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# Computer Training

## Introduction to Lotus Approach 97

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### *Workbook*



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## *Introduction*

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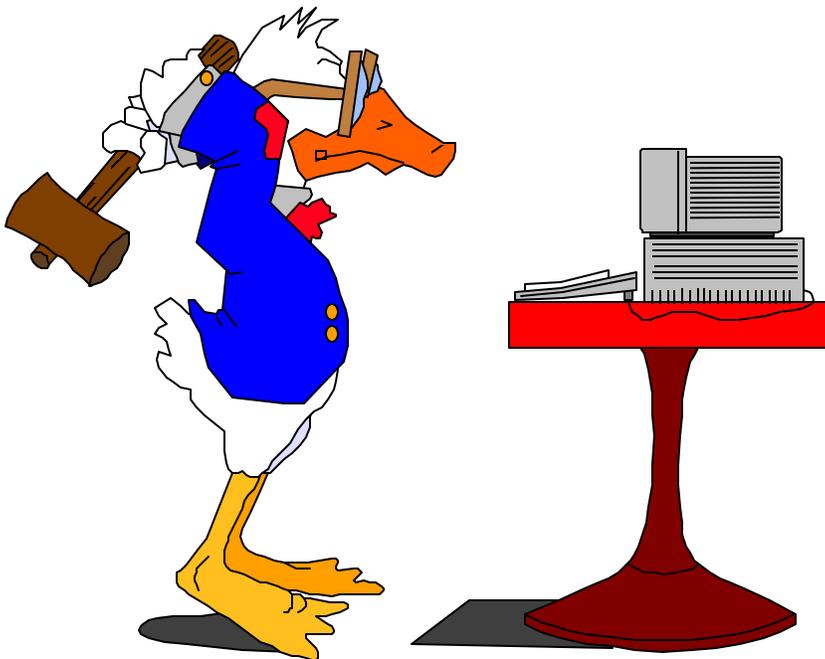
Welcome to the Warp! Lotus Approach 97 Computer Training Course.

Lotus Approach 97 is a Powerful Database Application program for Windows 95. It is part of Lotus's popular professional Integrated software suite: Lotus SmartSuite 97.

**Database Programs** are tools which allow you to store and manipulate information. This course gives step-by-step instruction on the basic features of Lotus Approach 97. By the end of this course you will be equipped with all of the skills necessary to use Lotus Approach 97 to generate simple and effective relational databases. With these skills, and a bit of practice, you will be well on your way to becoming an Approach 97 Whiz.

This workbook leads you step-by-step through all of the fundamental skills you will need to use Approach 97 effectively.

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# Creating a Database

## Getting started

You start Lotus Approach as you would any other Windows application:

**Exercise**  
Starting Lotus Approach 97



- Select **Lotus Approach** from the **Start Menu**

**Exercise**  
Creating & Saving a New Database



Click the **Create a New File Using a SmartMaster** tab  
Select **Blank Database** from the list

- Click the **OK** button



- Select the **3 1/2 Floppy [A:]** from the **Create in:** pull-down list box
- Click the **Create New Folder** button
- Create a new folder called **pet\_shop**
- Double-click on the new **pet\_shop** folder to open it
- Name your new database **Customers**
- Click the **Create** button

You will be presented with the **Creating New Database** window. Before we dive into the nuts-and-bolts of creating a new database, though, lets review some vital information you need to know:

## Planning a Database

There are 7 steps to creating a database:

1. Determine the purpose of your database
2. Determine the **tables** you need in your database
3. Determine the **fields** you need in each table
4. Identify fields with **unique** values
5. Determine the **relationship** between tables
6. Refine your design
7. Add **data** and create other database **objects**

### 1. Determine the purpose of your database

What information do you want to extract from your database? You need to determine how a database management system (like Approach) can help you turn the raw data you collect into the information you need. Throughout this workbook we will be looking at how a Pet Shop can use Approach to help keep tabs on the information needed to run the business.

As the Pet Shop manager your database might need to provide you with certain information, like names and addresses of customers and suppliers. You might want to keep an inventory of all the stock you currently have in your shop so that you can reorder when stocks get low. When a customer makes a purchase from your shop you may want to generate a detailed receipt to keep your books up to date. If they are a new customer, you could take their details so that you could send them your quarterly newsletter.

