MS Access for SmartStream

http://academicdepartments.musc.edu/vpfa/finance/systemsprocedures/
Table of Contents

Chapter 1
  The Basics ................................................................. 3
  Creating a New Database .............................................. 4
  Access Objects ............................................................ 5
  Attaching to SmartStream Tables ............................... 6
  Exercise 1 ................................................................. 6

Chapter 2
  Query Basics ............................................................. 7
  Create a New Query .................................................... 8
  Exercise 2 ................................................................. 9
  Sorting ....................................................................... 10
  Adding Criteria .......................................................... 10
  Query Results ............................................................ 11
  Exercise 3 ................................................................. 11
  Saving a Query ........................................................... 12
  Modifying a Query ...................................................... 12
  Exercise 4 ................................................................. 13
  Print Preview ............................................................. 13
  Expressions for Query Criteria ................................. 14
  Exercise 5 ................................................................. 15
  Export to Spreadsheet .................................................. 16
  Calculations in Queries ............................................... 17
  Parameter Query ......................................................... 19
  Exercise 6 ................................................................. 20

Chapter 3
  Creating a Report using the Report Wizard .................. 21
  Report Sections .......................................................... 24
  Exercise 7 ................................................................. 25
  Modifying a Report in Design View ............................. 25
  Report Properties ....................................................... 26
  Exercise 8 ................................................................. 27
  Printing Reports ........................................................ 27
Chapter 1  The Basics

What is a Database?

A database is a list or collection of lists that store related information in an organized manner, making for fast and easy retrieval of data. Common examples of databases include mailing lists, address books, inventory lists, medical records, and sales orders.

Electronic Relational Database

There are, however, some problems with keeping a database on paper:

1. The larger they get the more difficult they are to maintain, and the longer it takes to get information from them.
2. There is no efficient way to relate one list to another.

Electronic databases make it much easier to manage large collections of information. MS Access is an electronic relational database-management system for Windows. It enables you to store, organize, and manipulate collections of information in an electronic format.

Relational databases, such as Access, allow you to relate multiple tables to one another by the use of common fields. They are fast and flexible but most of all they cut down on the entry of redundant information.

Database terminology

Shown below is an example of a table:

<table>
<thead>
<tr>
<th>Ledger Entity</th>
<th>Acct</th>
<th>Unit</th>
<th>Project</th>
<th>Reporting</th>
<th>Year</th>
<th>Amt Class</th>
<th>Processing Year</th>
<th>Period 1 Bal</th>
<th>Period 2 Bal</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUCR</td>
<td>50301</td>
<td>2220000</td>
<td>80001</td>
<td>1010</td>
<td>01</td>
<td>ACTUAL</td>
<td>1997</td>
<td>950</td>
<td>1045</td>
</tr>
<tr>
<td>MUCR</td>
<td>50301</td>
<td>2220000</td>
<td>80001</td>
<td>1010</td>
<td>01</td>
<td>BUDFUND</td>
<td>1997</td>
<td>1000</td>
<td>1050</td>
</tr>
<tr>
<td>MUCR</td>
<td>50301</td>
<td>2220000</td>
<td>80002</td>
<td>1020</td>
<td>01</td>
<td>ACTUAL</td>
<td>1997</td>
<td>845</td>
<td>875</td>
</tr>
<tr>
<td>MUCR</td>
<td>50301</td>
<td>2220000</td>
<td>80002</td>
<td>1020</td>
<td>01</td>
<td>BUDFUND</td>
<td>1997</td>
<td>850</td>
<td>900</td>
</tr>
</tbody>
</table>

- **Database**: collection of data related to a topic or purpose, and the tools for using the data
- **Table**: collection of related information stored in rows and columns
- **Field**: a column in a table that contains a category of information
- **Record**: all of the fields for one item in a database
- **Data value**: one item of data
Access for SmartStream Reporting

Access can be used to create queries and reports on the SmartStream data. All SmartStream data is stored in tables, and therefore it can be imported into Access. In this class, we will learn how to attach to the SmartStream tables and create queries and reports.

