

Introduction to Microsoft Access 2007

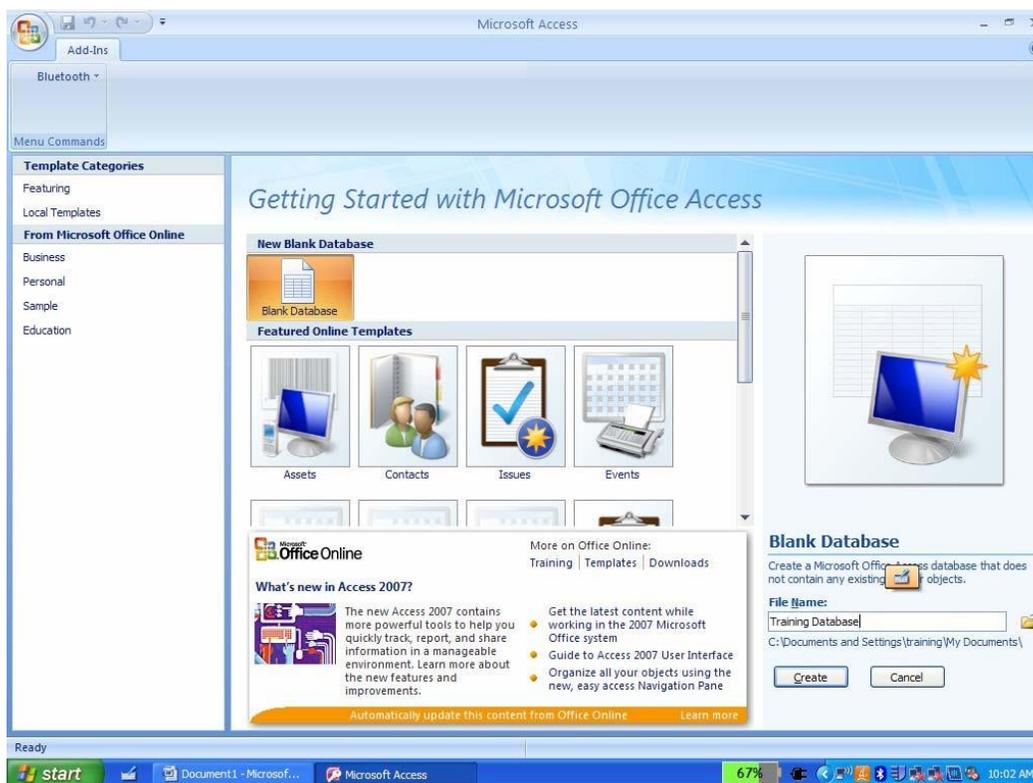
Introduction

A database is a collection of information that's related. Access allows 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) Select **Blank Database**
- 3) In the File Name field enter a name for the database
- 4) Click **Create**

Microsoft Access automatically creates a new table in the database called **Table1**. This is a temporary name until the table is saved.

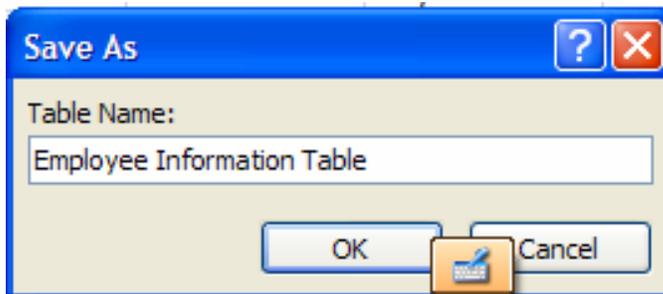


Understanding the Views

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, and set the Primary key. Datasheet View is used to enter the data for the records. By default, Access places you in Datasheet View.

To Switch to Design view:

- 1) Click the **View** button on the Home Ribbon
- 2) Type a name for the table
- 3) Click **OK**



Before proceeding, it is important to understand common Microsoft Access Data Types. (Explained in the table below)

