder are known as external queries. You can open and run external queries from an accessible location. However, you cannot publish an external query or link it to a button.

Saving Queries
If the Save Queries permission is assigned, you can save queries in order to use them again in BI Query. You do not need to run (submit) a query before saving it. To save queries to the BI Server Repository, you must publish them.

Publishing Queries
When you publish a query to the Repository, BI Query also saves the query locally in the Queries folder where the data model is stored. (Data values queries are stored in the DataVals folder.) If you want to publish a query as a data values query file for a particular attribute, follow the naming convention for data values files. You can create subfolders in the Repository to organize your queries more efficiently. When you publish queries, the folder structure you have set up in the Repository is preserved in the local Queries folder.

To publish a query
- Choose Query, Publish with the desired query as the active query
- Specify a name for the query in the Publish Query dialog box
- Click Publish

You don’t have to save a query before you publish it. It’s automatically saved locally (prompted) when you publish it.

To retrieve a query
- Choose Query, Retrieve from the menu
- Select the query you want in the Retrieve Query dialog box
- Click Retrieve

To save a query
- Select Query, Save from the menu
- Select to save the query as a personal query or as an external query.
  - Click My Queries to save the query as a personal query (not accessible to other users)
Click **External Queries** to save the query as an external query.

Click the Save button

By default your query will be saved in the User, Queries subdirectory of the folder your data model is stored in.

(normally C:\Program Files\Hummingbird BI\Downloaded Documents\Data\User\Queries)

Keep in mind that when you save a query you are not saving the data that it retrieved, you are only saving the means of retrieving it. To save the retrieved data you must save the result set (Results, Save As, Results).

The Export SQL Only export option is used to save only the actual SQL code generated by BI/Query. Use this if you want to import your code into another program.

**To load a query**

- Choose the **Query, Open, Query** menu option
- Select the desired query from the saved queries list
  - To open a personal query, click **My Queries**.
  - To open an external query, click **External Queries**.
- Click the **Run** button to open the query and run it

**OR**

- Click **Open** to open the query without running it

Running the query also loads it into the model. So, you can alter the query as before.

Both running the query and loading it will open the Show Query window. You can close or minimize the Show Query Window.

If you are familiar with SQL, the Show Query window is good for viewing your entire query, or reviewing the code that is automatically generated by BI.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Choose <strong>Query, Publish, Query...</strong></td>
<td>The Publish Query dialog box is displayed.</td>
</tr>
<tr>
<td><strong>2.</strong> Type <strong>CurrentQuarterCourses</strong> in the Query Filename box. Click <strong>Publish</strong></td>
<td>A prompt to save the query before it is published is displayed.</td>
</tr>
<tr>
<td><strong>3.</strong> Click <strong>OK</strong></td>
<td>The query has been published and the attribute window is redisplayed.</td>
</tr>
<tr>
<td><strong>4.</strong> Click the <strong>New Query</strong> button</td>
<td>The current query is cleared and the Schedule attribute window is closed.</td>
</tr>
<tr>
<td><strong>5.</strong> Choose <strong>Query, Retrieve</strong></td>
<td>The Retrieve Query dialog box is displayed.</td>
</tr>
</tbody>
</table>

*Closing the attribute window will not clear the query.*
6. Click **My Queries**

The Retrieve Query dialog box for My Queries is displayed.

7. Select **CurrentQuarterCourses**. Click the **Retrieve** button

The query is loaded and the Student Tables window is redisplayed.

### 3.11 Formatting Numbers

You can change the default display format for each attribute in the attribute window. Or, after results are returned, you can specify a display format from the results window.

You can select from a number of predefined formats for numeric data. You can also modify one of these formats by including, for example, a dollar sign or percent symbol as a prefix or suffix.
You can also highlight negative values in red, hide zero values, and display values in exponent notation.

**To specify a format**
- Click the question mark beside an attribute in the attribute window,
- Click Edit in the Attribute dialog box,
- Specify a format in the Specify Display Format dialog box,
- Click OK

### 3.12 Applying an Existing Prompt

If you create queries for reuse you may want to qualify an attribute with a **prompt**. A **prompt** will require the person running the query to supply the appropriate value(s) at the time the query is run. That way, the same query can retrieve a different set of results each time.

**Qualify an Attribute with a Prompt**
- In an attribute window, click the Qualify box for an attribute.
- With the cursor in the qualification text box, click the data values icon, and then select Prompts from the list.
- In the Prompts dialog box, select a prompt. (If the prompt you want isn’t listed, you can create it (discussed later)).
- Click Insert Prompt.
- If your query is complete, choose Query, Run to run it or publish it for later use

**Objective**

In this exercise, you will modify the **CurrentQuarterCourses** query so that it will display the courses available for the selected (prompted) quarter and view the default display format for an attribute.

1. Retrieve the **CurrentQuarterCourses** (if it is not currently active).
2. Close the **Show Query (SQL)** window if necessary.
3. Select the **Student Tables** window (if it is not currently displayed).
4. Display the **SCHEDULE** attribute window.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
</table>
| 2. Click the **Qualify** box for the **TERM** attribute                      | A check mark is displayed in the Qualify box for the TERM attribute and the qualification tree is displayed at the bottom of the attribute window.  
The TERM attribute is not bolded nor has a bullet next to it.  
The qualification for the TERM attribute is used but the TERM attribute will not be displayed in the results |
| 3. Click on the Data Values Icon, Prompts                                   | The Prompts dialog box is displayed.                                                                 |
| 4. Select **TERM** in Prompt Ids list and click on the **Insert Prompt** button. | The prompt is inserted into the qualification text box.                                               |
| 5. Click on the **question mark** button to the left of the CREDIT_HRS attribute | The Attribute ‘CREDIT_HRS’ dialog box is displayed                                                 |
6. Click the **Edit** button. The Specify Display Format dialog box is displayed.

7. Click **Cancel**. The attribute window is re-displayed.

8. **Publish** the query as **PromptedQuarterCourses**.

9. **Run** the query. A prompt to enter the term is displayed.