Once you have determined the information you want to extract from your database, you can then decide on the subjects (Tables), and the facts about each subject (fields) into which you will divide your data.

### 2. Determine the Tables you need

Each **Table** in your database holds information on just one **subject**.

The Pet Shop database will need one table for **Customers**, one for **Suppliers**, one for **Products** and one for **Sales**.

Determining the tables to include in your database is a very important and fundamental process. It is important that you sit down and sketch the tables you need **on paper** before you even turn on your computer. Talk to the people who will use the database to see what sort of data they need included. Look at the means by which you collect your data, like the questionnaires you give your customers, or the record sheets you use to keep track of your suppliers.

There are two basic rules when trying to determine the tables to include In your database:

1. A Table should not contain **Duplicate** information and information should not be duplicated between tables

You should store any one piece of data in your database **once**. A customer's name, for example, should only have to be entered once in the Customer table. Requiring the user of the database to input the customer's name when recording a **Sale** is duplicating information in two different tables. This could lead to data-entry errors.

2. Each table should contain data about one subject

Imagine that you designed a database which stored customer details when a sale was made. Each time a customer bought something, you would enter their name and address, as well as the code for the item being purchased. If the customer returned that item for a refund, you would have to delete the whole record, wiping out valuable customer information in the process. It would be better to create one table for Customer details, and one for Sales details. When a sale is cancelled, the only information which needs to be deleted is information about the purchase, leaving the customer's details intact.

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3. Determine the Fields you need

The **Fields** in each table hold the facts about one subject. The fields in a table for customer details might include **First Name, Surname, Address, Age** and other facts which describe each customer. The fields in each table should be related directly to the subject of the table.

4. Identify Fields with unique values

Each Approach database table should have one field which gives each of it's records a unique label. Examples might include unique serial numbers for each of the products you stock, or a different ID code for each of your customers. This field is called a **Key Field**, and allows Approach to connect information between different tables.

5. Determine the Relationships between tables

Approach is known as a **relational database management system**. You enter raw **data** into tables regarding specific subjects, and then link those tables to extract meaningful **information**. The **Edit...Join**

Menu item lets you form relationships between your tables easily. We'll look at building relationships later.

## 6. Refine the design

Once you have made the tables you think you need and formed relationships between them, you need to study your design to find any flaws. You'll enter a few records of data into each table and use sample **Forms** and **Reports** to see if you can extract the information you need from your database design.

## 7. Enter data and create other database objects

If you are confident your design is sturdy enough to let you extract the information you need, it is time to enter your data. You can then create forms, reports, crosstabs and other database objects to analyze your data.

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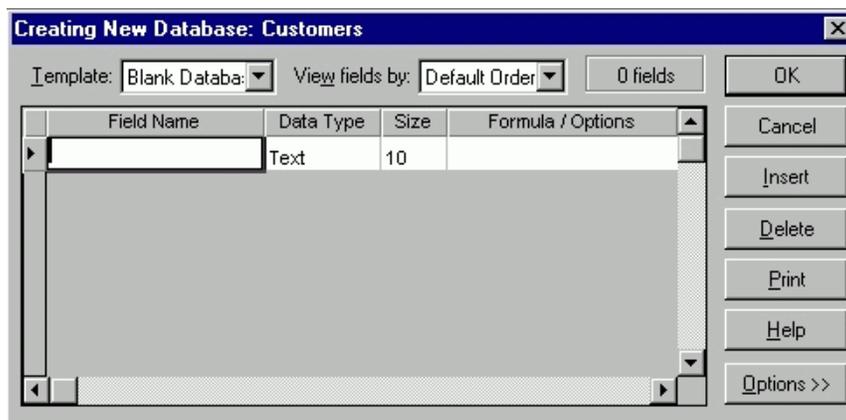
That was an overview of the entire process of designing a new database. Let's jump in and start creating a database:

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## Creating a Table

You should already have open a **Blank Database** which is stored as the file named **Customers.APR** on your floppy disk. Approach automatically presents you with **Creating New Database** window, which lets you add fields to your table:

**Exercise**  
*Creating a Table*

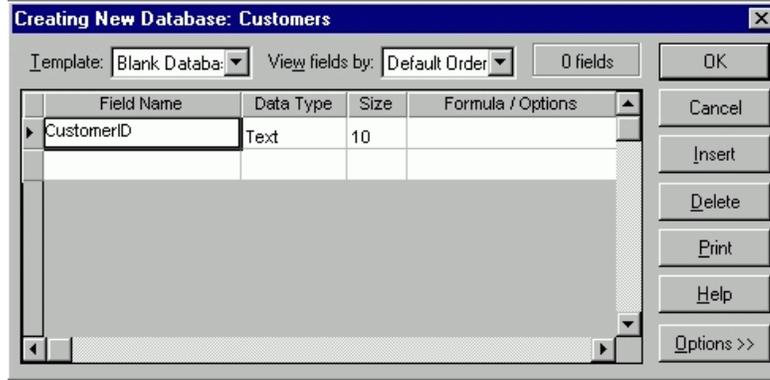


The names and properties of the **Fields** in your table are added here.

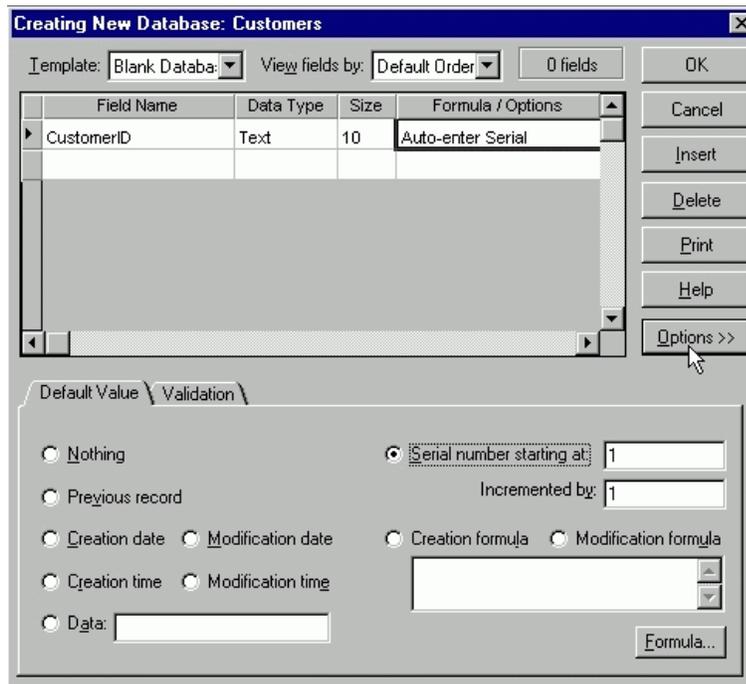
- Let's add the first field. It will be the **Key Field** for this table, the place where we store a unique code for each customer in our database:

**Exercise**  
*Adding Fields*

- Type **CustomerID** into the first **Field Name** box

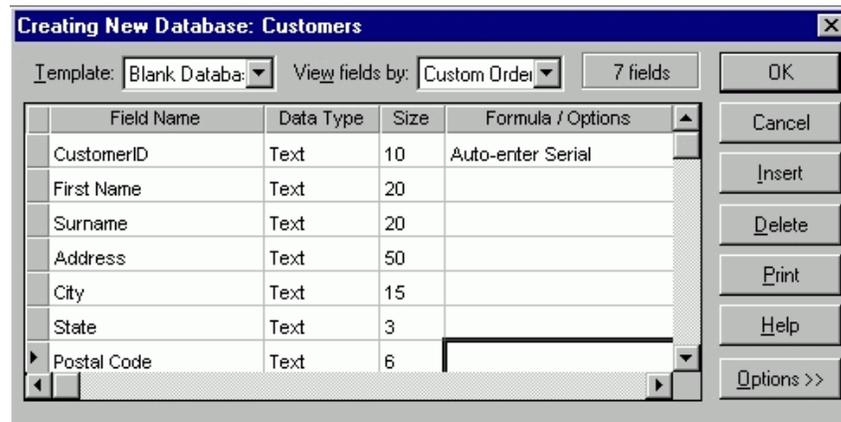


Now, let's give each customer their own **unique** serial number:



- Click the **Options >>** button
- Select the **Serial number...** option
- Click the **Options >>** button again

- Now, add the other fields which describe each customer to our database. Change the **Size** of each field to the largest likely value (eg : A customer's first name is unlikely to be longer than 20 characters long):