Starting MS Access

To open MS Access, do ONE of the following:

• Double-click the Access icon from your desktop.
• OR-
• Click the Access icon (yellow key) from the Office Shortcut Bar.
• OR-
• Select the Start button, Programs, and Microsoft Access.

Create a New Database

After opening Access, you have the option to open an existing database or create a new blank database. When creating a new blank database, be sure to choose the correct network drive and path prior to creating the file name. You may want to use a different drive from the default. When that is completed, click Create.

A new, blank database opens. There are no tables, queries, or other objects in the new file. **Tip:** One database can be used for all SmartStream reporting needs.
MS Access Objects

Access consists not only of the basic data, but also the related items you can use to work with the data. There are six objects in Access: tables, forms, queries, reports, macros, and modules. For SmartStream purposes, we will only discuss tables, queries and reports.

Tables: Objects used to store a collection of related information in an arrangement of rows and columns. For SmartStream, you will attach to the SmartStream tables to access the data.

Queries: Objects that enable you to analyze the data stored in tables by sorting, calculating, and summarizing.

Reports: Objects that enable you to analyze and print data in a specific format.

Attaching to the SmartStream Tables

- From the File Menu, select 'External Data', and 'ODBC Database'.
- Select ‘Link to the data source by creating a linked table.’ And OK
- The Select Data Source window will appear.
- Select the Machine Data Source tab.
- Select DARKWING and click the OK button.
• The Logon to Sybase box will open.
  Server Name: DARKWING
  Login ID: SS Login ID (ALLCAPS, unless it is your netid)
  Password: SS password (case sensitive)
  Database: MUSCreports
  Click OK

• The Link Tables window opens displaying a list of all the tables in the Data source.

• Select the desired table(s), and click the OK button. Select
  dbo_DW_ldr_acct_bal_v and dbo_DW_LTD_Tran_Invoice_v click OK.
  Note: A window will open that requests you select a unique record identifier
  for each view/table you are attaching to. Do not select any fields, but
  click OK or Cancel.

• The attached table(s) will now appear in the Tables tab of your Access database.

Exercise 1

Attach to the following tables:
  dbo_DW_ldr_acct_bal_v
  dbo_DW_FYcurrent_Tran_PJL_v

Note: When you begin to use Darkwing in your office, be sure to include the
Save Password feature when selecting the Tables. This will save you
from having to login to Darkwing each time you use that table in a
query.

Darkwing Data Warehouse Data Dictionary and Table Status:

http://www.musc.edu/fsm/ssstrain/ref_tables_cat.html
Chapter 2  Queries

This section will introduce you to the process of creating a query. You will learn how to create, save and run a query and how to get specific information from a query.

Following this discussion you should be able to:

• Create a select query
• Apply criteria to narrow the focus of a query
• Perform operations on columns including sorting and creating calculated columns

Why Use Queries?

There are many situations in which you do not need to see all of the data in your table(s). You may only want to see certain fields or records. Queries are used to view and analyze data. Using queries allows you to:

• Choose Fields - You don’t have to include all of a table in you query. For example, you can create a query that shows names and phone numbers without addresses or other information.

• Choose Records - You can specify criteria that records must meet to be included in your query.

• Sort Records - Information can be viewed in a specific order. You can create a query that sorts the records and then use the query as a data source for a report.

• Perform Calculations - New fields called calculated fields can be created.

• Data Tables are updated constantly. Every time a query is run, the most current data is returned.

Concepts of Creating a Query

Queries are created in the query Design View window. Select Queries have three components:

1. The source of data (table, multiple tables, or another query).
2. The question (which is the query design).
3. The answer (which is the temporary result called the query Datasheet View). In Access, the result of a select query is placed in a temporary datasheet.
Creating a New Query

- Click the Create tab.
- Click the Query Design button.
- From the 'Show Table' dialog box, select dbo_DW_ldr_acct_bal_v TABLE and click the ADD button. Notice that the field list of the table or tables appears in the upper pane of the query Design View window.
- Click the Close button to close the 'Show Table' dialog box.

