



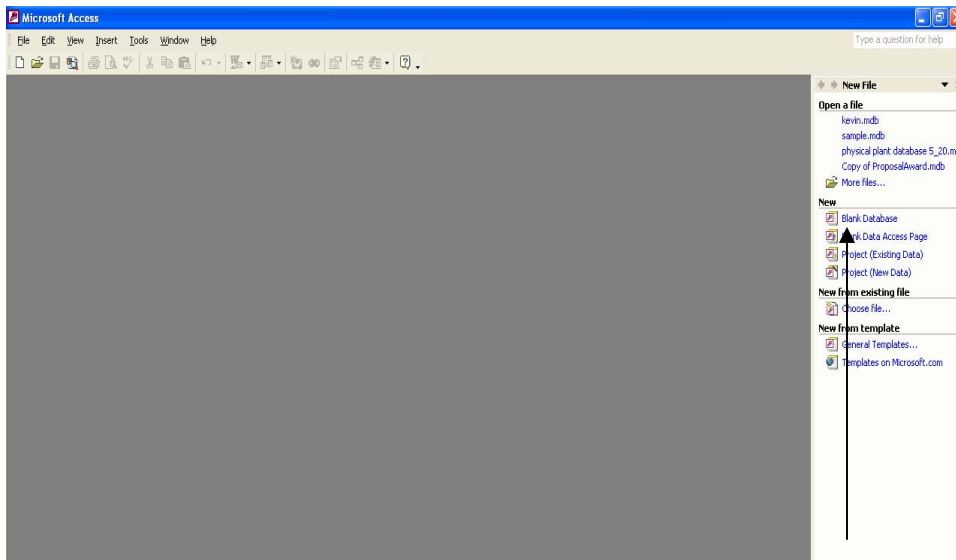
Introduction to Microsoft Access

A database is a collection of information that's related. Access allow you to manage your information in one database file. Within Access there are four major areas: **Tables, Queries, Forms** and **Reports**

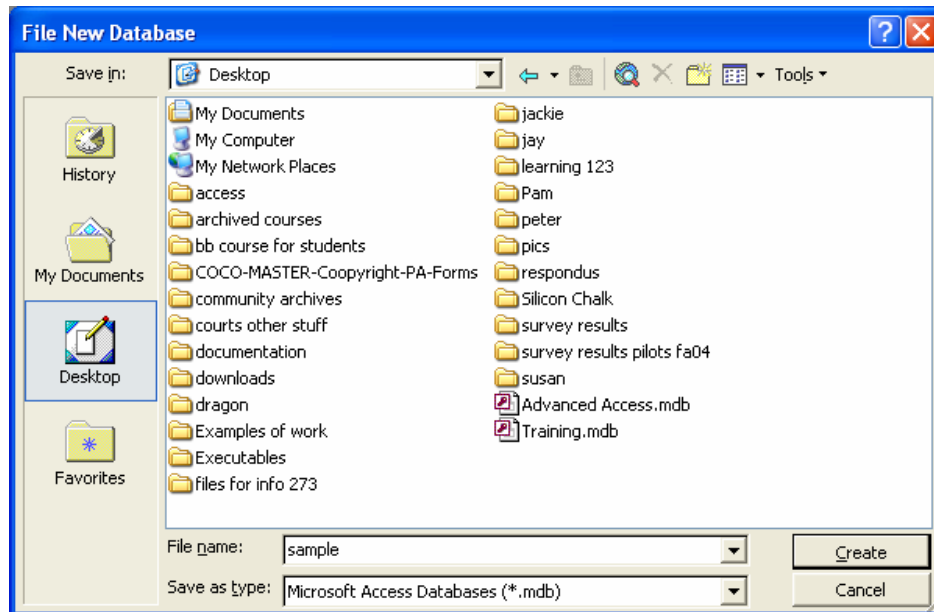
- **Tables** store your data in your database
- **Queries** ask questions about information stored in your tables
- **Forms** allow you to view data stored in your tables
- **Reports** allow you to print data based on queries/tables that you have created