10. **Type** the code for the quarter desired (i.e. **200420**) and click **OK**. The query is run and the results are displayed in a separate window.
3.13 Deleting Queries

**To delete a query**

- Select *Query, Retrieve* from the menu
- Select the query you want in the Retrieve Query dialog box
- Click *Delete*

**Objective**

In this exercise, you will **delete** the *CurrentQuarterCourses* query.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Choose Query, Retrieve</td>
<td>The Retrieve Query dialog box is displayed.</td>
</tr>
<tr>
<td>2. Click <em>My Queries</em></td>
<td>The Retrieve Query dialog box for <em>My Queries</em> is displayed.</td>
</tr>
<tr>
<td>3. Select <em>CurrentQuarterCourses</em> in the Saved Queries list. Click the <em>Delete</em> button</td>
<td>The Delete Published Query dialog box is displayed.</td>
</tr>
<tr>
<td>4. Click the check box for <strong>Also delete local copy</strong></td>
<td>The repository and local copies of the query are checked for deletion.</td>
</tr>
<tr>
<td>5. Click <em>Yes</em></td>
<td>The query is deleted and the Retrieve Query dialog box is displayed.</td>
</tr>
<tr>
<td>6. Click the <em>Close</em> button</td>
<td>The Student Tables window is redisplayed.</td>
</tr>
</tbody>
</table>
3.14 LAB 1

- Create a query from the SCHEDULE data object that displays the following attributes:
  TERM, SUBJECT, COURSE_NUMBER, TITLE, MAX_ENROLL, ACTUAL_ENROLL, and SEATS_AVAILABLE
- Qualify the query by the TERM. Use an existing prompt.
- Reorder the columns so that TERM is the last column.
- Sort the query in descending order using the ACTUAL_ENROLL attribute.
- Set the number of rows retrieved before prompt to 1000.
- Publish the query as Lab1.
- Run the query using 200120 for the TERM prompt.

- Delete both the repository and the local copies of the query.
3.15 Including a Numeric Condition in a Query

Qualify an Attribute with a Numeric Condition

- In an attribute window, click the Qualify box for an attribute.
- Select the desired operator from the Operator List.
- With the cursor in the qualification text box, enter the numeric condition.
- If your query is complete, choose Query, Run to run it or publish it for later use.

Objective

In this exercise, you will create a query from the SCHEDULE data object that will display the courses available that have a maximum enrolment of less than 15.

1. Create a new query from the SCHEDULE data object that contains the following attributes:
   - SUBJECT
   - COURSE_NUMBER
   - TITLE
   - CREDIT_HOURS
   - MAX_ENROLL
   - TERM_DESC

2. Sort the rows by the MAX_ENROLL attribute in descending order.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Click the <strong>Qualify</strong> box for the MAX_ENROLL attribute</td>
<td>A check mark is displayed in the Qualify box for the MAX_ENROLL attribute and the qualification tree is displayed at the bottom of the attribute window</td>
</tr>
<tr>
<td>2. Click in the <strong>Operator List</strong> and select the <strong>&lt; Less Than</strong> operator</td>
<td>The &lt; operator is displayed in the operator list box</td>
</tr>
<tr>
<td>3. Click in the <strong>Qualification Text Box</strong> and type <strong>15</strong></td>
<td>The qualification for the MAX_ENROLL attribute is now set for a value of less than 15</td>
</tr>
<tr>
<td>4. Type <strong>500</strong> in the <strong>Rows retrieved before prompt</strong> box in the <strong>Governor Settings</strong> if necessary. Click <strong>OK</strong></td>
<td>The limit has been set and the attribute window is redisplayed.</td>
</tr>
<tr>
<td>5. <strong>Run</strong> the query</td>
<td>The first 500 results are displayed.</td>
</tr>
</tbody>
</table>
3.16 Querying Multiple Data Objects

Some queries will require you to retrieve attributes from more than one data object. If the attributes are directly related (or have a relationship line drawn directly from one to the other) BI/Query will automatically establish the relationship for you. When a relationship is established the line connecting the objects becomes bold. If the objects do not have a direct relationship, meaning there is no line directly connecting them, create the necessary connections; click on the lines connecting the objects, so that you have a bold line connecting all objects you plan to use. Doing this may create a relationship with one or more objects that do not have any select attributes in the query. It is not necessary to select any attributes from the extra object(s).

When creating your queries it is best to use as few data objects as possible. The more objects that must be joined, the longer your query will take to complete.

**To create a query from multiple data objects:**
- Select the attributes needed from the first object
- Close the attribute window
- Double click on the second data object to access its attribute window (a bold dot will appear next to each object being used in the query.)
- Select required attributes
- Make sure a relationship has been established (A dark blue line will connect all objects used in the query)

**Objective**

In this exercise, you will create a query from the SCHEDULE and MEETING data objects that will display the class meeting location and time for classes in a prompted quarter.

1. **Clear** existing queries by clicking the **New Query** button
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Double click the <strong>SCHEDULE</strong> data object.</td>
<td>The <strong>SCHEDULE</strong> data object attribute window is displayed.</td>
</tr>
<tr>
<td>2. In the <strong>Attribute</strong> list select the following attributes (in the indicated order): <strong>TERM_DESC</strong> <strong>CRN</strong> <strong>TITLE</strong></td>
<td>The attributes are selected indicated by attribute name being bolded and a dot added to the left of the attribute name.</td>
</tr>
<tr>
<td>3. <strong>Sort</strong> the query on the <strong>CRN attribute</strong> in <strong>ascending</strong> order.</td>
<td>A number “1” is shown in the sort box indicating the results will be sorted.</td>
</tr>
<tr>
<td>4. <strong>Qualify</strong> the query on the <strong>TERM attribute</strong> using a prompt. <strong>NOTE</strong>: Do not display the attribute in the results.</td>
<td></td>
</tr>
<tr>
<td>5. Close the <strong>SCHEDULE attributes</strong> window</td>
<td>The Student Tables window is redisplayed.</td>
</tr>
<tr>
<td>6. Double click the <strong>MEETING</strong> data object.</td>
<td>The <strong>MEETING</strong> data object attribute window is displayed.</td>
</tr>
<tr>
<td>7. In the <strong>Attribute list</strong> select the following attributes (in the indicated order): <strong>BEGIN_TIME</strong> <strong>END_TIME</strong> <strong>BUILDING</strong> <strong>ROOM</strong></td>
<td>The attributes are selected indicated by attribute name being bolded and a dot added to the left of the attribute name.</td>
</tr>
<tr>
<td>8. Close the <strong>MEETING attributes</strong> window</td>
<td>The Student Tables window is redisplayed.</td>
</tr>
</tbody>
</table>
3.17 Creating and Applying Prompts

Often you want to pull one group of information qualified on a different value every time you run it. By inserting a prompt you can use the same query but change the qualification value each time it is run without ever changing the underlying query. The prompt is inserted into the edit box in place of a value. Then each time the query is run, the user is asked to provide a value to qualify on.