Query Window- Design View

![Query Window screenshot](image-url)
Selecting Fields

There is a direct relationship between what you place in the design grid and what is displayed in the query results. You must drag the field from the field list to a column of the design grid for a field to appear in the query results.

Adding fields to the design grid (Several different methods)

1. In the dbo_DW_ldr_acct_bal_v field list, select ldr_entity_id and drag it to the first empty Field cell in the design grid.

2. Click in the next empty Field cell. Open the drop-down list and select account from the dbo_DW_ldr_acct_bal_v field list displayed.

3. Double click unit from the field list.

Note: To select consecutive fields from the field list, hold the Shift key down while highlighting the fields you want to include. Use the Ctrl key to select non-consecutive fields.

By default, the Show check box is selected

Exercise 2

Add the following fields to the design grid:

  - project
  - reporting
  - year
  - acct_desc
  - processing_yr
  - amt_class_type
  - ldr_amt_1
Sorting Records

By default the records in the query results appear in the same order in which they appear in the table. You can sort up to 10 fields in a query to make the data easier to review and edit. Note that when you sort by more than one field, that Access sorts from left to right.

- In the design grid, click on the Sort cell in the column for account.

<table>
<thead>
<tr>
<th>account</th>
<th>dbo_lid_acct_bal</th>
<th>Ascending</th>
</tr>
</thead>
</table>

- Open the drop-down list and select Ascending (to sort the records by account number).

Adding criteria to select specific records

You can select specific records to appear in a query's results (Datasheet view) by entering criteria for one or more fields in the Criteria cell(s) in the design grid.

Criteria require an exact match for a specific value. For example, entering a project number in the Criteria cell for the project field causes the queryDatasheet view to display only the records with that number.

Note: Access automatically inserts quotation marks (""") around the entry if it is alphanumeric and number symbols (##) around date entries. If the entry is numeric, the number appears without quotation marks.

- In the design grid, click on the Criteria cell in the column for project.
- Type in the project number 10579. Hit Enter and notice the ("") around the project number.

Criteria cell

Using criteria to view records with a specific project number.

- In the design grid, click on the Criteria cell in the column for project.
- Type in the project number 10579. Hit Enter and notice the ("") around the project number.
Query Results

You can run your query once you have it set up the way you want. The results of a select query are placed in a temporary datasheet.

- Click on the Run button. Note: To stop the query Ctrl + Break on the keyboard.
- Observe the results. Use the record selectors to view the number of records returned. Records are in order ascending by account.

Notes: The width of a column can be modified by clicking and dragging the column to the desired width.

Exercise 3

In the design grid of the query, apply the following sort order and criteria: Note: To delete criteria, highlight the criteria and press the delete key.

1. Sort the records Descending by account.
2. Specify the criteria:  project = 10638
3. Run the query.
   How many records are returned? ___________
Saving a query

*Note that a query can be saved in either the design or datasheet view.*

- Click the **Save** button.
- Type `qryAccountBal`.
- Click **Ok**.
- Close the query by selecting **File, Close**.

Modifying a query

If a query doesn’t give the desired results, you can modify it by adding fields, deleting fields, changing the field order, changing sort order, and adding criteria.

- **Open Query**
  - Click the Queries tab.
  - Select the query `qryAccountBal`.
  - Click the Design button to open the Design view of the query.

- **Add fields**
  - Add the following fields: `ldr_amt_2` thru `ldr_amt_13`.

- **Delete field** - `ldr_amt_13` field
  - Click the column selector (grey bar above column name) above the `ldr_amt_13` field. This will highlight the column.
  - Press the delete key on your keyboard.