Creating a Database

1) Start Access



- 2) In the task pane, select **Blank Database**
- 3) In the File New Database dialog box, select the location where you want to store the database
- 4) Type a name for the database file at the bottom of the dialog box



- 5) Click **Create**

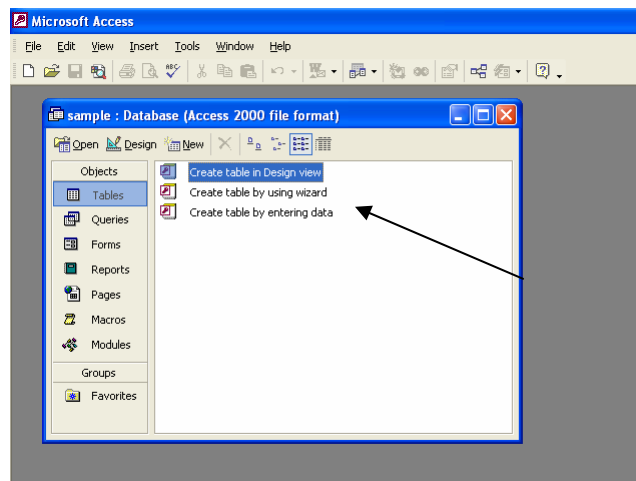
Access will display the database window.

Creating a Table

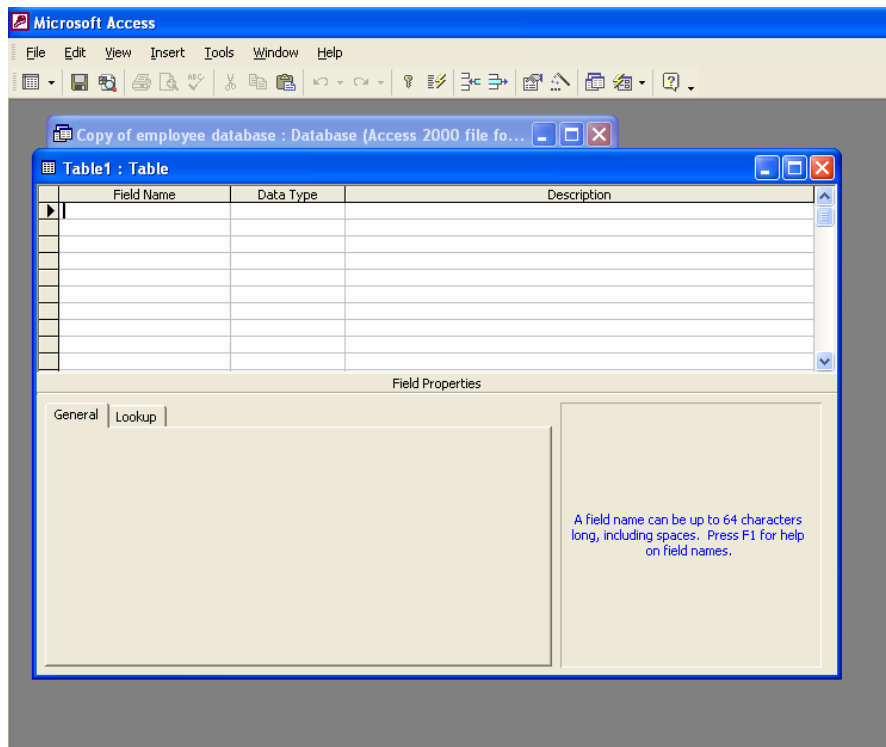
A table is a collection of data about a specific topic, such as employee information, products or customers.