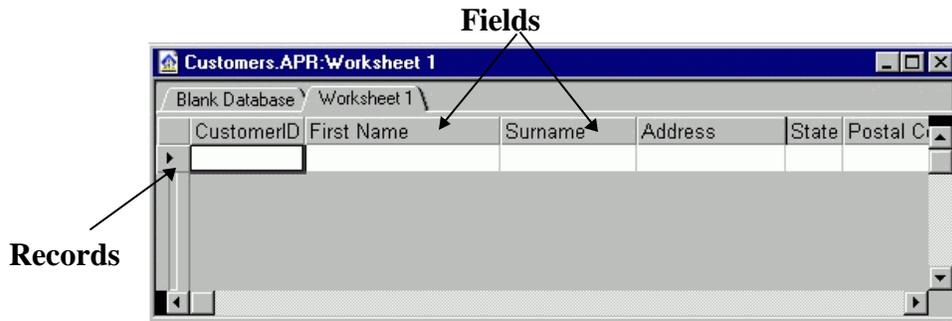


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- Click the **OK** button when you are happy with your table

You will be presented with a basic **Form** for entering your data. We'll study forms in detail later. For the moment, we'll look at the table in **Worksheet View**:

- Click the **Worksheet1** tab 



### Exercise

*Viewing a Database in Worksheet View*

A database is a collection of **Records** which categorize data into **Fields**. Each column in an Lotus Approach table stores the table's fields and each row stores the table's records. A record contains all the information on a subject for one member of your database.

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When you first create a table it will contain one empty record. To enter data into your new table, just fill in the fields for each record:

- Our first customer is:  
**Bob Jones**  
**1 Apple Lane**  
**Baker's Town TA 41345**
- We have chosen to record the CustomerID as an automatically incrementing serial number. So Mr Jones' code will be **1**. You don't need to type this in.
- Enter each part of the customer's details into the appropriate field in the first record. Use the **[Tab]** key on your keyboard to move forward through your fields. Use the **[Shift]+[Tab]** key combination to move backwards.

### Exercise

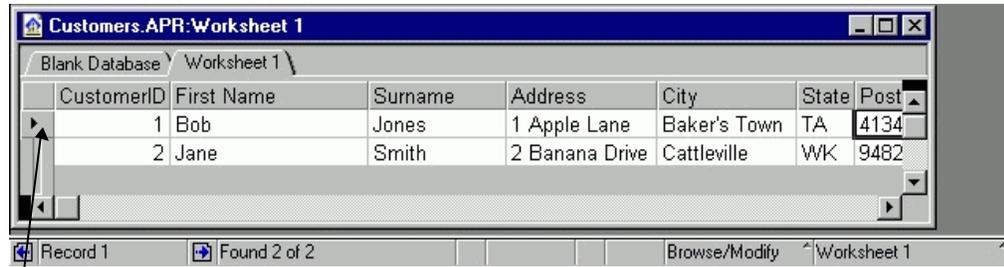
*Entering data into a Table*

Our next customer is:

**Jane Smith**  
**2 Banana Drive**  
**Cattleville WK 94827**

- Enter this data to make a record for Ms Smith. The CustomerID will be **2**. To create a new record click the **New Record** button on the **Action Bar**. You can also select the **Worksheet...Records...New** menu item, or hit the **[Ctrl]+[N]** keys on your keyboard





**Record Selector**

If you have more records in your table than will fit on your screen, you can navigate between them by using the **Record Navigation** tools on the **Status Bar**

### Using a Form to enter data

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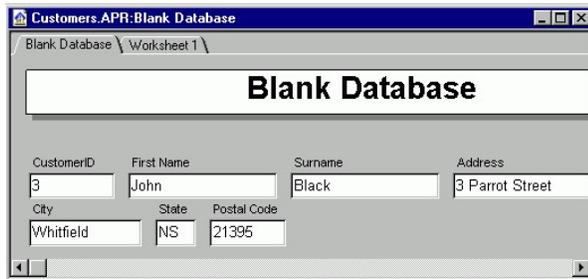
You can use a **Form** to enter data into your tables. Forms are usually easier to work with than entering your data directly into a worksheet. We'll look briefly at using the default form to add data to our **Customers** table.