Prompts have two parts: an ID, the prompt's name and the prompt string, the entry instructions to the user.

Creating Prompts

- Select Edit, Prompts from the menu or choose Prompts... from the Data Values box in your qualification tree
- Click New to create a new prompt
- Or select an existing prompt and click Edit
  
  (Note: You cannot edit a prompt created by the administrator)
- Fill in a unique name for the Prompt ID (The end user will not see this name)
- Enter a Prompt String (Ex. Please enter current term:)
- Click OK (your new prompt will appear in the Prompt Ids list)
- Delete an unused prompt by selecting it from the list and pressing Delete
- Click Done
Applying Prompts

Using a prompt is done in much the same way as using a value to qualify your query.

- Add a qualification to your query as before
- Choose Prompts from the Data Values box
- Select the desired prompt from the list or create a new one
- Click Insert Prompt
- Repeat as needed

If an operator that allows for multiple values is used, you can insert as many prompts as are needed into a single qualification. For example, if the BETWEEN operator is used you can prompt for both values.

Only prompts created by the Administrator work properly in published reports. User created prompts will only display the prompt ID, but not the prompt string when a published report is opened.

3.18 Applying Multiple Qualifications

When you qualify more than one attribute, or when you qualify the same attribute more than once, you can specify whether the query must satisfy both qualifications (the “AND” operator) or either qualification (the “OR” operator).

Each time you add an additional qualification, a branch is added to your qualification tree. These branches are connected by a connection operator which is, by default, set to AND. All qualifications joined by the AND operator must be true for the row to be retrieved. Only one of the qualifications must be true for a row to be returned if you join your conditions with the OR operator. To toggle between AND and OR operators, click on the word (and/or).

**AND** – All qualifications connected with the AND operator must but true for the row to be retrieved. In queries that include both AND and OR operators between qualifications the AND operator has a higher priority and is performed first.

**OR** – Only one of the qualifications connected with the OR operator must be true for the row to be returned.

**To include more than one qualification:**

- Click the Qualify box of the attribute you wish to qualify on
- Enter the desired value into the Qualification Text box
- Choose the Qualify box of the next attribute to qualify on or to qualify on the same attribute, click its Qualify box a second time
- Toggle the connection operator to the desired option (AND or OR)
- Group qualifications as needed
- Repeat for as many qualifications as needed
3.19 Including the **AND** Operator in a Query

**Objective**

In this exercise, you will **create** a prompt to prompt the user for the maximum class size and create a query from the **SCHEDULE** data object that will display the courses available during a prompted term that have a maximum enrolment of less than or equal to the prompted value.

1. **Clear** existing queries by clicking the **New Query** button.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select Edit, Prompts</td>
<td>The Prompts dialog box is displayed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Data Type:</td>
</tr>
<tr>
<td>Values:</td>
</tr>
<tr>
<td>String:</td>
</tr>
</tbody>
</table>

2. Click **New**

| The Edit Prompt dialog is displayed |

3. Enter the maximum class size into the prompt.

4. Create a query from the **SCHEDULE** data object.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
</table>
| 3. Type: MaxEnroll in the Name box.  
Type: Enter the Maximum Class Size in the String box.  
Click OK | Your new prompt appears in the Prompts list. |
| 4. Click Close | The Prompts dialog box is closed and the Student Tables window is redisplayed. |
| 5. Double click the SCHEDULE data object. | The SCHEDULE data object attribute window is displayed. |
| 6. In the Attribute list select the following attributes (in the indicated order):  
TERM_DESC  
SUBJECT  
COURSE_NUMBER  
TITLE  
CREDIT_HRS  
MAX_ENROLL | The attributes are selected indicated by attribute name being bolded and a dot added to the left of the attribute name. |
| 7. Sort the query on the MAX_ENROLL attribute in descending order. | A number “1” is shown in the sort box indicating the results will be sorted, |
| 8. Qualify the query on the TERM attribute using a prompt.  
NOTE: Do not display the attribute in the results. | |
| 9. Qualify the query on the MAX_ENROLL attribute using the prompt you just created. | The SCHEDULE attribute window appears as below: |
| 10. Click the Operator List box for the MAX_ENROLL attribute and change Equal to Less than or equal | The qualification tree appears as shown. |
| 11. Set the Rows retrieved before prompt Governor Settings to 500 if necessary. | The limit has been set and the attribute window is redisplayed. |
| 12. Run the query | A prompt to enter the term is displayed. |
| 13. Type the Maximum Class Size desired in the Prompt dialog box (i.e. 15) and click OK | The query is run and the results are displayed in a separate window. |
| 14. Type the code for the quarter desired (i.e. 200330) and click OK | |
3.20 Including the OR Operator in a Query

**Objective**

In this exercise, you will create a query from the SCHEDULE and MEETING data objects that will display classes that begin before 10 am or 6 pm or later.

1. **Clear** existing queries by clicking the New Query button.

2. In the SCHEDULE Attribute list select the following attributes (in the indicated order):

   - TERM_DESC
   - CRN
   - TITLE

3. In the MEETING Attribute list select the following attributes (in the indicated order):

   - BEGIN_TIME
   - END_TIME
   - BUILDING
   - ROOM

4. Sort the query on the BEGIN_TIME attribute in ascending order.
### ACTION (You Do) | COMPUTER RESPONSE / Comments
---|---
1. Click the **Qualify** box for the BEGIN_TIME attribute | A check mark is displayed in the Qualify box for the BEGIN_TIME attribute and the qualification tree is displayed at the bottom of the attribute window.

2. Click the **Operator List** box and change Equal to **Less than** | 

3. Click in the **Qualification text** box and type **1000** (10 AM) | 

4. Click the **Qualify** box for the BEGIN_TIME attribute again | A branch is added to the qualification tree.

5. Click the **Operator List** box and change Equal to **Greater than or equal** | 

6. Click in the **Qualification text** box and type **1800** (6 PM) | The qualification tree appears as shown

7. Click **and** | The and operator is changed to the or operator.

8. Set the **Rows retrieved before prompt Governor Settings** to **500** if necessary. | The limit has been set and the attribute window is redisplayed.

9. **Run** the query | The results window is displayed.

