General User/Technical Guide for Microsoft Access

School of Nursing

University of Michigan

This guide is the first step in understanding your database. See the list of documentation locations at the end of this guide to locate the documentation specific to your database. You will need BOTH pieces in order to understand and use your database.

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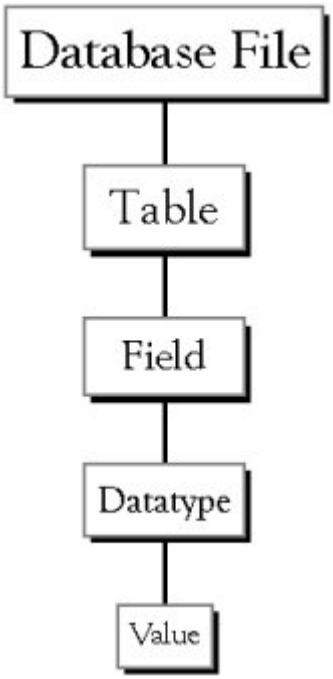
OVERVIEW

To access a School of Nursing database, you must have access to the either the unique server that stores your database (such as the OBFA drive for the HR database) or the snits databases drive, most commonly mapped to "V:" or "Q:". Within the snits database drive, there are several folders, you must also have access to the necessary folder(s).

Once you are in the correct location, you need to find the filename for your particular database, with a mdb file extension. If there is an .ldb file on the drive, ignore it. If you do not have file extensions showing, you can tell the difference by the icon,  for the mdb file and  for the lock (ldb) file. You can also drag the shortcut file onto your desktop if you want. There is no need to copy the shortcut, it will remain on the database drive for others to use as well.

This is an overview of how data is stored in a database file.



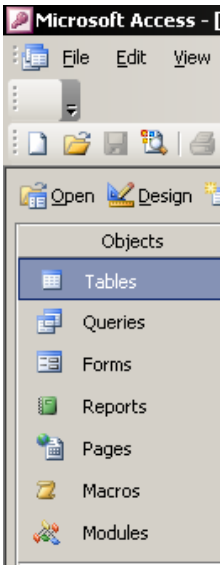
Database File: This is your main file that encompasses the entire database and that is saved to a server.
Example) StudentDatabase.mdb

Table: A table is a collection of data about a specific topic. There can be multiple tables in a database.
Example #1) Students
Example #2) Courses

Field: Fields are the different categories within a Table. Tables usually contain multiple fields.
Example #1) Student LastName
Example #2) Student FirstName

Datatypes: Datatypes are the properties of each field. A field only has 1 datatype.
FieldName) Student LastName
Datatype) Text

Once data is stored, it may be accessed by one of four ways. These components are accessed from the main database window, on the left side.

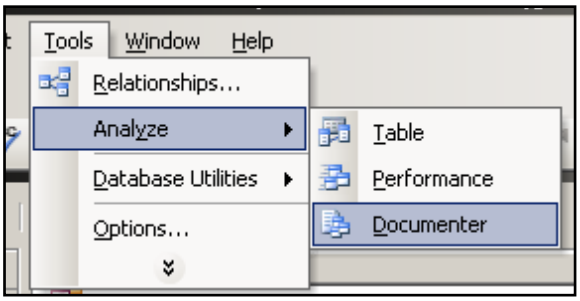


- Tables – where all the data is stored. Information can be accessed and modified in tables, but is often not in a very user friendly format.
- Queries – these are used to refine data either to use in a form or report, or in order to print data for evaluation. Data cannot be modified in queries.
- Forms – forms are a useful way of viewing AND modifying data, but can be difficult for a novice to design sometimes.
- Reports – the end product of data entry, reports can be general or highly specific, and are arranged to be viewed in a professional, informative manner.