- **Change the field order**
  *Move* `processing_yr` *after* `amt_class_type`.
  - Click the column selector above the `processing_yr` column.
  - Drag and drop the field after the `amt_class_type` column.

  - Click the **Run** button to view the modified Datasheet.
  - Save the query by selecting the Save button.
  - Close the query.
Exercise 4

In the design view of qryAccountBal query do the following:

1. Add ldr_amt_0 and ldr_amt_13 to the design grid.
2. Delete the ldr_entity_id column from the design grid.
3. Specify the following criteria: project 10579, fy 2010
4. Sort records ascending by account.
5. Run the query.
   How many records are displayed? ______________

Print Preview

You can print the results of a query either after the query has been run or directly from the Database window.

- Click the Print Preview button to preview query results. To print the query results, click the Print button.
- Click the Close button to close the Print Preview window. You return to the Datasheet view.
- Click the View button to return to the Design view.

Expressions for Query Criteria

An expression is a combination of symbols- operators and values- that produces a result. An operator is a symbol or word, such as > and OR, that indicates an operation to be performed on one or more elements. There are several different types of operators including comparison and logical. Expressions are entered in Criteria cells in the design grid.

<table>
<thead>
<tr>
<th>Operators</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Equal to</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Not equal to</td>
</tr>
<tr>
<td>&gt;</td>
<td>Greater than</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or Equal to</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or Equal to</td>
</tr>
<tr>
<td>Between</td>
<td>Within a specified range of values, inclusive.</td>
</tr>
<tr>
<td>In</td>
<td>Equal to any of several values in a specified list.</td>
</tr>
<tr>
<td>Like</td>
<td>Compares to another (pattern, matching)</td>
</tr>
<tr>
<td>And</td>
<td>Two or more criteria must be true</td>
</tr>
<tr>
<td>Or</td>
<td>Two or more criteria of which at least one be true</td>
</tr>
<tr>
<td>*</td>
<td>Wildcard</td>
</tr>
</tbody>
</table>
The list below gives typical expressions used as query criteria.

<table>
<thead>
<tr>
<th>Field</th>
<th>Expression</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project</td>
<td>10080 OR 10093</td>
<td>Uses the OR operator to select records with from either project</td>
</tr>
<tr>
<td>account</td>
<td>5*</td>
<td>Uses wildcard to select records with accounts starting with 5.</td>
</tr>
<tr>
<td>account</td>
<td>&gt;50000 AND &lt; 60000</td>
<td>Select records greater than 50000 and less than 60000</td>
</tr>
<tr>
<td>ldr_amt_8</td>
<td>&gt;=1000000</td>
<td>Selects records with account balances in period 8 greater than or equal to $1,000,000</td>
</tr>
<tr>
<td>ldr_amt_8</td>
<td>Between 500 And 1000</td>
<td>Selects records with account balances in period 8 greater than $500 and less than $1000</td>
</tr>
</tbody>
</table>

If you want to view the records for ACTUAL transactions in processing year 2009 for project number 10579 or 10638, you would do the following.

- In the Criteria cell for project, type 10579 or 10638. Note that both criteria are entered in the same cell because we want only the records that meet all criteria to be displayed.
- In the Criteria cell for processing_yr, type 2009.
- In the Criteria cell for amt_class_type, type ACTUAL (in all caps).
- Click the Run button. The results display all records with amt_class_type ACTUAL occurring in processing year 2009 with project numbers 10579 or 10638.
- Click the Views button to return to the Design view.

Let's try another example. This time we are going to find all expense accounts (start with 5) occurring in processing year 2009 and amount class type ACTUAL within unit 1050000.

- Highlight the criteria in the unit column and hit the delete key on the keyboard to delete the unit criteria.
- In the Criteria cell for unit type 1050000.
- In the Criteria cell for account, type 5*.
- Verify that "ACTUAL" is in the amt_class_type column and "2009" is in the processing_yr column.
• Click the Run button. The results display all expense account numbers in unit 1050000 with amount class type ACTUAL and processing year 2009.
• Click the Save button.
• Select the File menu and Close.