To Create a Table in Design View:

- 1) Click the **Tables** object button
- 2) Double-click **Create table in Design view**



Below is a picture of the Table Design screen as it will appear:

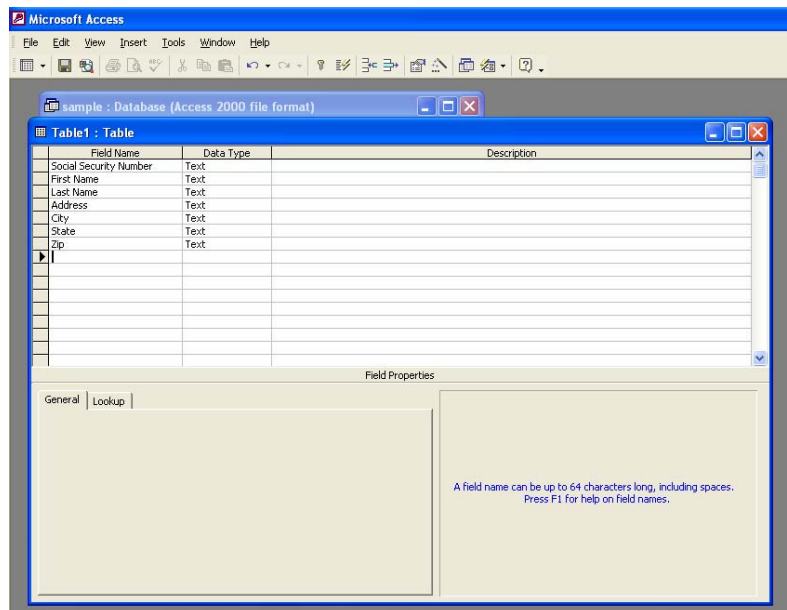


Data Types

Data Type	Description	Size
<i>Text (most common data type)</i>	Alphanumeric data	Up to 255 characters
Memo	Alphanumeric data; sentences and paragraphs	Up to 64,000 characters
Number	Numeric data	1,2,4, or 8 bytes.
Date/ Time	Dates and times	8 bytes
Currency	Currency data, stored with 4 decimal places	8 bytes
Auto-Number	Unique value generated by Access for each new record	4 bytes
Yes/No	Boolean (true/false) data	1 bit
OLE Object	Pictures, graphs, or other ActiveX objects from another Windows-based application	Up to about 1 gigabyte
Hyperlink	A link "address" to a document or file on the Web, local network, or on your computer	Up to 2048 characters

- 3) Enter a field name in the first field name cell, then press the **Tab** key to enter the Data Type column (Limited to 64 characters per field)
- 4) Click the **down-arrow** at the right end of the Data Type cell, and then select an appropriate data type for the field

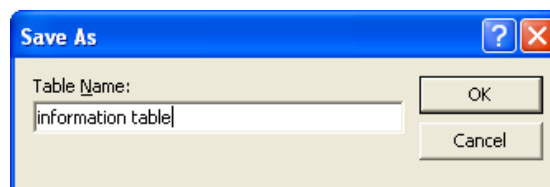
Note: The order that you enter the field names is the order the fields will appear in the table



- 5) Continue until all fields are inserted

To Save the Table:

- 1) Click the **Save** icon on the toolbar
- 2) Enter a name for the table



- 3) Click **OK**

Access will ask you if you would like it to create a primary key. Click **No** to letting Access create a primary key field. This will be explained later.

Setting a Primary Key

The **primary key** is the unique identifier for each record in a table. Access will not allow duplicate entries in a primary key field.

To Set a Primary Key:

1. Double click on the table if necessary to open it
2. In **Design View**, position your cursor in the field you wish to set as the primary key
3. Click the **primary key button** on the tool bar