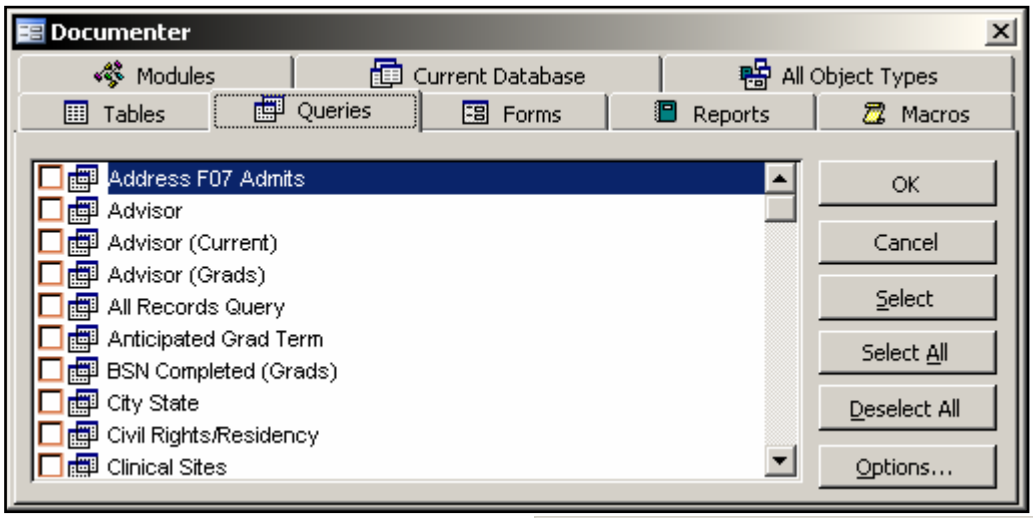
These components may also have code behind them, which can be accessed by clicking the  button from the toolbar.

There are many components in the each database, different tables, queries, etc often too many to list. A good way of getting a feel for a database is printing out a comprehensive list of compenents to look over. Follow these directions for each database in order to create a list.

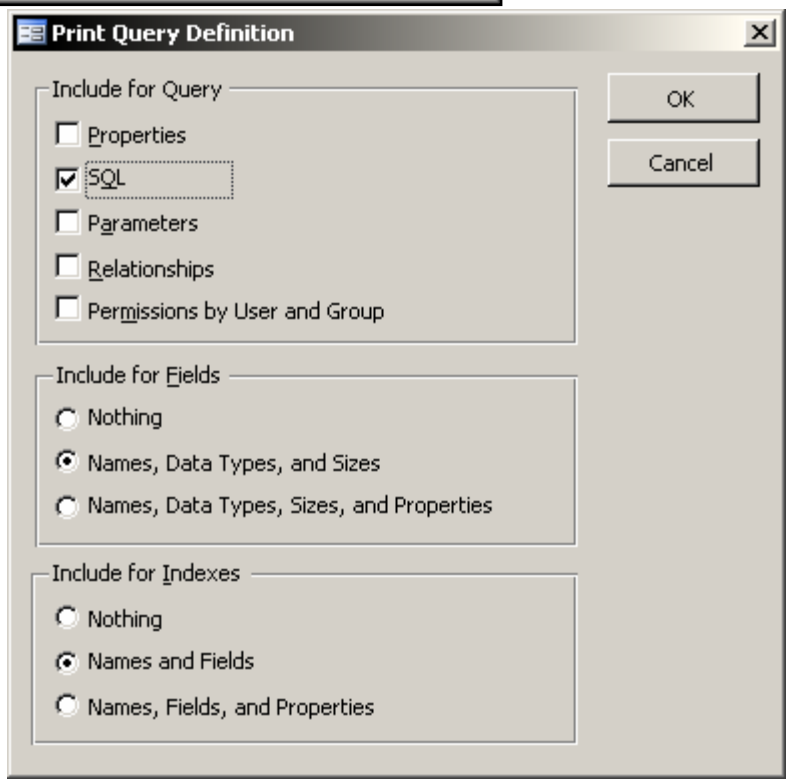
Go to Tools---> Analyze ---> Documenter.



Once in the documenter, you can select queries whatever formats you would like, and select which items you want documented. One way to do this is to use the *Select All* button on the right side.



If you select Options, it will take you to a menu where you may choose whatever print options you like - this selection seems to provide a good amount of information without being too detailed.



TABLES

A table is a collection of data about a specific topic, such as students or courses. Using a separate table for each topic means that you store that data only once, which makes your database more efficient, and reduces data-entry errors. Tables organize data into columns (called fields) and rows (called records).