10. **Close** the results and attribute windows | The Student Tables window is redisplayed.
3.21 Combining Qualifications

When you have specified two or more qualifications in a query, you can combine them so they take precedence over those that are not combined. For example, the qualification \( \text{TERM} = 200130 \) and \( \text{SUBJECT} = \text{BIOL} \) and \( \text{SUBJECT} = \text{CHEM} \) is ambiguous. It is unclear whether its purpose is to produce a) a list of all biology or chemistry classes, all in the summer 2001 term, or b) a list of all biology classes in the summer 2003 term and all chemistry classes.

If you are placing more than two qualifications on your data, you may not retrieve the data you anticipate. If \textbf{AND} and \textbf{OR} operators are used in conjunction with one another, you must group your qualifications in such a way that they are performed in the proper order. For example: the above example could appear as follows:

By default BI/Query puts a higher priority on the \textbf{AND} operator and will perform the \textbf{AND} operation first. Then, the qualification connected by the \textbf{OR} operation will be added on. This means that rows will be returned if the qualification connected by the \textbf{OR} is true, regardless of the results of the other two qualifications. So, the above query will return information for: all biology classes in the summer 2003 term and all the chemistry classes regardless of the term.

To avoid this you must group your qualifications in the order you want them performed (as you might to define order of operation in a math problem).

\textbf{To combine qualifications:}

- Hold down the \textbf{Shift} key and click the \textbf{condition box} of the qualifiers you wish to join.
Select **Query, Qualification, Combine** from the menu.

The result of combining qualifications of the previous example will be as follows:

![Query Results](image)

The query will now return only those classes in the summer 2003 term and the subject is either biology or chemistry.

**To Uncombine the qualifications:**
- Select the handle that represents the group
- Choose **Query, Qualification, Uncombine**

### 3.22 Including the AND - OR Operators in a Query

**Objective**

In this exercise, you will create a **SmallAmPmCourses** query from the **SCHEDULE** and **MEETING** data objects that will display classes that begin before 10 am or 6 pm or later in a prompted term that have a maximum enrolment of less than or equal to the prompted value.
1. **Clear** existing queries by clicking the **New Query** button.

2. In the **SCHEDULE** Attribute list select the following attributes (in the indicated order):
   
   ```
   TERM_DESC
   MAX_ENROLL
   CRN
   TITLE
   ```

3. In the **MEETING** Attribute list select the following attributes (in the indicated order):
   
   ```
   BEGIN_TIME
   END_TIME
   BUILDING
   ROOM
   ```

4. **Sort** the query on the following attributes (in the indicated order):
   
   ```
   BEGIN_TIME attribute in ascending order
   MAX_ENROLL in descending order
   ```

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Qualify the query on the <strong>TERM</strong> attribute using a <strong>prompt</strong>. <strong>NOTE</strong>: Do not display the attribute in the results.</td>
<td>A check mark is displayed in the Qualify box for the TERM attribute and the qualification tree is displayed at the bottom of the attribute window.</td>
</tr>
<tr>
<td>2. Qualify the query on the <strong>MAX_ENROLL</strong> attribute using a <strong>prompt</strong>. <strong>NOTE</strong>: Change the operator to <strong>Less than or equal</strong>.</td>
<td>A check mark is displayed in the Qualify box for the MAX_ENROLL attribute and a branch is added to the qualification tree.</td>
</tr>
<tr>
<td>3. Click the <strong>Qualify</strong> box for the <strong>BEGIN_TIME</strong> attribute.</td>
<td>A check mark is displayed in the Qualify box for the BEGIN_TIME attribute and another branch is added to the qualification tree.</td>
</tr>
<tr>
<td>4. Click the <strong>Operator List</strong> box and change Equal to <strong>Less than</strong>.</td>
<td></td>
</tr>
<tr>
<td>5. Click in the <strong>Qualification text</strong> box and type <strong>1000</strong> (10 AM).</td>
<td></td>
</tr>
<tr>
<td>6. Click the <strong>Qualify</strong> box for the <strong>BEGIN_TIME</strong> attribute again.</td>
<td>Another branch is added to the qualification tree.</td>
</tr>
<tr>
<td>7. Click the <strong>Operator List</strong> box and change Equal to <strong>Greater than or equal</strong>.</td>
<td></td>
</tr>
</tbody>
</table>
### ACTION (You Do)

8. Click **and** operator between the two **BEGIN_TIME** qualifiers
   - The “and” operator is changed to the “or” operator.

9. Click in the **Qualification text** box and type **1800** (6 PM)
   - The qualification tree appears as shown

10. Hold down the **Shift** key and click the condition box of both **BEGIN_TIME** qualifiers.

11. Select **Query, Qualification, Combine**

12. **Publish** the query as **SmallAmPmCourses**

13. **Run** the query using the following:
   - Maximum Class Size - **15**
   - Term - **200330**
   - The results window is displayed.

14. **Close** the results and attribute windows
   - The Student Tables window is redisplayed.
### 3.23 LAB 2

- Create a query from the SCHEDULE and INSTRUCTOR data objects that displays the following attributes:
  
  \[
  \text{TTERM\_DESC, SUBJECT, COURSE\_NUMBER, TITLE, INSTRUCTOR\_FIRST\_NAME, and INSTRUCTOR\_LAST\_NAME}
  \]

  Qualify the query so that the results show the information for a prompted term and where the subject is a prompted subject or the course number is less than a prompted number. Use existing prompts for TERM, SUBJECT and COURSE\_NUMBER. Reorder the columns so that TERM\_DESC is the last column.

- Sort the query in ascending order, first by the SUBJECT and then by the COURSE\_NUMBER.

- Set the number of rows retrieved before prompt to 1000.

- Publish the query as Lab2.

- Run the query using 200120 for the term prompt, MATH for the subject prompt, and 200 for the course number prompt.

### 3.24 Results Window

When data is retrieved it is displayed on your screen in a Query Results window. Results can be displayed in the spreadsheet view (the default display format) or in a form view. In the spreadsheet view all the data is displayed in columns. In the form view you see only one record at a time.

Resize the columns by positioning the mouse pointer on the border between the column headings and dragging to the desired size.
Manipulating Results

Hiding columns: – Choose the Results, Hide Columns menu option.

Column order: – Choose Results, Reorder Columns from the menu. In the resulting dialog box reorder the list of columns to represent the desired order.

Sort order: – Select Results, Filter, Sort. Reorder the list of columns to represent the desired sort order. Each column can be changed to sort in ascending or descending order.

Compute Values: – Choose Results, Filter, Compute. This returns the MIN, MAX values for each column in the result set. For numerical columns, SUM and AVG will also be calculated.