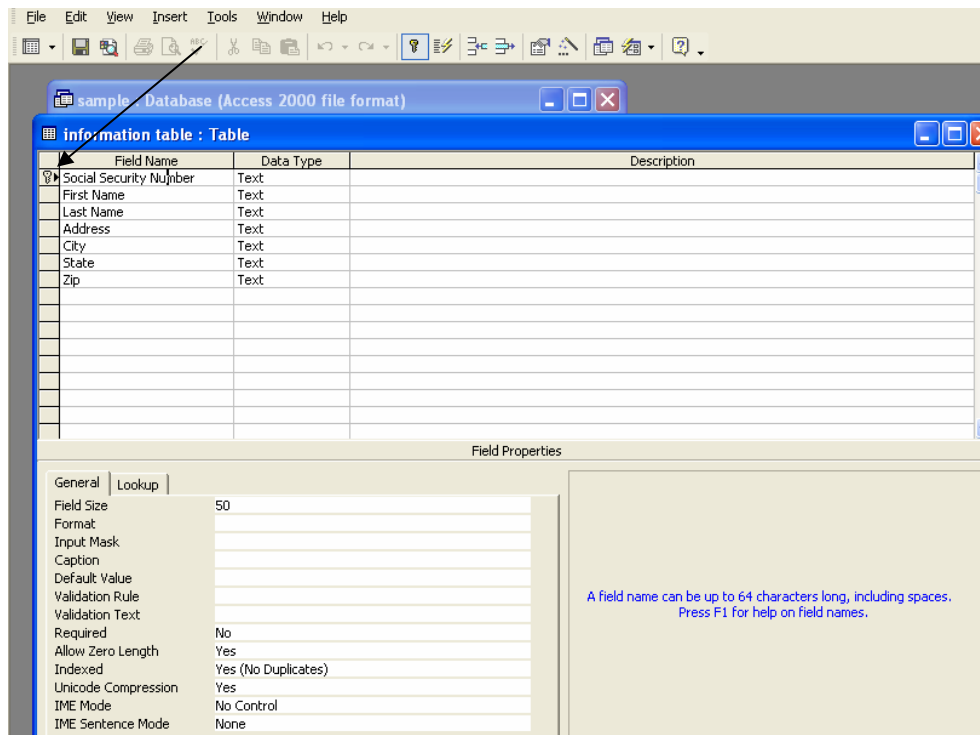
To Switch Between Design View and Datasheet View:

- 1) Double click on the table
 - 2) Select **View Menu, Design View**
- Or
- View Menu, Datasheet View**

There are 2 basic views when you work in a table: **Design View** and **Datasheet View**:

- **Design View** is used to set the data types, insert or delete fields, set the primary key
- **Datasheet View** is used to enter the data for the records

The primary key symbol will appear in the gray row header at the left end of the field as seen in the picture below:



- 3) Save the table

Input Masks

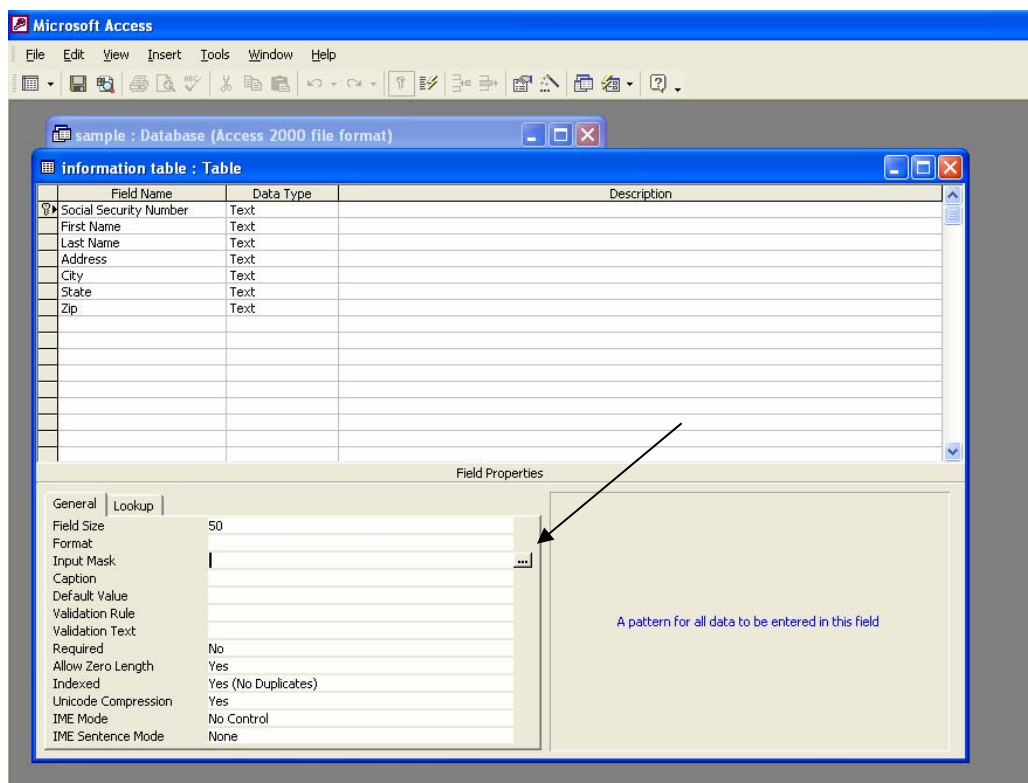
An **input mask** is used to pre-format a field to “look/act” a certain way when a user inputs data.