You can view tables in either datasheet view or design view. To switch views form the datasheet (spreadsheet view) and the design view, simply click the button in the top-left hand corner of the Access program.

Datasheet View	Design View
 Displays the view, which allows you to enter raw data into your database table.	 Displays the view, which allows you to enter fields, data-types, and descriptions into your database table.

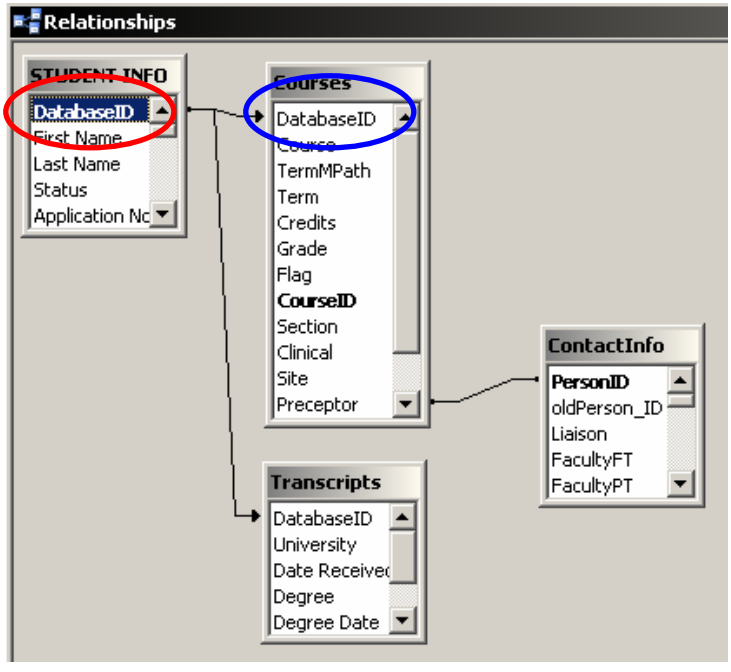
To enter data in a table, click on the Datasheet View and simply start entering the data into each field.

To add a new row drop down to a new line and enter the information you would like.
To update a record select the record and field you want to update, and change the data.
To delete a record select the entire row and hit the Delete Key on the keyboard.

RELATIONSHIPS

After you've set up multiple tables in your Microsoft Access database, you need a way of telling Access how to bring that information back together again. The first step in this process is to define relationships between your tables. After you've done that, you can create queries, forms, and reports to display information from several tables at once.

A relationship works by matching data in key fields - usually a field with the same name in both tables. In most cases, these matching fields are the primary key from one table, which provides a unique identifier for each record, and a foreign key in the other table. For example, students can be associated with the courses they've taken by creating a relationship between the student table and the courses table using the StudentID fields.



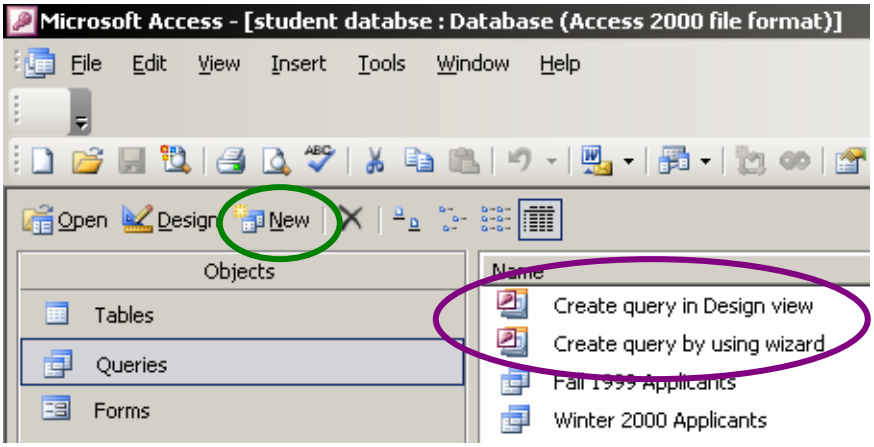
In the database window view, at the top, click on Tools ---> Relationships

1. Select the Tables you want to link together, by clicking on them and selecting the Add Button
2. Drag the primary key of the Parent table (Student Info in this case), and drop it into the same field in the Child table (Courses in this case.)