Limited Range: – Select Results, Filter, Range from the menu. This allows you to limit the data that is displayed in your result window. For example, you can choose to only show salary from 20000 to 30000 or only names that start with A (to accomplish this choose a min value of A and a max value of AZ).

3.24.1 Displaying the Form View

By double-clicking on a row number, you can toggle to the form view where your data is displayed vertically, one row at a time. A scrollbar allows you to change the row number and view the respective data.

Each time you manipulate the results, a new result window will open on top of the old. Each of these result windows will be uniquely numbered, the integer being the number of your current query and the numbers behind the decimal representing the number of altered results windows. To go back to your previous results, simply close the current result window.

The Results, Results Options menu item allows column headings and query name to appear when pasting, as well as other options.
The changes you make to the data in the result window do not affect your query. Once you close your result windows your changes will be lost; the next time you run the query the results will return to their original state.

**Objective**

In this exercise, you will explore the capabilities of manipulating the results of the `SmallAmPmCourses` query. You will resize columns, reorder columns, hide columns, resort the results, and view the results in a form view.

1. **Clear** existing queries by clicking the **New Query** button unless the active query is the `SmallAmPmCourses` query (if it is skip step 2 & 3).

2. **Retrieve** the `SmallAmPmCourses` query.

3. **Close** the SQL window.

4. **Run** the query, using 15 for the Maximum Class Size and 200330 for the Term.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position the mouse pointer on the <strong>border</strong> between the <strong>TITLE</strong> and <strong>BEGIN_TIME</strong> column headers.</td>
<td>The pointer appears as a horizontal double-headed arrow.</td>
</tr>
<tr>
<td>2. <strong>Drag the border to the right</strong> until all the titles are displayed.</td>
<td>The columns are resized and appear similar to the results displayed below.</td>
</tr>
<tr>
<td>3. Using the procedures in the above steps, <strong>resize</strong> the remaining columns as necessary.</td>
<td></td>
</tr>
</tbody>
</table>

### Step-by-Step Instructions with Examples:

1. **Select Results, Reorder Columns** (or right click in the results window and select Reorder Columns). The Reorder Columns dialog box is displayed.
2. **Select MAX_ENROLL** in the **Columns** list and **click the Last button**. The MAX_ENROLL column is relocated to the last item in the Columns list.
3. **Click OK**. The Reorder Columns dialog box is closed and the results window is re-displayed with MAX_ENROLL as the last column.
4. **Click the CRN column header**. The CRN column is selected.
5. **Select Results, Hide Columns**. The CRN column is hidden.
9. Select **Results, Reorder Columns**.

   The Reorder Columns dialog box is displayed.
   The red ✶ to the left of “CRN” indicates a hidden column.

10. Select **CRN** in the **Columns** list and click the **Show** button.

    The hidden column indicator is removed.

11. Click the **First** button.

    The CRN column is relocated to the first item in the Columns list.

12. Select **TERM_DESC** in the **Columns** list and click the **Hide** button.

    The TERM_DESC column is hidden and the hidden column indicator is displayed to the left to the left of the column name.

13. Click **OK**

    The Reorder Column dialog box is closed and the results window is re-displayed with CRN as the first column and the TERM_DESC column is hidden.
14. Select Results, Filter, Sort.

The Sort dialog box is displayed.

15. Select BEGIN_TIME in the Available columns list and click the Move button.

The BEGIN_TIME column is relocated to the Sort rows by list. It will be sorted in ascending (default) order.

16. Select MAX_ENROLL in the Selected Columns list and click the Move button.

The MAX_ENROLL column is relocated to the Sort rows by list under the BEGIN_TIME. It will be sorted in ascending (default) order. NOTE: This attribute was sorted in descending order previously.
**ACTION (You Do)** | **COMPUTER RESPONSE / Comments**
---|---
17. Click **OK** | The Sort dialog box is closed and a new results window is displayed with results resorted first in ascending order by **BEGIN_TIME** and then in ascending order by **MAX_ENROLL**.

![Sort dialog box](image)

18. Double-click on the 1 row header. | The Query Results (Form) is displayed.

![Query Results (Form)](image)

19. Close all result windows. | The Student Tables window is redisplayed.

20. Close **BI/Query** unless you are continuing on to Lab 3. (click yes if you are asked if you want to save the data model) | **BI/Query** is closed.
LAB 3
Modify the result set from Lab2. Do the following:

- Resize the title column so all the titles are displayed.
- Hide the term description column.
- Reorder the columns so that the instructor first name and last name are the first two columns.
- Resort the results by the instructor last name in ascending order.

Prompts
- Course – 200
- Subject – Math
- Term - 200330

Close BI/Query unless you are continuing to Section 4.
4 CREATING REPORTS

Gathering data is only part of the information dissemination process. After extracting the desired data we need to make the data meaningful by presenting it in a compelling fashion. BI/Query Reports is a tool that provides you with a flexible reporting environment to produce reports. You can use either detailed or summary data sources when creating reports. Reports can contain one or more types of presentations. Presentations are tables, charts, and crosstabs that you use to present data. BI/Query Reports is the reporting tool for BI/Query. The two are dependent on each other for data and reporting needs.

- Tables provide a quick and easy method of presenting your data. They display detailed data in columns, under headings, appearing across the top of the table.
- Charts display data in a graphical format. They allow you to summarize and rearrange your data to help you recognize patterns, trends, and other relationships that may not be apparent in tables and crosstabs.
- Crosstabs allow you to summarize and view your data dynamically. They display data in a matrix of rows and columns, with headings appearing across both the top and sides.

4.1 Introduction

In this section we will cover the fundamentals of creating reports.

In this section, you will learn how to:

- Start BI/Query Reports
- Send results of a query to BI Query Reports
- Use the Presentation Designer
- Create a table presentation
- Use a predefined style for a table presentation
- Arrange data
- Reorder columns
- Resize columns
- Change titles
- Change how data is displayed
- Publish/Save a report.
- Retrieve/Open a report
- Refresh the data in a report

4.2 Start BI/Query Reports

Start BI/Query Reports from BI/Query.

To start BI/Query Reports

- Start BI-Query User from Novell-delivered Applications using the previously discussed logon procedures
- Choose Tools, BI/Suite, BI/Query Reports or click the BI/Query Reports button
- Choose File, Retrieve and select the desired report
### Objective

In this exercise, you will start BI/Query Reports and display and explore the BI/Query Reports Application window.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Click on the <strong>BI/Query Reports</strong> button</td>
<td>The BI/Query Report application is started.</td>
</tr>
<tr>
<td>2. Choose File, Retrieve</td>
<td>The Retrieve Report window is displayed.</td>
</tr>
</tbody>
</table>

1. **Click on the BI/Query Reports button**
2. **Choose File, Retrieve**

#### 1. **Click on the BI/Query Reports button**

![BI/Query Reports button](image)

The BI/Query Report application is started.

