

Section 2

Designing Databases

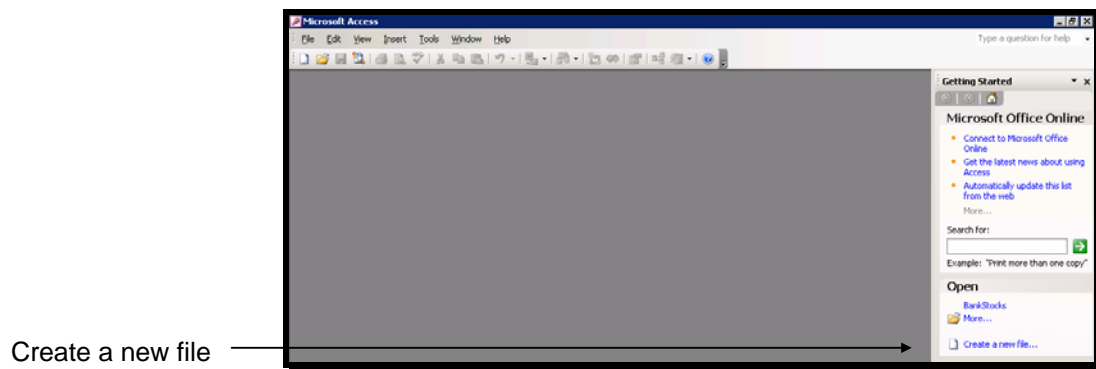
In this section, you will build a new database. It will be necessary to name fields, define the data types, and set sizes for fields. Once the database design is complete, you are ready to add data to the new database. You will learn to modify the database design and to edit data stored in the database.

Database Design

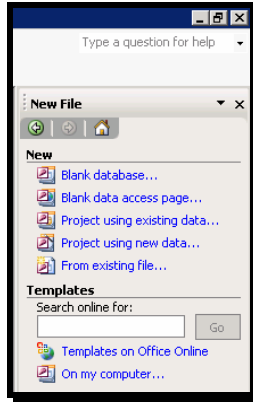
Before you create a new database in Access, you are required to assign a name to the new file. In this exercise, you will define a database and name it **Acme**. This database will contain product inventory information for the Acme Toys, Tricks and Games Company.

One of the new features introduced with Office XP was the Task Pane. This feature was new in all Office XP applications. The Task Pane provides an alternative way to complete tasks. If the Task Pane does not appear automatically when you launch **Microsoft Access**, click on the **View** menu option and select **Task Pane**.

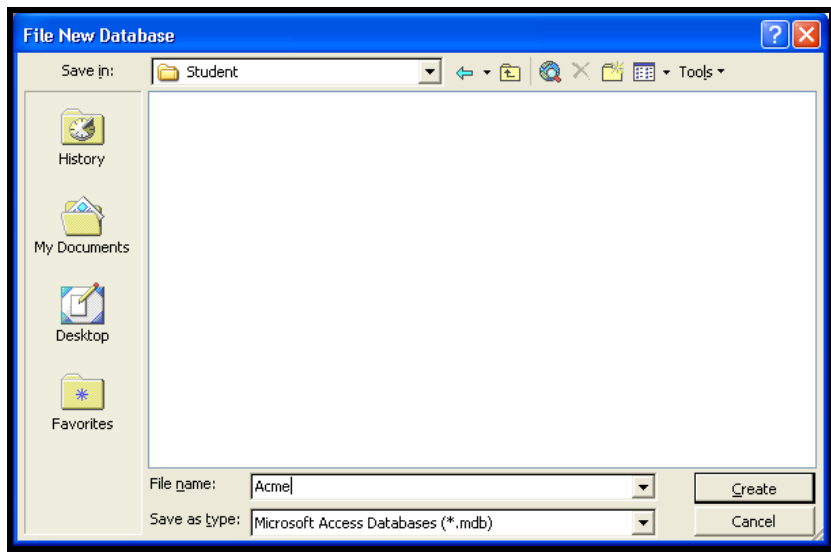
1. Launch **Microsoft Access** from the [Start] button.
The Microsoft Access Task Pane appears on the right of the screen.



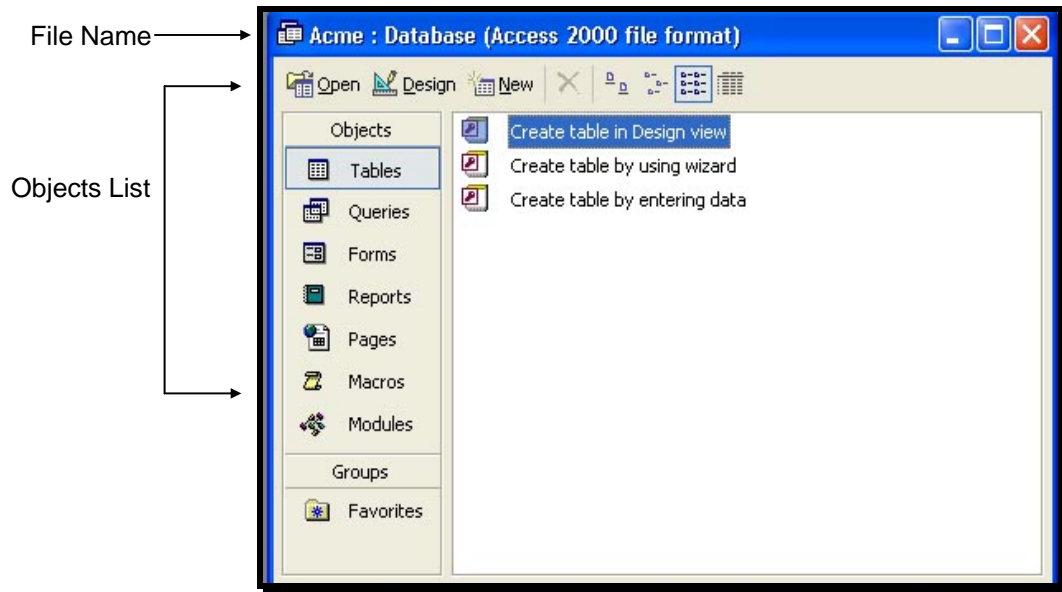
2. In the Task Pane, click on **Create a new file...**
The New File Task Pane will open.