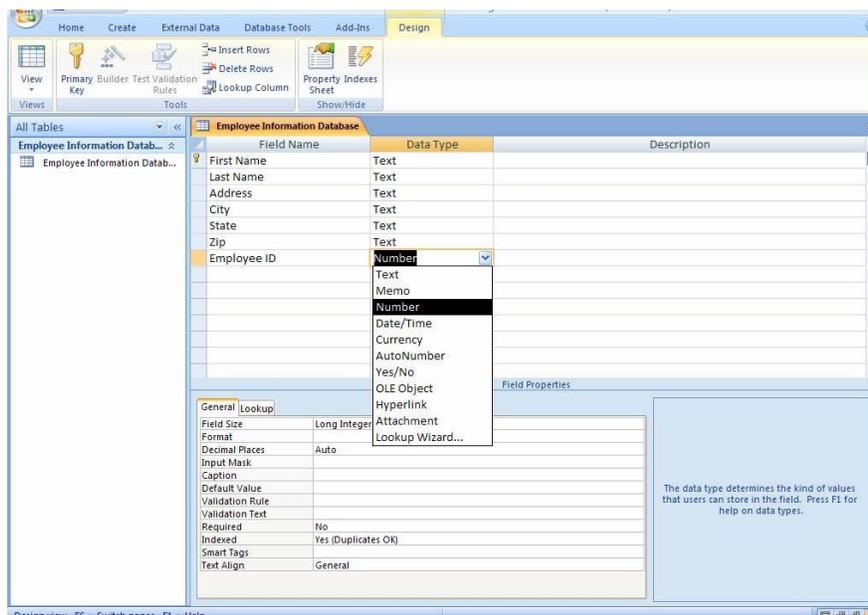
Data Type	Description	Size
Text (most common data type)	Alphanumeric data	Up to 255 characters
Memo	Alphanumeric data; sentences and paragraphs	Up to 64,000 characters
Number	Numeric data	1,2,4, or 8 bytes.
Date/ Time	Dates and times	8 bytes
Currency	Currency data, stored with 4 decimal places	8 bytes
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

To Enter Fields in a Table:

- 1) Type a name for the first field in the table
- 2) Press **Enter**
- 3) Select a data type
- 4) Press **Enter**
- 5) Type a description for the field
- 6) Press **Enter**

Continue this until all necessary fields have been entered into the table.

Note: The order that you enter the field names is the order the fields will appear in the table and on a form.



To View the Datasheet:

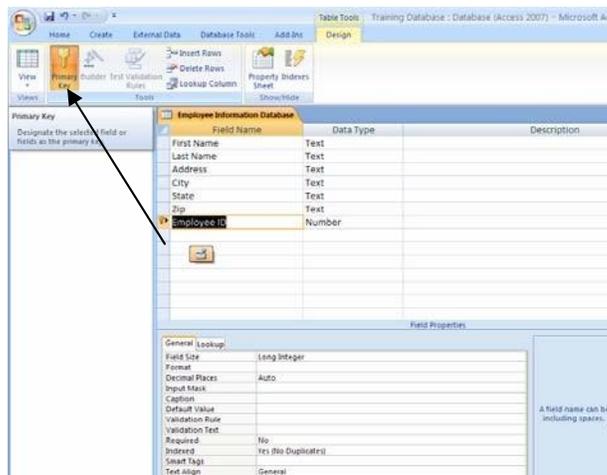
Click the **View** button on the Ribbon

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. By default, Access sets the first field in the table as the Primary Key field. An example of a Primary Key would be your Social Security Number. This is something unique about you and should not be duplicated.

To Set a Primary Key:

- 1) Switch to **Design View**
- 2) Position your cursor in the field you wish to set as the Primary Key
- 3) Click the **Primary Key** button on the Ribbon



To Switch Back to Datasheet View to Enter your Records:

Click the **View** button on the Ribbon.

Entering Data in a Table

Once you have entered the fields and set the data types it is now time to enter the records in a table.

To Enter Data in a Table:

- 1) Make sure you are in **Datasheet View**
- 2) Enter the data into the table by pressing the tab key to move from one cell to another
- 3) When you have completed the record (row), press **Enter**

First Name	Last Name	Address	City	State	Zip	Employee ID
MARY	SMITH	110 JONESDALE	METUCHEN	NJ	08840	1
CARRIE	JONES	45 HEMLOCK DR	EDISON	NJ	08820	2
MARK	DAVIS	12 ANNETE DR	EDISON	NJ	08820	3
STEVE	STIEN	15 COTTONWOOD	EDISON	NJ	08820	4
MIKE	ROBERTS	67 UNIVERSAL	CRANFORD	NJ	08976	5
*						

When inputting data into the table, Access automatically saves the data after each new record.

Input Masks

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

Example: You could create an input mask for a Social Security Number field that automatically inserts the dash.

The Input Mask data can either be stored in the table or simply displayed and not stored. (The latter is preferred)

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
- 5) Select **Input Mask**
- 6) Click **Next**

- 7) Select a **Placeholder** character
- 8) Click **Next**

Input Mask Wizard

Do you want to change the input mask?

Input Mask Name: User Defined

Input Mask: 000-00-0000

What placeholder character do you want the field to display?
Placeholders are replaced as you enter data into the field.