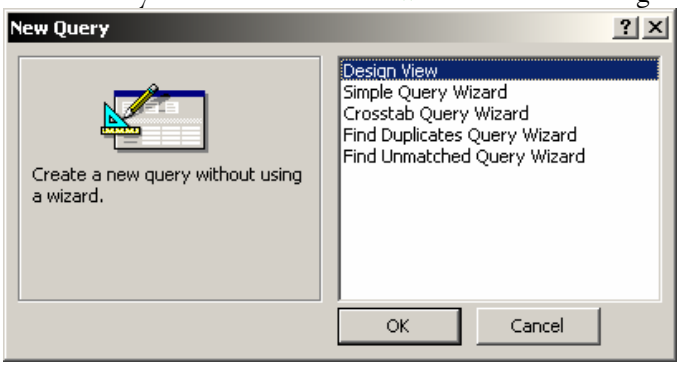
QUERIES

Queries are used on their own to create lists that can be rerun and reprinted as necessary, and also to provide data for reports. Queries are useful in that they take data from tables and filter and sort it for viewing. Queries can also be run on each other to produce very complicated views of data. Some queries perform actions, the database will usually ask if this is what you want to do. For example, any queries with this  symbol are make-table queries. This means that when you run them, they will create a table with the data you've selected. If this table name already exists, Access will delete it first and replace it with the new query.

One way to create a new query is to click on one of the Create query buttons. Using the wizard can be easier for inexperienced designers. Access will walk you through the design process.

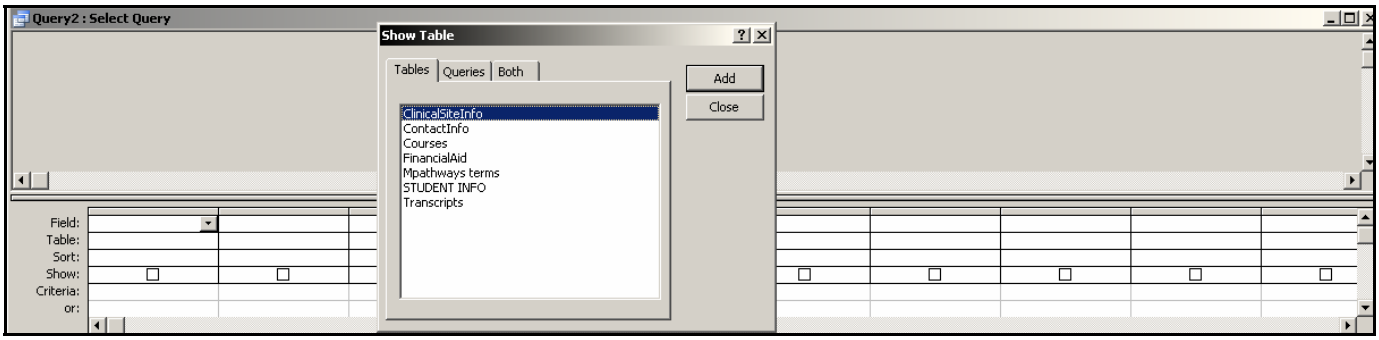


Another way is to click on the New button. This brings up a dialog box with some choices.