Exercise 5

1. Create a new query.

2. Add the dbo_DW_ldr_acct_bal_v table.

3. Add the following fields to the design grid:
   ldr_entity_id
   account
   acct_desc
   unit
   project
   reporting
   year
   processing_yr
   amt_class_type
   ldr_amt_1 thru ldr_amt_12

4. Using criteria, find all expense accounts (start with 5) occurring in processing year 2009 and amount class type ACTUAL within unit 1047000.

5. Sort the records by project ascending.

6. Run the query.
   How many records are displayed? ____________

7. Save the query and name it qryActBalExercise.
Export to Spreadsheet Application

The results of your query can be exported to a spreadsheet application such as Excel. The following steps can be performed either before or after you run a query.

- Select the External Data tab, Excel.
- The Export-Excel Spreadsheet screen asks for the file name and file format along with the export options.
- View the query results in Excel.

- Close Excel.
- Maximize Access.
- If not already, return to the Design view of qryAcctBalExercise.
Using queries to perform calculations

You can use queries to perform calculations on data. Calculating and summarizing the data enables you to analyze trends in your data.

Calculated fields
You can perform a horizontal calculation on data in each record in a table by adding a calculated field to the design grid. To create a calculated field:

1. Enter an expression in a field cell by typing the name of the column followed by a : and then the expression. If the expression includes field names, you must enter square brackets around each field name. For example, \([\text{ldr_amt}_1]+[\text{ldr_amt}_2]\).

   or

2. Use the expression builder to create the expression. To use the expression builder, right-click in the field cell and select 'Build'.

When you enter an expression in a Field cell, Access supplies a default column name such as \(\text{Expr1}\). You can replace this name with a more meaningful name, such as \(\text{Total}\).

- In the qryAcctBalExercise query, click in the first empty column of the design grid.
- Click the right mouse button in the Field cell and select 'Build…'
- The Expression Builder opens. Double click each field from the middle column that you want to include in your expression separated by the desired arithmetic operator.

Arithmetic operators- (also can use keyboard)

- Click OK.
- Click anywhere in the grey portion of the window to deselect the column.
- In the calculated field column, double click on \(\text{Expr1}\) to select and rename the calculated field.
- Type \(\text{Total}\).
- Run the query.
- Click the Views button to return to the Design view.
Calculating a total for a group of records

You can also use a select query to perform vertical calculation on records in a table. This type of calculation summarizes data in individual fields in a table by using aggregate functions. To create a query with totals, determine which fields to group and which summary operation to perform.

The following example will calculate the total sum account balance for period 12 of 2009 ACTUALS by project.

In the Design view of qryAcctBalExercise do the following:

- Modify the design grid to appear as the following example. Specify criteria to find records for unit 1050000, processing year 2009, and amount class type ACTUAL.

<table>
<thead>
<tr>
<th>Field</th>
<th>Table</th>
<th>Sort</th>
<th>Show</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>unit</td>
<td>dbo_DW_idr_acct</td>
<td>Ascending</td>
<td></td>
<td>&quot;1050000&quot;</td>
</tr>
<tr>
<td>project</td>
<td>dbo_DW_idr_acct</td>
<td></td>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>processing_yr</td>
<td>dbo_DW_idr_acct</td>
<td></td>
<td></td>
<td>&quot;ACTUAL&quot;</td>
</tr>
<tr>
<td>amount_class_type</td>
<td>dbo_DW_idr_acct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>idr_amt_12</td>
<td>dbo_DW_idr_acct</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Click the Totals button. Notice that a Total row has been added to the grid, and "Group By" has been included for each field. The Group By operator under unit, project, processing_yr, and amount_class_type will cause Access to perform the calculation for each unit/project/account combination for a certain processing year and amount class type.

- In the column for idr_amt_12, click the drop down arrow for the Total cell and select Sum.