Placeholder character:

Try It:

Cancel < Back Next > Finish

- 9) Select **Without the symbols in the mask**
- 10) Click **Next**
- 11) Click **Finish**

Input Mask Wizard

How do you want to store the data?

With the symbols in the mask, like this:
264-31-6851

Without the symbols in the mask, like this:
744423152

Cancel < Back Next > Finish

Now, when entering data that has been formatted with an Input Mask, you do not have to type the format into the record.

The following is an example of a table with a field that has been formatted with an Input Mask on the Social Security Field.

Notice, the only thing that the user has to enter is the digits, not the symbols.

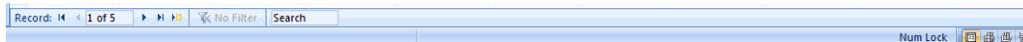
The screenshot shows the Microsoft Access interface with the 'Employee Information Table' open. The 'Social Security' field in the first row is highlighted, showing an input mask of '1 555-##-####'.

First Name	Last Name	Address	City	State	Zip	Employee ID	Social Security
MARY	SMITH	110 JONESDALE	METUCHEN	NJ	08840	1	555-##-####
CARRIE	JONES	45 HEMLOCK DR	EDISON	NJ	08820	2	
MARK	DAVIS	12 ANNETE DR	EDISON	NJ	08820	3	
STEVE	STIEN	15 COTTONWOOD	EDISON	NJ	08820	4	
MIKE	ROBERTS	67 UNIVERSAL	CRANFORD	NJ	08976	5	

Navigating Records

Use the arrows at the bottom of the table to navigate among records. You are able to navigate from the first record, previous record, next record, last record, and create a new record (as shown in the picture below).

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



Sorting Records in a Table

By sorting your records in a table, you are easily able to view/locate records in your table.

To Sort Records in a Table:

- 1) Position your cursor in the field that you wish to sort by, by clicking on any record in that field.
- 2) Click either the **Sort Ascending** or **Sort Descending** icon

The screenshot shows the 'Employee Information Table' sorted by the 'Last Name' field in ascending order. The 'Last Name' column header has a small arrow pointing down, indicating the sort direction. The records are now ordered: MARK DAVIS, CARRIE JONES, MIKE ROBERTS, MARY SMITH, and STEVE STIEN.

First Name	Last Name	Address	City	State	Zip	Employee ID	Add New Field
MARK	DAVIS	12 ANNETE DR	EDISON	NJ	08820	3	
CARRIE	JONES	45 HEMLOCK DR	EDISON	NJ	08820	2	
MIKE	ROBERTS	67 UNIVERSAL	CRANFORD	NJ	08976	5	
MARY	SMITH	110 JONESDALE	METUCHEN	NJ	08840	1	
STEVE	STIEN	15 COTTONWOOD	EDISON	NJ	08820	4	

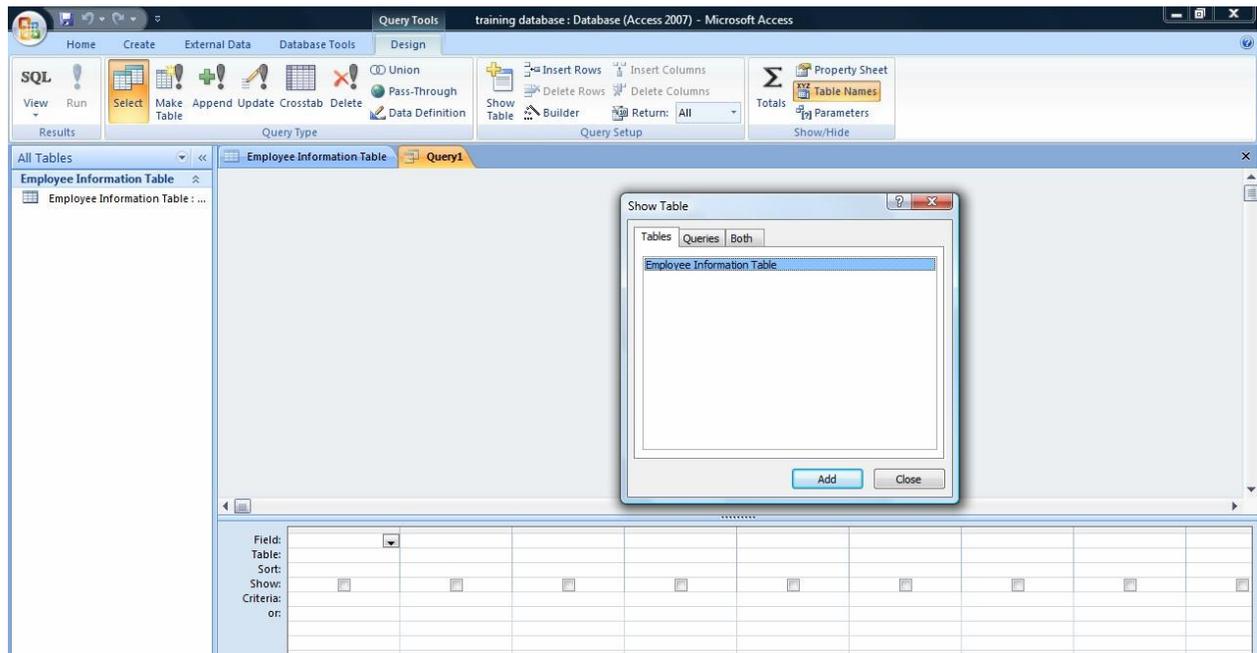
Notice, the table above has been sorted by the Last Name field in ascending order.