#### 2. **Choose File, Retrieve**

![Retrieve Report window](image)

The Retrieve Report window is displayed.

1. **In the left pane click Training**
2. **Select the SampleReport.rep file in the right pane (Contents of Training) and click OK.**
3. **Click OK.**

![Retrieve Data window](image)

The Data Warehouse connection window is displayed.

1. **In the left pane click Training**
2. **Select the SampleReport.rep file in the right pane (Contents of Training) and click OK.**
3. **Click OK.**

The Data Warehouse connection window is displayed.
### ACTION (You Do)

<table>
<thead>
<tr>
<th>ACTION</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. <strong>Type in your User Name and Password</strong></td>
<td><strong>The report is displayed.</strong></td>
</tr>
</tbody>
</table>

**Enter Connection Information**

- **Connection:** data1.com
- **Database User:**
- **Database Password:**

---

**OK**

**Cancel**

**Help**
4.3 The BI/Query Reports Application Window

The BI/Query Reports Application window includes the following elements:

| **Title Bar:** | This displays the name of the **program** (BI/Query Reports), the **Report** in use (SampleReport.rep) and the **window navigation controls** (minimize, restore, close) |
| **Menu Bar:** | This displays the program’s **primary commands**. The available options depend on the particular object with which you are working as well as the particular task you are performing. |
| **Toolbar:** | This displays a number of **shortcut buttons** for performing common BI/Query Reports operations. When you position the mouse pointer on one of these buttons, a **ScreenTip** (the name of the button) appears next to the pointer. BI/Query Reports includes several different toolbars. |
| **Desktop:** | This area, which occupies the majority of the screen, is used to display your work. The desktop currently displays the Sample Report. |
| **Status bar:** | This displays helpful information as you use the program. The “Ready” indicator, which appears at the left side of the Status bar, lets you know that the program is ready for input. |
4.4 Creating Reports

Creating a report involves getting a result set either by creating or using an existing query, deciding which presentation(s) to use in the report and then formatting the report. The most common way of presenting data in a report is to use tables. Tables work best for presenting detailed data, preparing forms, and creating large lists of information.

**To start BI/Query Reports from BI Query User**
- Retrieve a results set
- Choose Results, Show as Report, BI/Query Reports
- Create the report using the Presentation Designer

**Objective**

In this exercise, you will create a report based on the existing query, SmallAmPmCourses. You will use the Presentation Designer to create the report with a table presentation. After the report is created you will modify the report to rearrange the columns, resize columns, use column properties to change font alignment, and change the report title.

1. **Start BI/Query User**
2. **Retrieve** the SmallAmPmCourses query
3. **Run** the query
   a. Enter 15 for the maximum class size
   b. Enter 200640 for the term

The result set is now displayed

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Choose Results, Show as Report,</td>
<td>The Presentation tab of the Presentation Designer dialog box is</td>
</tr>
<tr>
<td>BI/Query Reports</td>
<td>displayed.</td>
</tr>
</tbody>
</table>
### ACTION (You Do)

#### COMPUTER RESPONSE / Comments

2. Ensure **Table** is selected and click the **Next** button. The Style tab of the Presentation Designer dialog box is displayed.

3. Change the Title to **My Report**

4. Select **Columnar** in the Choose a Style list

5. Click the **Next** button. The Arrange Data tab of the Presentation Designer dialog box is displayed.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Drag the TERM_DESC column from the Columns list to the Available data list</td>
<td>The TERM_DESC will not be displayed in the report.</td>
</tr>
<tr>
<td>7. Drag MAX_ENROLL column in the Group by list to the end of the Columns list</td>
<td>The MAX_ENROLL column will now be the last column displayed in the report.</td>
</tr>
</tbody>
</table>

### Column Control Bar

8. Click the Finish button and close the Tip dialog box if necessary.

   The report is displayed.

   ![Presentation Designer](image)

   **My Report**

<table>
<thead>
<tr>
<th>BEGIN_TIME</th>
<th>CRN</th>
<th>TITLE</th>
<th>END_TIME</th>
<th>BUILDING</th>
<th>ROOM</th>
<th>MAX_ENROLL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0700</td>
<td>40456</td>
<td></td>
<td>ET</td>
<td>136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0700</td>
<td>40457</td>
<td></td>
<td>ET</td>
<td>136</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>0700</td>
<td>40458</td>
<td></td>
<td>ET</td>
<td>136</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>0800</td>
<td>40034</td>
<td>Physical</td>
<td>ES</td>
<td>118</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>0800</td>
<td>41662</td>
<td>Fluid Power</td>
<td>ET</td>
<td>304</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>0900</td>
<td>43753</td>
<td>Reinforced</td>
<td>ET</td>
<td>106</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

9. Point to the END_TIME column header on the Column Control bar and drag it to a position between the BEGIN_TIME and the CRN columns.

   The END_TIME column is relocated.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. On the Column Control bar, point to the border between the TITLE and</td>
<td>The TITLE column is resized.</td>
</tr>
<tr>
<td>BUILDING columns and drag the border to the right increasing the width of the</td>
<td></td>
</tr>
<tr>
<td>TITLE column</td>
<td></td>
</tr>
<tr>
<td>11. Double-click the BEGIN_TIME label</td>
<td>The Text Editor dialog box is displayed.</td>
</tr>
<tr>
<td>12. Type BEGIN and click OK</td>
<td>The label is renamed</td>
</tr>
<tr>
<td>13. Using the procedure above, rename the following columns:</td>
<td>The labels are renamed</td>
</tr>
<tr>
<td>END_TIME to END</td>
<td></td>
</tr>
<tr>
<td>MAX_ENROLL to MAX</td>
<td></td>
</tr>
<tr>
<td>14. Hold down the [Ctrl] key and click the following columns:</td>
<td>All columns except the TITLE column are selected.</td>
</tr>
<tr>
<td>BEGIN_TIME</td>
<td></td>
</tr>
<tr>
<td>END_TIME</td>
<td></td>
</tr>
<tr>
<td>CRN</td>
<td></td>
</tr>
<tr>
<td>BUILDING</td>
<td></td>
</tr>
<tr>
<td>ROOM</td>
<td></td>
</tr>
<tr>
<td>MAX_ENROLL</td>
<td></td>
</tr>
<tr>
<td>15. Click the Properties button</td>
<td>The properties dialog box is displayed.</td>
</tr>
<tr>
<td>16. Select the Font tab and select the Center option in the Justification,</td>
<td>The report is re-displayed with all entries in the selected columns horizontally centered.</td>
</tr>
<tr>
<td>Horizontal box. Click OK</td>
<td></td>
</tr>
</tbody>
</table>