- Click the Run button.

The results display a sum of account balances in Period 12 for 2009 ACTUALS for all projects within unit 1050000.

- Click the Views button to return to the Design view.
**Parameter Query**

If you expect to run a query repeatedly with changes to the criteria, you can create a parameter query. Parameter queries enable you to enter criteria with the 'Enter Parameter Value' dialog box. To create the prompts, enter the text for the prompt enclosed within square brackets.

For this example use the query we just created with a summary of accounts in period 12 for all projects in a unit. We will convert the query to a parameter query to prompt you for a unit number.

- In the design view of qryAcctBalExercise, double click the criteria cell of the unit column.
- Hit the Delete key on the keyboard. Make sure that the cell is empty.
- Type **[Enter the unit number:]**

- Click the run button. The 'Enter Parameter Value' dialog box opens.
- Enter unit **1050000**.
- Click OK or press Enter.

- The results are displayed.

![Parameter Query Result](image)

- Save and close the query.
Exercise 6

Query Purpose:
Create a parameter query that shows expense detail transactions for ACTUAL FY2010 PJL lines for any given project.

- Include the following fields from the dbo_DW_LTD_Trn_Invoice_v table:
  line_ldr_entity_id, account, unit, project, reporting, year, posting_yr, posting_pd, amt_class_type, date_posted, descp, jrn_id, pmt_rqst_nbr, pmt_rqst_vou_nbr.
- Do not show the amt_class_type column in the Datasheet view.
- Put in criteria to display only Expense accounts (Accounts like 5*).

Run the query for project 10638. How many rows are displayed? __________

Rerun the query for project 10579. How many rows are displayed? __________
Chapter 3 Creating Reports

In Access, you can print queries, but by creating reports you usually make your data more presentable and meaningful. You can specify fields that you want to include, and organize data by grouping and sorting the records. You can also include summary calculations in your reports.

A report can be created either with the Report Wizard or using the Design view. We are going to focus on creating a report using the Wizard, and then go into the Design view to modify it.

Creating a report and selecting the data source

- Click the Create tab. Notice that there are no report objects created yet.
- Click the Report Wizard icon.
- Choose the Table or Query you are basing your report on.

Adding fields to the report

- Single click account to select the field and click on >.
- Double click on acct_desc.
- Do one of the above methods to add unit, project, ldr_amt_9, and ldr_amt_10, and ldr_amt_11 to the report.
- Click on Next>.

Report Groups

Access gives you the option of grouping the report by a field(s), which means that the final report will divide the table into categories of related records. Up to 10 fields can be grouped in a report. Once you have grouped your data, you can specify a sort order. For example, we will group our report by unit and project.

- Select the unit field.
- Click on >.
- Select the project field and click >. Notice in the sample report, unit and project have been pulled out of the detail section and placed above it.
- Click on Next>.
- In the first sort order box, click on the drop-down arrow and select account.
• Click on the **Summary Options** button.
• Observe the options. Only number and currency values have summary options.
• Click on the sum box for ldr_amt_9, ldr_amt_10, and ldr_amt_11.
• Click on **OK**.
• Click on **Next>**.

![Summary Options](image)

### Report Layout and Styles

A *layout* refers to how the data and labels are displayed on the report. You can choose from six layouts.

A *style* defines how the title and the information in the Detail section will be displayed on the report.

• Observe the panel. The Layout is Stepped and the Orientation is Portrait.
• In the Layout box, select **Align Left 1**.
• Click on **Next>**.
• Click on **Next>** to accept the default style of Corporate.