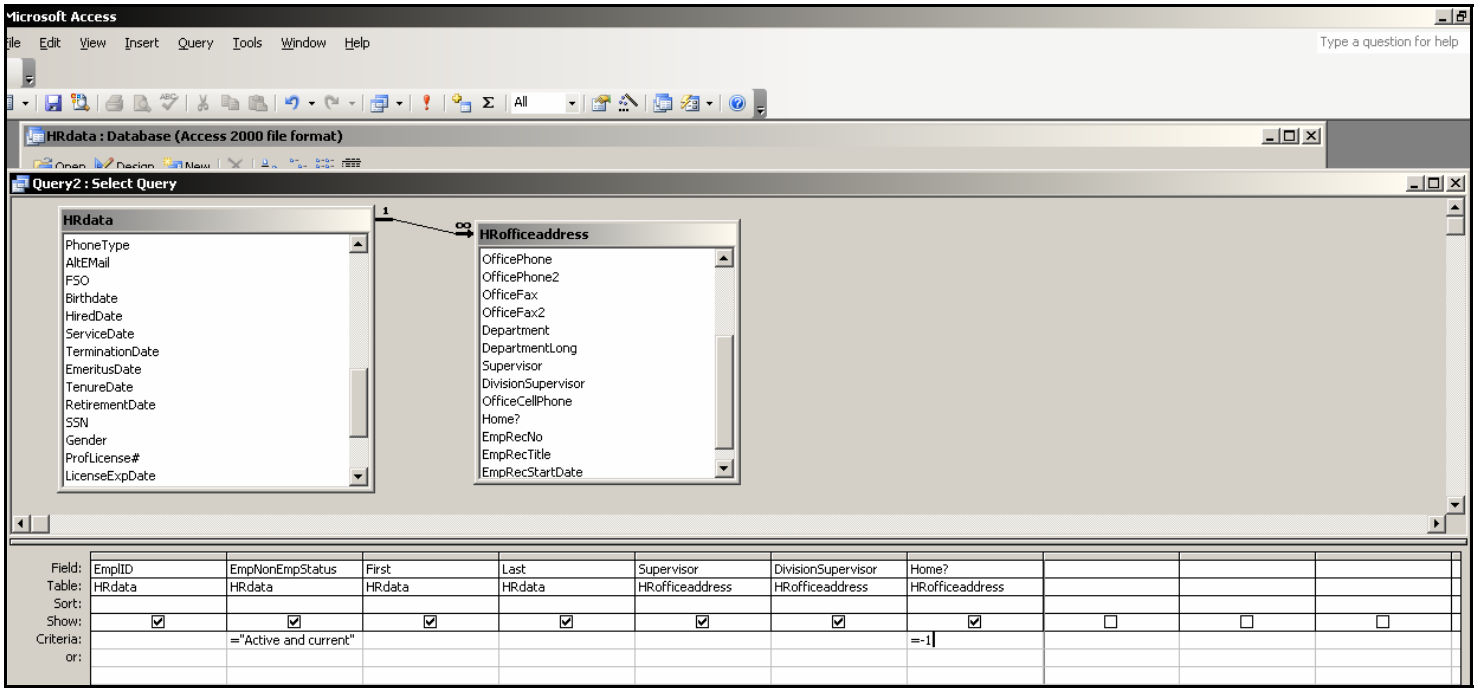


The query wizard can be useful, but very limited. If you are unsure, choose the wizard, but with some instructions you should be able to use the Design View which is the top choice of the message window.

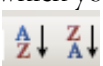
When you choose Design View, a design window will pop up, where you can choose which tables you would like to select from for your query. You can click on the tables and select Add to the right, or just double click. Once you have selected all your tables hit Close.



The next step is to make sure your tables are connected. Most tables have already been connected during the design of the database in the relationships. If not though, you can click and drag from the field in the first table to the corresponding field in the second table. In the example below, there is a one to many relationship between the two tables because there is only one record per person in the HRdata table, but there can be several records per person in the HRofficeaddresses table.



Once your tables are connected, you can double-click or click and drag down to the lower window. Once you have all the fields you would like to see results for, you can work on the filters or sorts you would like to program into your query. You can see in the second column that this query is filtered on EmpNonEmpStatus to be active and current employees only. This query also only pulls one office address per person, their primary office, which is why the last column has a -1 in the criteria column. Access identifies Yes/No fields as 0 for No and -1 for Yes. You can also put the word ascending or descending in the sort row of the column in order to pre-determine the sort order. This is particularly useful if you need to sort by more than one field.

Once you have results for your query, which you get by clicking on the  symbol on the toolbar, you can click any column and then click one of the two sort buttons  on the toolbar in order to sort. Access does not sort the same way Excel does. You do not need to highlight all the columns and indicate whether or not there is a header row. You have no chance of your data getting scrambled. However, you can only sort on one column at a time unless you specify multiple sort orders in the design window.