Example: social security number input mask automatically inserts the dash; phone numbers automatically inserts the parentheses and dashes

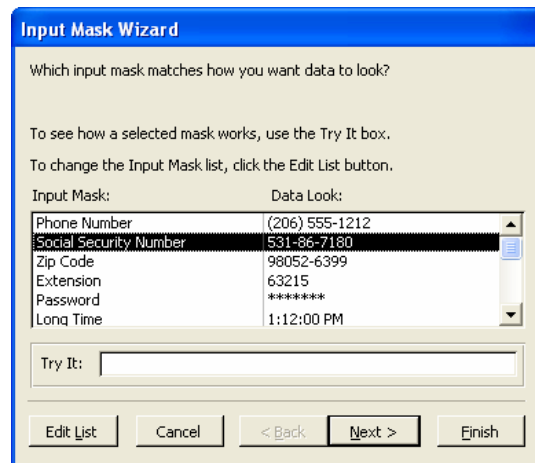
The input mask data can either be stored in the table or simply displayed and not stored.

To Create an Input Mask for a Field

- 1) Open a table in **Design View**
- 2) Click in a field for which you'd like to create an input mask
- 3) In the Field Properties section at the bottom of the screen, click in the **Input Mask** line and notice the **Build** button that appears at the right end of the line (see below):



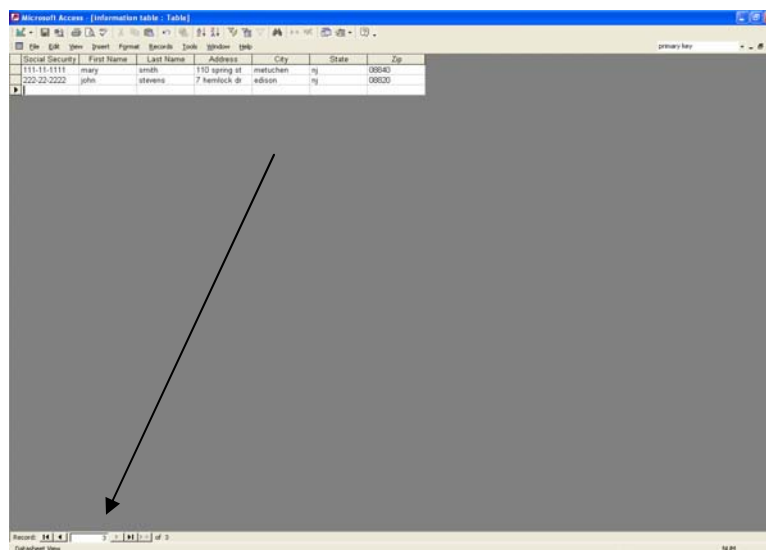
4) Click the **Build** button to start the Input Mask Wizard (shown below).