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) Click the **Create** tab on the Ribbon
- 2) Click **Query Design** icon



- 3) Double-click **Create Query** in Design View
- 4) Select the table that you would like to base your Query on
- 5) Click **Add**
- 6) 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.

- 7) 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.

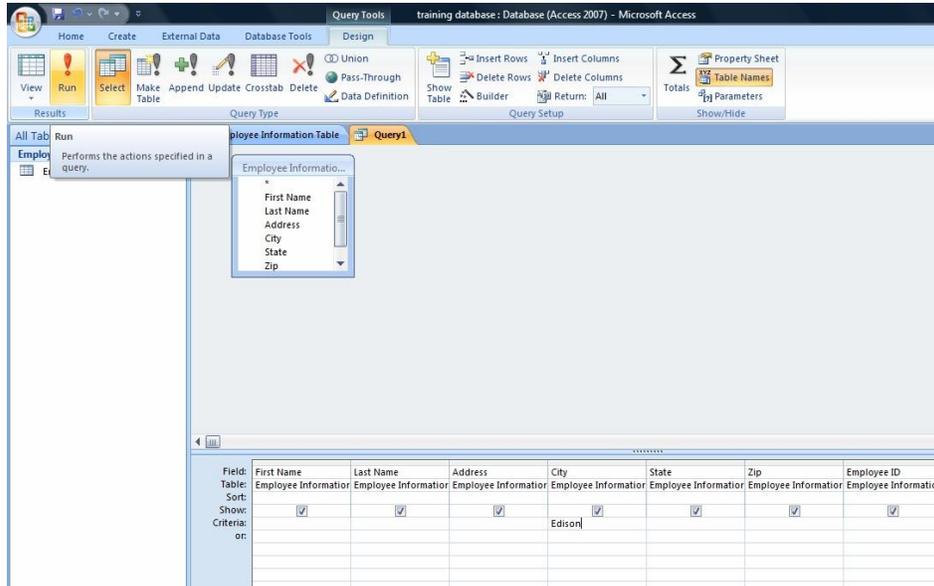
To Define Criteria for your Query:

- 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 Edison:

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

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



First Name	Last Name	Address	City	State	Zip	Employee ID
CARRIE	JONES	45 HEMLOCK DR	EDISON	NJ	08820	2
MARK	DAVIS	12 ANNETTE DR	EDISON	NJ	08820	3
STEVE	STIEN	15 COTTONWOOD	EDISON	NJ	08820	4