The main design screen described above is intended to do more drag and drop type of operations. Sometimes it's easier to "read" a query's criteria by using the SQL window. To navigate to this screen, use the View menu ---> SQL. This will bring up the text SQL version of your query design.

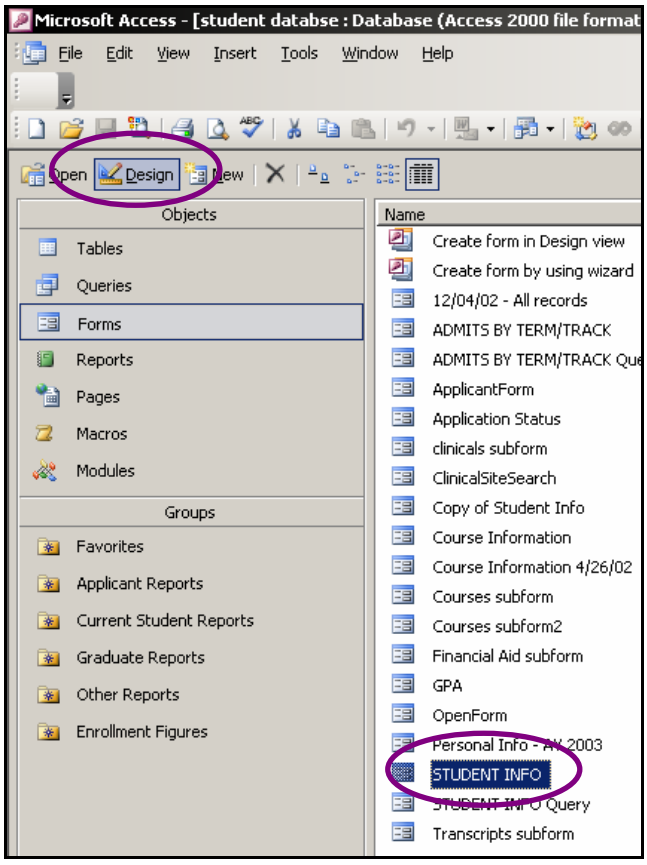
To modify an existing query, you select the query you want to modify, and then click on Design. This will open the query in design mode, where you can make changes as necessary. Make sure to save when you are done!

FORMS

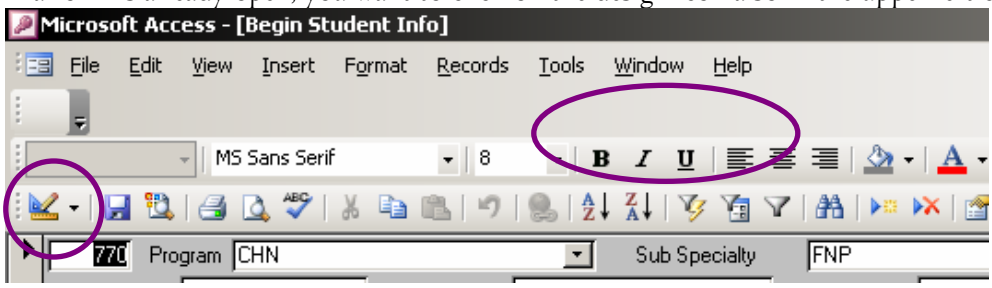
Forms are used almost entirely for data entry. This is their purpose, and it is recommended that unless you are a very advanced user, you enter data exclusively using forms.

Forms can be opened by double clicking the form name, or by clicking on the name, and then clicking on the open button 

in the upper left corner. To modify a form, highlight the form you want to modify and click on the Design button in the upper left corner.