- 5) Select the appropriate input mask
- 6) Click **Next**
- 7) Click **Next** for additional screens on which you can set options for the input mask
- 8) Click **Finish** on the last screen of the input mask wizard

Viewing and Navigating Tables:

- 1) Select the **Tables** object
- 2) Double-click a table's name to open the table
- 3) Enter the data into the table by pressing the tab key to move from one cell to another
- 4) When you have completed the record (row), press **Enter**



Use the arrows at the bottom of the table to navigate among records.

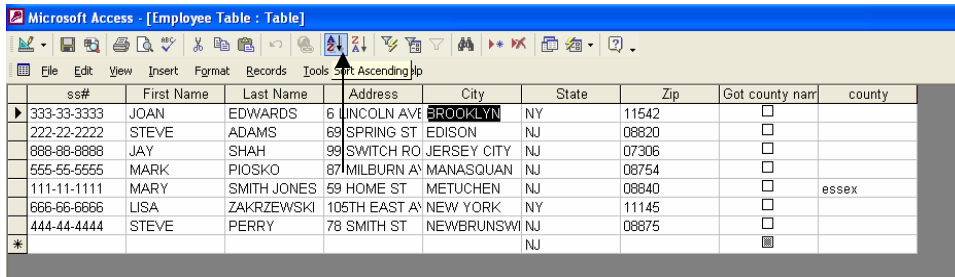


Use the arrows to navigate from the first record, previous record, next record, last record, and create a new record. (as shown in the picture above)

Notice that the total number of records in the table is shown at the right end of the navigation arrows.

To Sort Records in a Table:

- 1) Position your cursor in the field that you wish to sort by clicking on any record in the table (make sure your cursor is positioned in the field you are sorting by)
- 2) Click either the **Sort Ascending** or **Sort Descending** icon

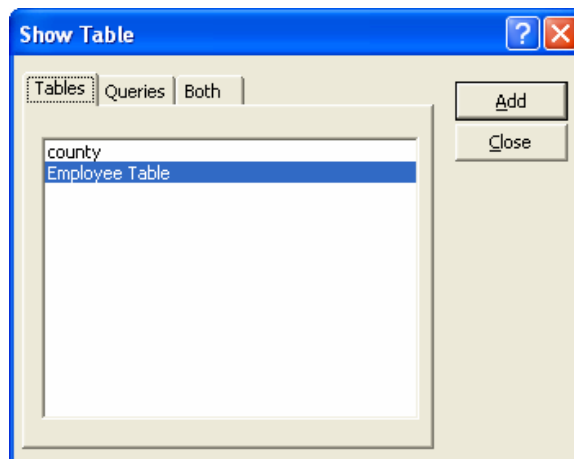


Queries

You use queries to view, change, and analyze data in different ways. You can also use them as a source of records for forms and reports

To Create a Query:

- 1) Move to the queries object
- 2) Double-click **Create Query in Design View**
- 3) Select the table that you would like to base your query on
- 4) Click **Add**



5) Close the **Show Table** window

The table(s) will now be displayed in the upper part of the Query Design Screen by boxes containing the tables' fields.

6) Double click on the field names in the field list window which you would like to include in the query


Defining Criteria in the Query

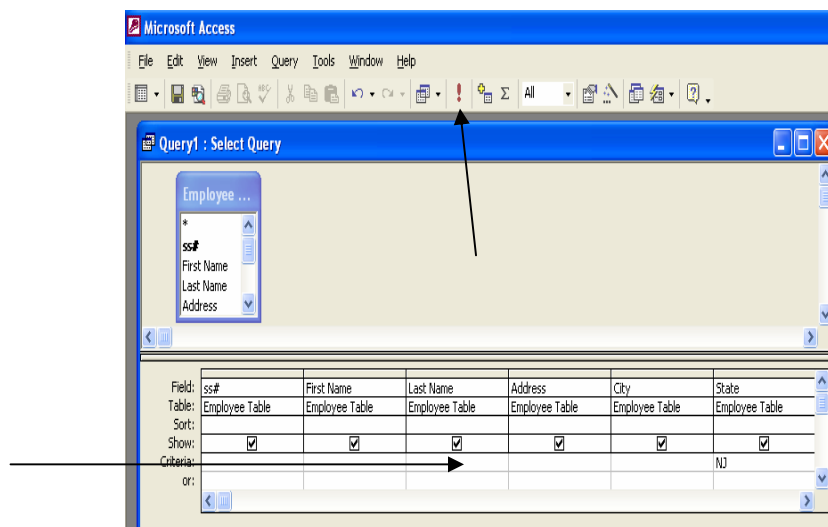
In order to control which records are displayed, you must define criteria in a query. The most common type of query is the Select Records query which will be discussed below.