3. In the **New File** Task Pane, click on **Blank database...**
*The **File New Database** dialog box appears. This is where you will assign a name for the new database.*



4. Double-click the **Student** file folder, if necessary.
*The **Student** folder now appears in the **Save in:** text box; the file name **BankStocks.mdb** should also appear in the list.*
5. Type the name **Acme** in the **File name:** text box over the default text **db1**.
6. Click [**C**reate].
*A Database window appears displaying **Acme** as the database name.*



Objects

There are many objects associated with a database. Tables, forms, queries and reports are all objects that are stored within a single database file. These objects are listed to the left of the Database window. In this exercise, you will define a table object for the Acme database. A table allows you to store data in fields and records. In this exercise, you will design a new table.

Create a Table

1. Click **Tables** in the **Objects** list.
2. Double-click the first option to **Create table in Design view**. *The Table Window opens in Design View. A default name of Table1 is assigned to the table.*



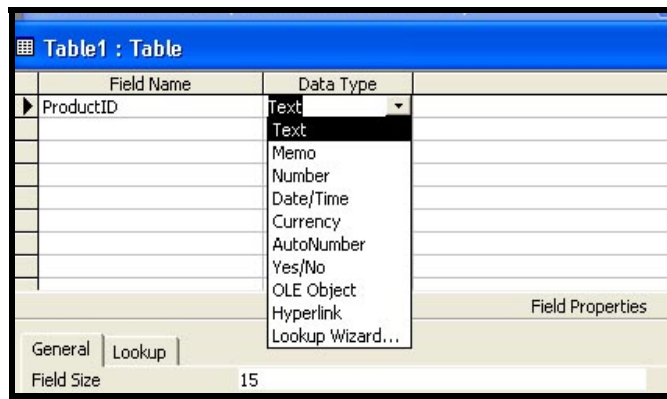
Designing a Table

A Table Window is displayed when building a table object. The current table window is called the Design View. To build a new table, you will be creating a table structured with fields. This exercise will create a database for inventory.

Table structure is a combination of field names, data types, sizes and field properties and keys. **Fields** are a specific type of data common to all of the inventory in the database. Each product's id, product name, price, quantity on hand, open orders, order date, etc, should be included in the table. A common field name is assigned to each of these pieces of data.

Decisions must be made regarding field criteria before you begin designing the data table. In this exercise, the database table you design will contain eight fields. It is not necessary to know exactly how many fields you will need. Microsoft Access makes it easy to add fields to a table at any time.

A unique **name** must be assigned to each field. Field names can contain from one to 64 characters, composed of alpha or numeric characters. A field name cannot begin with a blank space, so do not hit the space bar before you type a field name. A field name does not allow brackets [], braces { }, parentheses (), or the number (#) key by itself. If you want to use the # symbol, you must use it in conjunction with other text, such as Phone #. A good idea is to avoid symbols in field names; then you do not have to worry about invalid field names that may not be accepted. Access will allow you to use blank spaces within field names, but this nomenclature will not be used in this manual. When you work with complex Access features and program code, blank spaces are difficult to imitate.



Section 2

Summary Exercises

Part One

1. Open the **Acme** database.
2. Create a new table in Design View.
3. Add the fields as shown in the table below.

Field Names	Type	Width
CustomerID	Text	3
CompanyName	Text	30
ContactName	Text	30
Address	Text	20
City	Text	20
State	Text	2
Zip code	Number	Long Integer
Phone	Text	14
Website	Hyperlink	
Credit Limit	Currency	

4. In the **Field Properties** window, enter the appropriate captions to make the field names display as two words instead of one. Example, the field name **CompanyName** should have the caption: **Company Name**.
5. Set **CustomerID** as the primary key for the table.
6. Save the table design as **AcmeCustomers**.
7. Save the table with the changes.
8. Close the table.

Part Three

1. A field is defined by _____, _____, and _____.
2. A field must be given a name that cannot exceed _____ characters.
3. Each field name must be _____. A field name may only be used once in a database file.

4. A field made up of alphabetic, numeric characters or allowed symbols is called a _____ data type.
5. A field made up of only numeric digits is called a _____ data type.
6. Field Size can be defined in the _____ section of the Table Window.
7. Field Size cannot be changed once you begin adding data to the table. (True / False)
8. You can select the size for a Date/Time field by typing the desired width in the Field Size text box in the Field Properties section of the Window. (True / False)
9. To modify the table design, click the _____ button on the toolbar in the Database Window.
10. What are two ways to save a table?