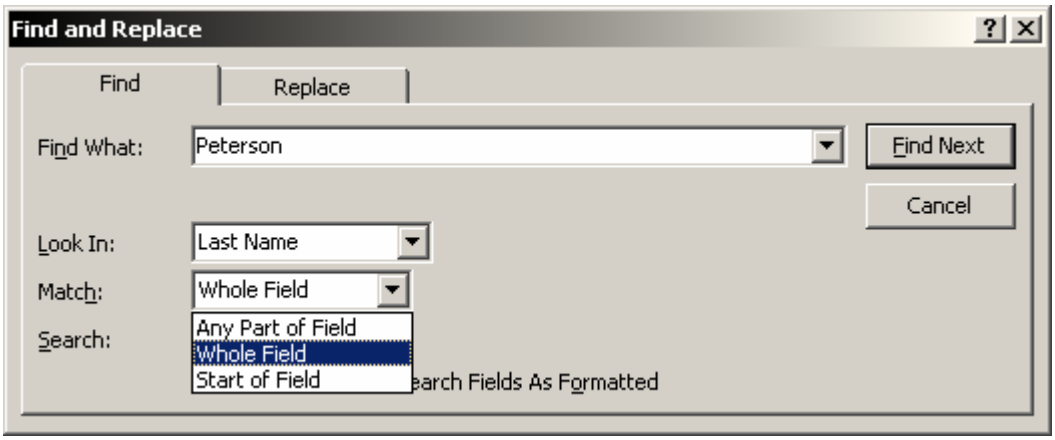


If a form is already open, you want to click on the design icon also in the upper left corner.



Once you have opened your form for data entry, there are a few things to note. To enter a new record in a form there are navigational buttons at the bottom of the form. These buttons will also move you from record to record. Clicking on the far right button with the asterisk next to it takes you to a new, blank record.

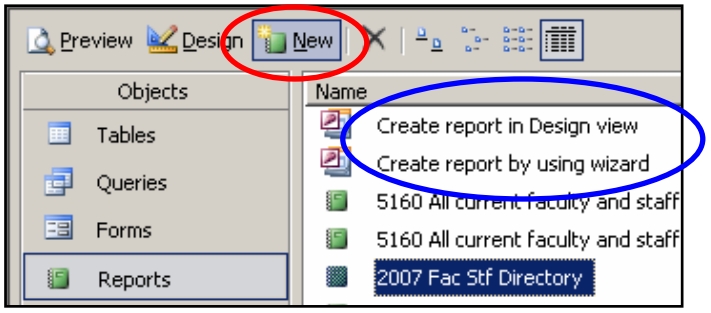
To search for a record in a form, put your cursor in field you want to search on and click on the binoculars  on the toolbar. Once the Find and Replace box comes up, type what you are searching for in the Find What box, and make sure you have selected the appropriate Match choice. Click on Find Next and Access will find the first instance of your search criteria. You can keep clicking until you find the correct result.

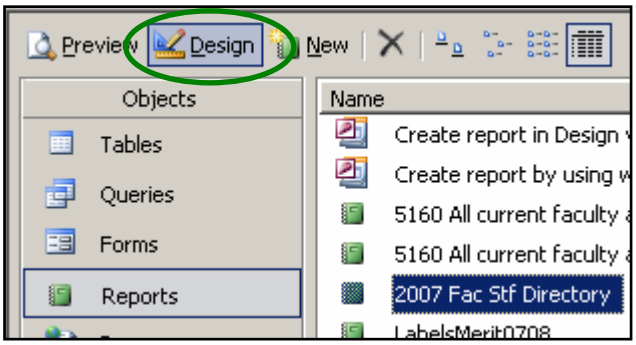


One more important note about forms and data entry in Microsoft Access. Access automatically saves record changes, so when you enter or replace data, you do not need to save anything. This is both useful, and a potential hazard. Once you have tabbed out of a field, you cannot retrieve any old data for that field. So if you change the value in a field, then tab out of the field, and then decide you want to go back to the old value, it is too late to have Access remember it. You will have to remember the old value, and retype it. The only exception to this is while you are still in a field, prior to tabbing out. At that point, you can hit the Esc key, and your old data will reappear.

REPORTS

Reports are used to display data. All School of Nursing databases have reports that have already been created, but often new reports are needed, or a pre-existing report needs to be modified. To create a new report, you can either click on the New button in the reports section, or double-click one of the Create report buttons.