To Define Criteria for your Query:

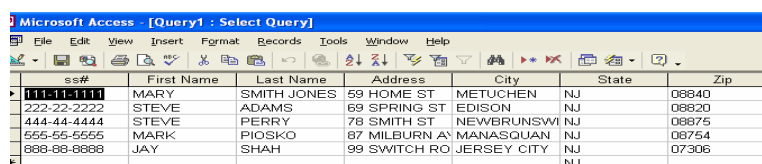
- 1) Position your cursor in the criteria row in the field for which you wish to define the criteria for
- 2) Enter the criteria

Example: To find all people in the table who live in NJ:

- Position your cursor in the **criteria row** of the State field
- Type NJ
- Click the **Run Query** button 



Below is a picture of the results of the above query:



ss#	First Name	Last Name	Address	City	State	Zip
111-11-1111	MARY	SMITH JONES	59 HOME ST	METUCHEN	NJ	08840
222-22-2222	STEVE	ADAMS	69 SPRING ST	EDISON	NJ	08820
444-44-4444	STEVE	PERRY	78 SMITH ST	NEWBRUNSWI	NJ	08875
555-55-5555	MARK	PIOSKO	87 MILBURN A	MANASQUAN	NJ	08754
888-88-8888	JAY	SHAH	99 SWITCH RO	JERSEY CITY	NJ	07306

The result of a query is called a **recordset**. A recordset can be sorted, printed or filtered in the same manner as a table.

To Save the Query:

- 1) Click the **Save** icon
- 2) Enter a name for the query
- 3) Click **OK**

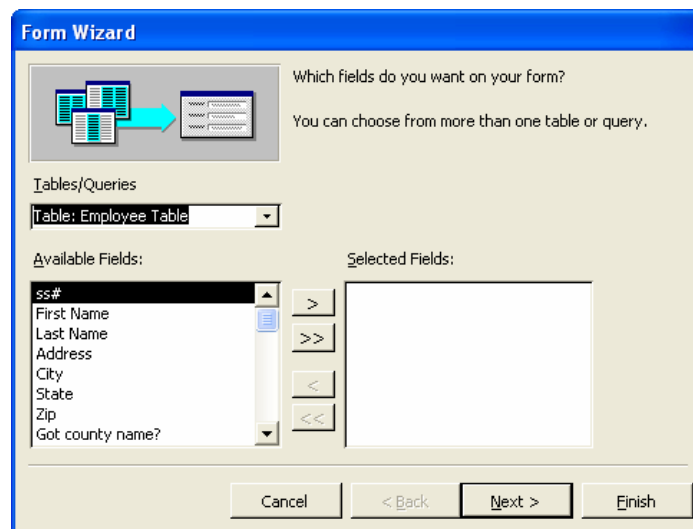
Note: When saving a select query, you are saving the question that you are asking, not the results that you see when you run the query.

Creating a Form Using the Forms Wizard

A form is a database object that is used to enter or display data in a database.