### Adding a title and previewing the report

• Type **March/April/May AcctBal for 2000 Actuals**
• Click on **Finish**.
• Observe the Print Preview window. The report has the title at the top and current date and page number at the bottom. The text fields are left aligned and number fields are right aligned. The records within each unit/project group are sorted by account.
• Click on the report to change to single page view. Click on the report again to return to 100% view.
• Click on the Next Page navigation button.
March/April/May ActBal for 2000 Actuals

<table>
<thead>
<tr>
<th>unit</th>
<th>1040000</th>
</tr>
</thead>
<tbody>
<tr>
<td>project</td>
<td>10000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>account</th>
<th>acc_desc</th>
<th>a_r_9</th>
<th>a_r_10</th>
<th>a_r_11</th>
</tr>
</thead>
<tbody>
<tr>
<td>50100</td>
<td>PERSONAL SERVICE UNCLASSIFIED</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>50101</td>
<td>PERSONAL SERVICE CLASSIFIED</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>50102</td>
<td>RESIDENT SUPPORT</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>50189</td>
<td>FRINGE BENEFITS</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>55106</td>
<td>TRAINING EXPEND</td>
<td>$693.33</td>
<td>$693.33</td>
<td>$693.33</td>
</tr>
</tbody>
</table>

Summary for 'project'= 10000 (5 detail records)
Sum: 693.33  693.33  693.33

<table>
<thead>
<tr>
<th>project</th>
<th>10001</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>account</th>
<th>acc_desc</th>
<th>a_r_9</th>
<th>a_r_10</th>
<th>a_r_11</th>
</tr>
</thead>
<tbody>
<tr>
<td>50201</td>
<td>FREIGHT EXPRESS DELIVERIES</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Summary for 'project'= 10001 (1 detail record)
Sum: 0  0  0

<table>
<thead>
<tr>
<th>project</th>
<th>10004</th>
</tr>
</thead>
</table>

Page Selectors

- Click on the Close button.
Report sections

When you view the design of the report, the window may be divided into several areas. These areas control where the information is printed in a report. The following table describes the various report sections.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Header</td>
<td>Printed in the beginning and is often used for the title and date of the report</td>
</tr>
<tr>
<td>Page Header</td>
<td>Printed at the top of each page; for example column headings</td>
</tr>
<tr>
<td>Group Header</td>
<td>Printed once at the start of each group</td>
</tr>
<tr>
<td>Detail</td>
<td>Contains the fields that will print for every record</td>
</tr>
<tr>
<td>Group Footer</td>
<td>Includes summary calculations for each group</td>
</tr>
<tr>
<td>Page Footer</td>
<td>Prints at the bottom of every page. The expression ’=Page’ will add page numbers.</td>
</tr>
<tr>
<td>Report Footer</td>
<td>Prints at the end of the report; used for summary calculation for all records.</td>
</tr>
</tbody>
</table>

• Observe the design of the report. The Report header contains the title. The Unit header and Project header is for each Group. The Detail section contains the fields. The Page footer contains a control to provide page numbers and function ( =Now() ) to print the current date.

• Observe the controls. A control is a graphical object used in reports. Labels and text boxes (fields) are examples of controls. There are two types of controls:
  1. Bound control- Tied to a field in an underlying table or query, referred to as text boxes.
  2. Unbound controls- Not linked to fields in the underlying table or query, referred to as labels.

• Close the report Design View window.

Renaming a database object
Database objects, such as queries and reports, can be renamed from the Database window. The object must be closed before you rename it.

• Select the report March/April/May AcctBal.
• Click on the text until a box appears around it and it contains an insertion point. (Or right-click on the report and select Rename)
• Type rptMarchAprilMayAcct.
• Press Enter.
Exercise 7

Create a report using the Report Wizard based on the query qryAcctBal.

1. Add the fields (project, account, acct_desc, ldr_amt_10, ldr_amt_11, and ldr_amt_12.
2. Group on project and sort by Account.
3. Summarize the ldr_amt_10, ldr_amt_11, and ldr_amt_12 columns.
4. Make the layout 'Align Left 1', orientation 'Landscape', and the style 'Compact'.
5. Name the report 'Project ActBal'.
6. Preview the report.
7. Close the report.
8. Rename the report to rptProjectActBal.
9. Reopen the report in Design View.