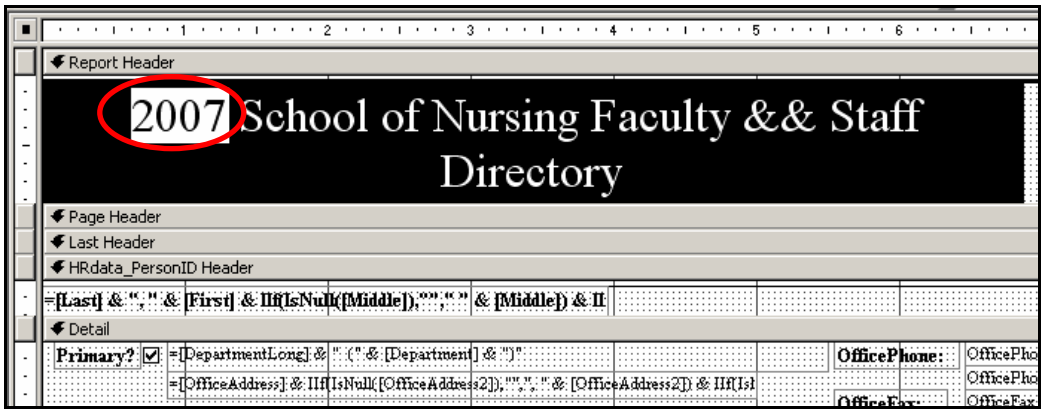




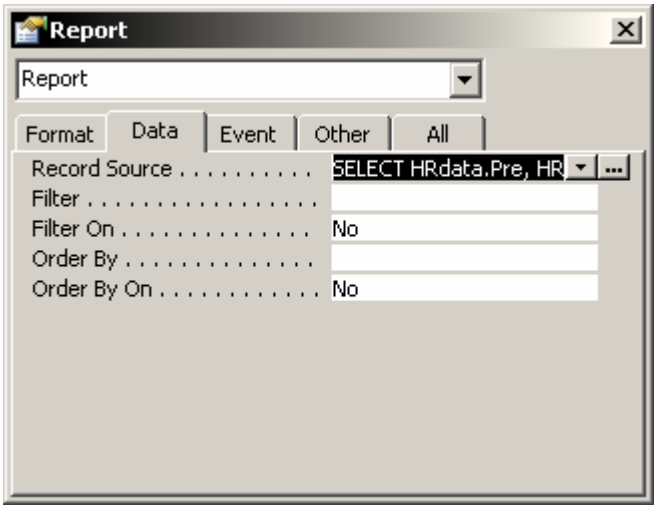
For novice users, it is MUCH easier to use the report wizard. Access does all the work of creating text and label boxes, and you can just modify the report as necessary for appearance.

To modify an existing report, such as the Faculty/Staff directory in the HR database, you click on the report name and then on the Design button.

To modify a label in a report open in design view, you double-click in the box until you get a text cursor and then you can type as normal. This is probably the most commonly done report modification, used frequently for example to change the Year in a title.



Another useful tool is the Properties window, which often will come up when you open a report, but if not, it can be pulled up by clicking on the properties button  on the toolbar. It pulls up a small screen that contains all the information about whatever element (field box, label, whole report, etc) is selected.



LOCATIONS

Patient Data Logs
M:\Angie\Patient Data Logs\Documentation\Patient Data Logs Documentation.doc (snits staff only)
https://private.www.umich.edu/~nursing/forms/resources/coverletter.pdf
https://private.www.umich.edu/%7Enursing/forms/resources/general_orientation.ppt

Clinical Placement:
V:\CCPD\Documents\Clinical Placement User's Guide.doc
M:\Angie\CCPD\Documentation\CCPD Database Technical.doc (snits staff only)

Student Databases:
M:\Angie\Student Databases\Documentation\Student Info Database Technical.doc (snits staff only)
V:\Student Info Database.doc
V:\Phd\Documents\PhD Student Info Database.doc
V:\oaa\Mandatories for Ruth.doc

HR Database:
\\itd-pfs1\nurs_obfa\BFA\Directories & Listings\HR Database User's Guide.doc

INDEN Database:
L:\OIA\INDEN Related documents\INDEN DATABASE DOCUMENTATION.doc

Recruitment Database:
M:\Angie\Recruitment\Recruitment User Documentation.doc