To Create a Form Using the Wizard:

- 1) Move to the forms object in the database window
- 2) Double-click **Create Form by Using Wizard**
- 3) Using the drop-down arrow, select the tables/queries that you wish to base the form on
- 4) After selecting the table/query, select the fields you wish to include on the form by double clicking on them
- 5) Click **Next**



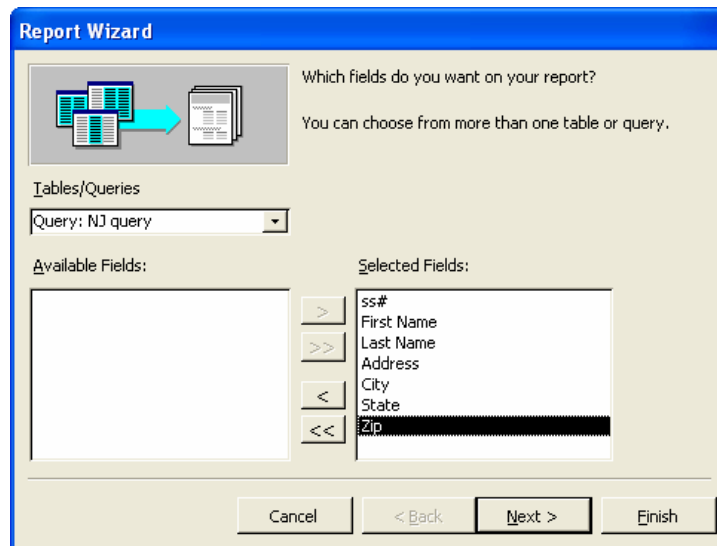
- 6) Select a layout for the form
- 7) Click **Next**
- 8) Select a style
- 9) Click **Next**
- 10) Type a name for the form
- 11) Click **Finish**

Reports

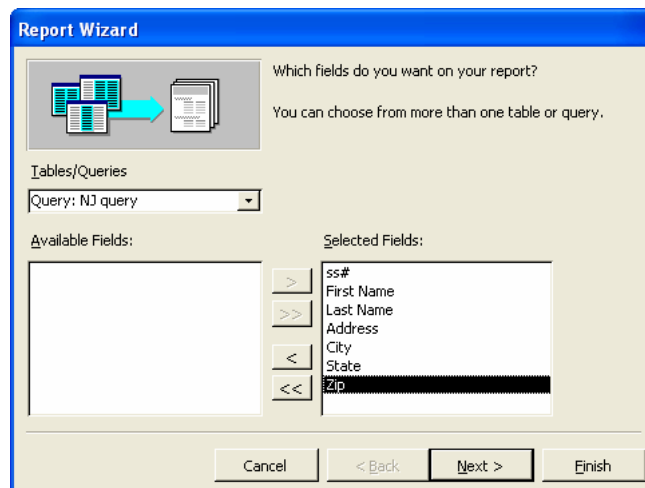
Reports can be based on tables or queries and can be made with the Report Wizard.

To Create a Report Using the Report Wizard:

- 1) Select the reports object in the database window
- 2) Double-click **Create Report by Using Wizard**
- 3) Select the table or query upon which the report will be based



- 4) Select the fields that you want to include on the report by double clicking on them
- 5) Click **Next**
- 6) If you would like to add grouping to your report, select the field you wish to group by double clicking on it (*Example: City*)
- 7) Click **Next**



- 8) Select the field to sort the data by
- 9) Click **Next**
- 10) Choose a layout and orientation by clicking on layout and orientation
- 11) Click **Next**
- 12) Select a style
- 13) Click **Next**
- 14) Enter a title
- 15) Click **Finish**

NJ Report

City	Last Name	ssn#	First Name	Address	State	Zip
EDISON	ADAMS	222-22-2222	STEVE	69 SPRING ST	NJ	08820
JERSEY CITY	SHAH	888-88-8888	JAY	99 SWITCH ROAD	NJ	07306
MANASQUAN	PROSKO	555-55-5555	MARK	87 MILBURN AVE	NJ	08754
METUCHEN	SMITH JONES	111-11-1111	MARY	59 HOME ST	NJ	08840
NEWBRUNSWICK	PERRY	444-44-4444	STEVE	78 SMITH ST	NJ	08875

Printing Reports

To Print a Report:

- 1) Click the **Print** icon on the toolbar at the top of the screen