### My Report

<table>
<thead>
<tr>
<th>START</th>
<th>END</th>
<th>CRN</th>
<th>TITLE</th>
<th>BUILDING</th>
<th>ROOM</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>0800</td>
<td>1250</td>
<td>30046</td>
<td>Elementary French</td>
<td>HU</td>
<td>109</td>
<td>15</td>
</tr>
<tr>
<td>1250</td>
<td>30047</td>
<td></td>
<td>Elementary French</td>
<td>HU</td>
<td>109</td>
<td>15</td>
</tr>
<tr>
<td>0900</td>
<td>1250</td>
<td>30129</td>
<td>Seminar: Hearing Conservation</td>
<td>PH</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>1150</td>
<td>30428</td>
<td></td>
<td>Fundamentals of Video Production</td>
<td>MH</td>
<td>75</td>
<td>15</td>
</tr>
</tbody>
</table>

17. Leave the report open.
4.5 Publishing/Retrieving and Saving/Opening Reports

Publishing a report stores the report in the repository and can be shared by other users whereas saving a report saves the report to your local drive and is only available to you; you specify who can have access to the report. Retrieving a report retrieves the report from the repository and opening a report opens the report from your local drive.

Before you save a report you specify how the report opens. This is accomplished in the Tools, Preferences menu.

To specify how a report opens

➢ Choose Tools, Preferences
➢ On the General page, choose whether or not you want the reports refreshed automatically, or if you want to be prompted each time you open the report
➢ Click OK

To set security and publish a report

By default, when you publish a report you are the only one that has access to it. You can grant users access to your reports using these three permissions.

- Read access allows users to view and print, but not to change, the report.
- Write access allows users to view, print, modify, schedule, refresh, and re-publish the report.
- Refresh allows users to refresh the report.

➢ Choose File, Publish with the report open in BI/Query Reports
➢ Click Set Security in the Publish dialog box
➢ In the Set Security dialog box, select the form of security you want to assign and the users and groups to whom you want to grant or deny it
➢ Click OK when you have finished setting security
➢ Type a description for the report in the Publish to Repository dialog box (This helps users decide whether they need to look at the report)
➢ Click the browse button if you want to publish the report to a folder other than the one shown
➢ Select the folder you want in the Select Folder dialog box
➢ Click Publish

A report must be saved before it can be published.

A user cannot delete a report they publish (discussed later).

Only prompts created by the Administrator work properly in published reports. User created prompts will only display the prompt ID, but not the prompt string when a published report is opened.

To retrieve a report using BI/Query Reports
If you are starting BI/Query Reports, click Repository Reports in the Welcome to BI/Query Reports dialog box or choose File, Retrieve if you are already in BI/Query Reports

Select the report you want in the Retrieve Report dialog box

Click OK

**To save a report**

Choose File, Save

If the Save AS dialog appears, specify the name and location of the report

Click Save

**To open a report**

Choose File, Open

In the Open dialog box, locate a file, then click Open

If the Retrieve Data dialog box appears, select an option, then click OK

### Objective

In this exercise, you will specify how a report opens, publish the report to include setting the security for the report and then you will retrieve the report.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Choose Tools, Preferences</td>
<td>The Preferences dialog box is displayed.</td>
</tr>
<tr>
<td>ACTION (You Do)</td>
<td>COMPUTER RESPONSE / Comments</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Ensure the <strong>Ask me each time</strong> is selected in the <strong>When Opening this report</strong> box. Click <strong>OK</strong></td>
<td>The Preferences dialog box is closed.</td>
</tr>
<tr>
<td>3. Choose <strong>File, Publish</strong></td>
<td><img src="image" alt="BI/Query Reports" /> <strong>You must save the report before publishing.</strong> Do you want to save it now?</td>
</tr>
<tr>
<td></td>
<td>The Publish to Repository dialog box is displayed.</td>
</tr>
<tr>
<td>4. Click <strong>Yes</strong></td>
<td>The Save As dialog box is displayed.</td>
</tr>
<tr>
<td>5. In the File name box type <strong>trngxx_MyReport</strong> <em>(xx is your workstation number)</em></td>
<td>The Publish to Repository dialog box is displayed.</td>
</tr>
<tr>
<td></td>
<td>In the <strong>Description</strong> box, type a <strong>brief description</strong> of the report.</td>
</tr>
<tr>
<td>6. In the Description box, type a <strong>brief description</strong> of the report.</td>
<td><img src="image" alt="Publish to Repository" /> <strong>Set Security...</strong></td>
</tr>
<tr>
<td>7. Click the <strong>Set Security</strong> button</td>
<td>The Set Security dialog is displayed.</td>
</tr>
<tr>
<td>ACTION (You Do)</td>
<td>COMPUTER RESPONSE / Comments</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>8. Select <strong>Refresh</strong> in the Secured Items pane</td>
<td></td>
</tr>
<tr>
<td>9. Click the + sign to the left of the <strong>Training</strong> group.</td>
<td>The Training group is expanded.</td>
</tr>
<tr>
<td>10. Ensure <strong>Training</strong> is still selected and click the <strong>Grant</strong> button</td>
<td>The Training group is granted Refresh and Read permissions for the report. Individual members of the group inherit those permissions.</td>
</tr>
</tbody>
</table>
11. Click the **OK** button

   The Set Security dialog box is closed and the Publish to Repository dialog box is redisplayed.