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

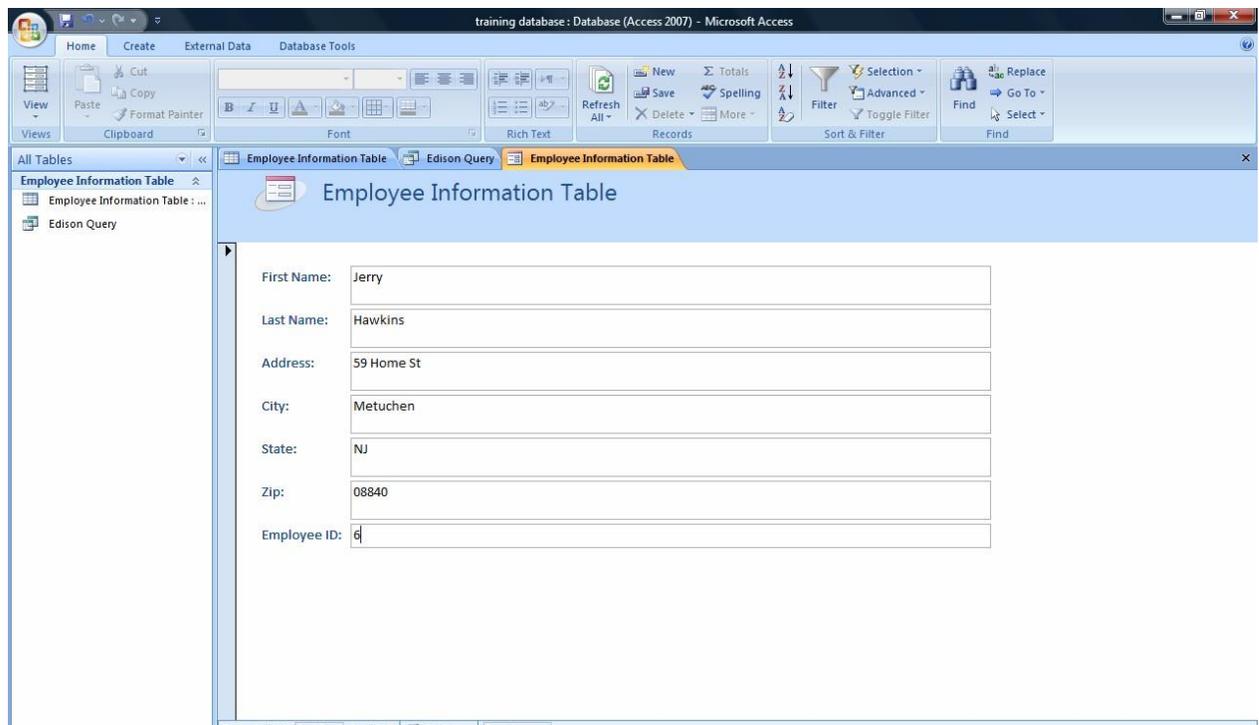
A form is a database object that is used to enter or display data in a database.

To Create a Form Using the Wizard:

- 1) Navigate to the table you want to base the form on
- 2) Click **Create** on the Ribbon
- 3) Click **Forms**

You are able to navigate using the navigation arrows at the bottom of the form.

Note: The form feeds the table. If you edit a record on the form, or create a new record, that data will be passed to the table it is associated with.



To Enter a Record on the Form:

- 1) Click the **View** button on the Ribbon to switch from Layout View to Form View
- 2) Enter the data for each field in the record, pressing the **Enter** key to move to the next field
- 3) Press **Enter** after you have entered data for the last field

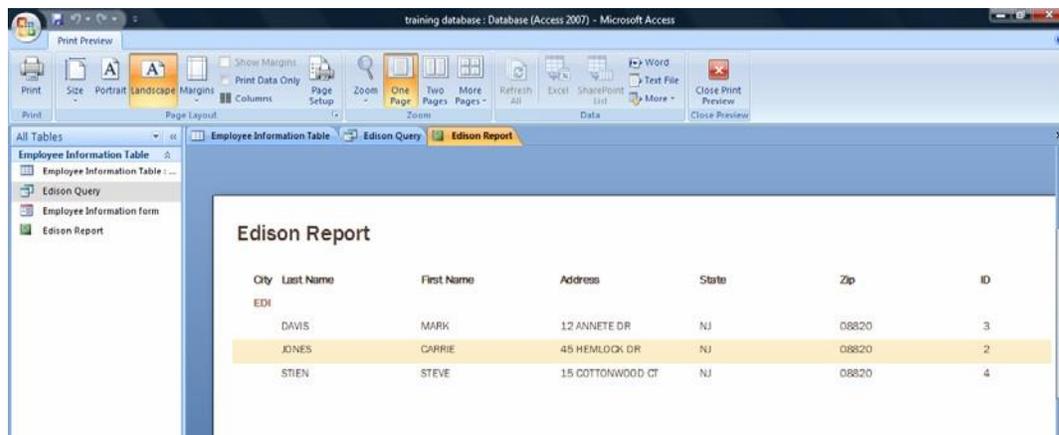
This will send the record to the table.

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) Click the **Create** tab on the Ribbon
- 2) Click the **Report Wizard** icon
- 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 a style for the report
- 9) Click **Next**
- 10) Type a title for the report
- 11) Click **Finish**



To Print a Report

- 1) Open the report by double clicking on the object in the **Navigation Pane**
- 2) By default, the report opens in Print Preview.

To Adjust the Orientation:

Click the portrait or landscape icon on the Print Preview Ribbon

To Adjust the Margins

- 1) Click the **Margins** icon on the Print Preview Ribbon
- 2) Select a margin size

To Print the Report

- 1) Click the **Print** Icon on the Print Preview Ribbon
- 2) Select the **Printer**
- 3) Click **OK**