Modifying the report in Design View

After using the Report Wizard to create a report, it can be modified in the Design View. You can switch between Print Preview and Design View using the View button.

As mentioned previously, each part of the report design is a control. Controls can be sized and aligned to the dimension you want. First the control or controls need to be selected. Selected controls will have boxes around the edges called handles.

- Click on Project ActBal in the Report Header section to select the control. Notice the handles.
- Put your mouse on the middle handle on the right side. The pointer changes to a two-headed arrow.
- Drag the handle to the right to resize the title control.
- Rename the title to Project Account Balance.
- Click on Grand Total in the Project Footer section.
- Place the mouse pointer on the large square in the upper left corner of the text box control. This is called the move handle. The mouse pointer changes to hand with a pointing finger when you place it on the handle.
- Drag the control to the right of the form to the left of the sum fields. The pointing finger moves only the selected control.
- Click the Undo button.
- Hold down the <Shift> key while clicking on Grand Total and the three Sum fields in the report footer. Shift/click allows for multiple control selections.
- Place the mouse pointer on the bottom edge of either text box control between the selection handles. The mouse pointer changes to an open hand.
Drag the controls to the right. Notice all controls move.
Click on the left-most **project** in the Project Header section. Click again and notice the cursor is now blinking in the control.
Change the lower case `p` to an upper case `P`.

**Report properties**

Modifying the properties of the controls can enhance the appearance of the report. To do this, select the control, display the property sheet, and change specific property settings. For example, you can use the Format property to customize the way numbers, dates, times, and text, are displayed and printed.

There are several ways to display the property sheet for a control(s):

1. Right-click on the control and select Properties.
2. Double-click on the control.
3. Click the control and select the **Properties** button.

Click on the three **Sum** fields in the Project Footer section. You will need to hold down the Shift key to select all three fields.
With all three selected, right-click, and go to **Properties**.
Click on the **Format** property drop-down list.
Select **Currency**.
Move the Properties box so you can view the report.
Click on the three **Sum** fields in the Report Footer section. Notice that the Properties box changes.
Click on the **Format** property drop-down list and select **Currency**.
Select the dropdown in **Font Size** property field.
Click the drop-down arrow, and select **12** to change the Font size to 12pt.
Close the properties box.
Double-click on **Idr_amt_10** in the Project Header section.
Highlight the text in **Caption** to rename the Idr_amt_10 label. Type **April**. Press <Enter>.
Close the properties box.
Click the Center justified button on the toolbar.
Exercise 8

Make the following modifications to the **rptProjectActBal** report:

1. Modify all the ldr_amt_# captions in the Project Header section to display the proper month.
2. Center-justify the months as well.
3. Adjust the font size of the two controls in the Page Footer section to 9, and italicize the text.
4. Make the 'a' of the account control an uppercase 'A' in the project header section.
5. Make any adjustments on controls so all columns are aligned.
6. Preview the report.
7. Save the report.

### Project Account Balance

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount</th>
<th>Apr '06</th>
<th>May '06</th>
<th>Jun '06</th>
</tr>
</thead>
<tbody>
<tr>
<td>10354</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50105</td>
<td>PURCHASED COMPUTER STORE TAXABLE</td>
<td>$287,937.90</td>
<td>$120,217.60</td>
<td>$415,039.27</td>
</tr>
</tbody>
</table>

Summary for project - 10354 total records

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount</th>
<th>Apr '06</th>
<th>May '06</th>
<th>Jun '06</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$247,351.50</td>
<td>$110,217.60</td>
<td>$485,039.27</td>
<td></td>
</tr>
</tbody>
</table>

### Printing reports

When printing reports, you can print a specific range of pages or specify the number of copies to print and the page orientation (portrait or landscape).

- Choose File, Print…
- Observe the Print dialog box.
- Click on **Cancel** to close the Print dialog box without printing. **Note, click OK to print the report.**
- Close the report.