12. Click on the **folder button** to the right of the Folder box

   The Select Folder dialog box is displayed.
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Select the <strong>Training</strong> folder and click <strong>OK</strong></td>
<td>The Select Folder dialog box is closed and the Publish to Repository dialog box is redisplayed.</td>
</tr>
<tr>
<td>14. Click the <strong>Publish</strong> button</td>
<td>The report is published, the Publish to Repository dialog box is closed and an information dialog box is displayed.</td>
</tr>
<tr>
<td>15. <strong>Click OK</strong></td>
<td>The BI/Query Reports information dialog box is closed and the report is redisplayed.</td>
</tr>
</tbody>
</table>
| **16. Close** the report | |}
<p>| **17. Choose <strong>File, Retrieve</strong> | The Retrieve Report dialog box is displayed. |</p>
<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. If necessary, select the <strong>Training</strong> folder, then select the <strong>trnxx_MyReport.rep</strong> (xx – your workstation number) report and click <strong>OK</strong></td>
<td>The Retrieve Data dialog box is displayed.</td>
</tr>
<tr>
<td>19. Click <strong>OK</strong></td>
<td></td>
</tr>
<tr>
<td>20. If necessary enter your connection information and click <strong>OK</strong></td>
<td>The Retrieve Data dialog box is closed and the prompts are displayed</td>
</tr>
<tr>
<td>21. Enter <strong>200640</strong> for the <strong>Term</strong> prompt and <strong>15</strong> for the <strong>MaxEnroll</strong> prompt</td>
<td>The report is displayed.</td>
</tr>
<tr>
<td>22. <strong>Close</strong> the report</td>
<td></td>
</tr>
</tbody>
</table>

### 4.6 Deleting Reports

While it is not possible for a user to “delete” a published report, we have devised a process to eliminate (delete) unwanted reports from the repository. This process moves the unwanted report the current folder to a delete folder from which the administrators can delete the reports. You can delete a locally saved report.

**To retrieve a report using BI/Query Reports**

- If you are starting BI/Query Reports, click Repository Reports in the Welcome to BI/Query Reports dialog box or choose File, Retrieve if you are already in BI/Query Reports.
- Select the report you want to delete in the Retrieve Report dialog box.
- Click **OK**.
- Choose File, Publish with the report open in BI/Query Reports.
- Click the browse button.
- Select the **ZZ_DELETE_FOLDER** in the Select Folder dialog box.
- Click **Publish**.
**Objective**

In this exercise, you will move the published `trng_xx_MyReport` to the delete folder and delete the locally saved report.

<table>
<thead>
<tr>
<th>ACTION (You Do)</th>
<th>COMPUTER RESPONSE / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Retrieve the trngxx_MyReport</td>
<td>The report is displayed.</td>
</tr>
<tr>
<td>2. Choose File, Publish</td>
<td>The Publish to Repository dialog box is displayed.</td>
</tr>
<tr>
<td>3. Click the browse button</td>
<td>The Select Folder dialog box is displayed.</td>
</tr>
<tr>
<td>4. Select the ZZ_DELETE_FOLDER and click OK</td>
<td>The Publish to Repository dialog box is redisplayed.</td>
</tr>
<tr>
<td>5. Click the Publish button and click OK</td>
<td>The information dialog box is displayed and then the report is redisplayed.</td>
</tr>
<tr>
<td>6. Close the report</td>
<td></td>
</tr>
<tr>
<td>7. Choose File, Open</td>
<td>The Open dialog box is displayed.</td>
</tr>
<tr>
<td>9. Click the Yes button</td>
<td>The report is deleted and the Open dialog box is redisplayed.</td>
</tr>
<tr>
<td>10. Close the Open dialog box.</td>
<td></td>
</tr>
<tr>
<td>11. Close BI/Query Reports</td>
<td></td>
</tr>
</tbody>
</table>
4.7 LAB 4 (FINAL CASE STUDY)

- Create a query from the SCHEDULE data object so that the results display the following attributes:
  - TERM_DESC
  - TITLE
  - DEPT
  - PRIMARY_INSTRUCTOR_LAST_NAME
  - PRIMARY_INSTRUCTOR_FIRST_NAME
  - PRIMARY_BEGIN_TIME
  - PRIMARY_END_TIME
  - PRIMARY_BUILDING
  - PRIMARY_ROOM

- Qualify the query so that the results show the information for:
  - A prompted TERM and
  - Where the PRIMARY_SESSION_IND is not null and
  - Where the PRIMARY_BEGIN_TIME is null or
  - Where the PRIMARY_ROOM is null

- Reorder the columns so that TERM_DESC is the last column.

- Sort the query first in ascending order by DEPT and then in ascending order by the PRIMARY_INSTRUCTOR_LAST_NAME

- Publish the query as Lab4.

- Run the query and use 200410 for the TERM prompt

Create a report from the Lab4 query results. The report should be a stacked table presentation that fits on one page titled “Final Case Study”

Arrange the data so that it is grouped by Dept and as shown below
• Rename the following labels:
  o PRIMARY_INSTRUCTOR_LAST_NAME to INSTRUCTOR
  o PRIMARY_BEGIN_TIME to BEGIN
  o PRIMARY_END_TIME to END
  o PRIMARY_BUILDING to BLDG
  o PRIMARY_ROOM to RM
• Resize columns as necessary
• Modify column properties so that <null> values are displayed as blank
• Publish the report in the Training folder as trngxx_LAB4 (use your workstation number for xx).
  o Set the security so that all members of the Training group can refresh the data.
Final Case Study

<table>
<thead>
<tr>
<th>DEPT</th>
<th>TITLE</th>
<th>INSTRUCTOR</th>
<th>BEGIN</th>
<th>END</th>
<th>BLDG</th>
<th>RM</th>
</tr>
</thead>
<tbody>
<tr>
<td>9999</td>
<td>Gr. Dynamics &amp; Fac. of Em. Mgt</td>
<td>Arnold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Em. Mgmt &amp; Chal. of terr.</td>
<td>Labadie</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A/HI</td>
<td>B Gallery Internship</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Gallery Internship</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Gallery Intern</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art History Internship</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Gallery Internship</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Gallery Internship</td>
<td>Eereal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WA Art Consortium Intern</td>
<td>Clark-Langager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gallery Workshop</td>
<td>Clark-Langager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gallery Independent Study</td>
<td>Clark-Langager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art Hist Instructional Assist</td>
<td>Janson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Studies 19th Art</td>
<td>Miller</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Assistant</td>
<td>Miller</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCT</td>
<td>Internship in Accounting</td>
<td>Singleton</td>
<td>PH</td>
<td>OFC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AHE</td>
<td>Field Exp/Adult Education</td>
<td>Chambers</td>
<td>D-EV</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cleanup:

- Delete the following queries, both the repository and local copies:
  - SmallAMPMCourses
  - Lab2
  - Lab4
- Delete the trngxx_Lab4 report from both the repository and the local drive.

Congratulations!!

You have completed the class.