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### Exercise

Using a **Form** to add a record

- Click the **Blank Database** tab at the top of your screen



- Our next customer is:

**John Black**  
**3 Parrot Street**  
**Whitfield NS 21395**

- Click the **New Record Button** on the action bar



- Enter the Customer's details on the form. Use the **[Tab]** and **[Shift]+[Tab]** keystrokes to navigate through your form

## Editing data in a table

To edit data in a table using the table's worksheet view:

- Click the **Worksheet 1** tab

## Editing individual cells

- Click on the cell you want to edit
- Use standard text formatting techniques to edit the contents of the cell

CustomerID	First Name	Surname	Address	City
1	Bob	Jones	1 Apple Lane	Ba
2	Jane	Smith	2 Banana Drive	Ca
3	John	Black	3 Parrot Street	W

### **Exercise**

*Modifying data in a Table*

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Renaming your Worksheets and Forms

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- Double-click on the **Worksheet 1** tab

CustomerID	First Name	Surname	Address	City
1	Bob	Jones	1 Apple Lane	Ba
2	Jane	Smith	2 Banana Drive	Ca
3	John	Black	3 Parrot Street	W

### **Exercise**

*Renaming a Worksheet and a Form*

- Rename your Worksheet **Customers Worksheet** and hit **[Enter]**
- Click the **Blank Database** tab
- Double-click the **Blank Database** tab and rename it **Customers Form**:

- While we are in **Design Mode** double click on the form's label (Blank Database) and change it to read **Customers**. Click somewhere outside of this box to finish your editing.
- Click the **Browse** button on the action bar to exit from Design Mode

### **Exercise**

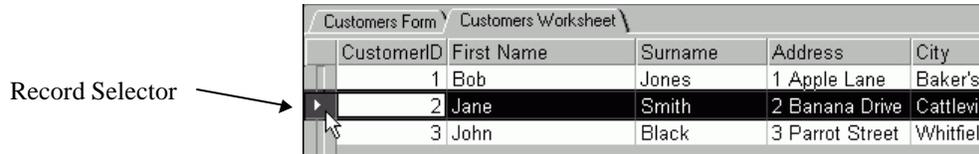
*Editing the text in a Form Text Block*

### Selecting database objects

You can select whole **Records**, whole **Fields** or the whole **Table** to edit:

#### Exercise Selecting a Record

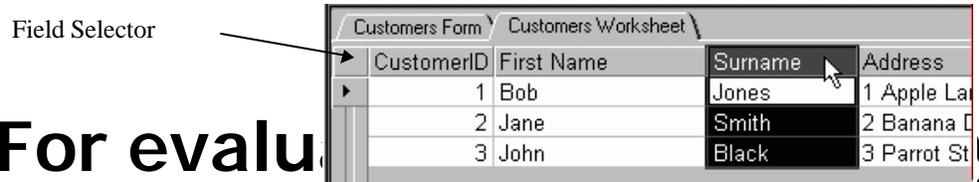
- To select a **Record** in Worksheet View, click on the **Record Selector** next to the record of interest



- To select more than one record, click and **drag** over the record selector buttons of interest

#### Exercise Selecting a Field

- To select a **Field**, click on the **Field Selector** above the field of interest



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- To select more than one field, click and **drag** over the field selector buttons of interest

#### Exercise Selecting all Records & Fields

- To select all the records in your table, click the **Select All** button



### Adding a field to your database

Let's add a **title** field to our database in Worksheet View:

#### Exercise Adding a New Field to a Database

- Select the **Create...Field Definition** menu item
- Click on the **First Name** field
- Click the **Insert** Button
- Name your new field **Title**
- Change the field size to **6** characters
- Click the **OK** button



- Drag** the new field and drop it before the **First Name** field

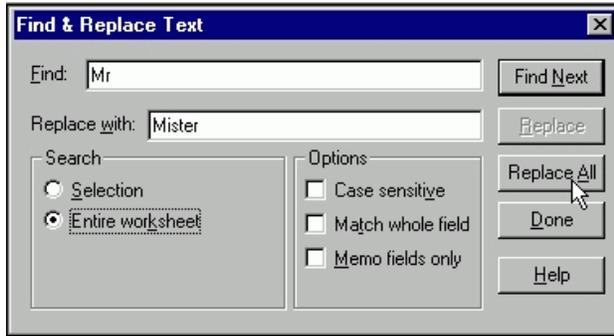
- Enter new **Title** data for your records

CustomerID	Title	First Name	Surname	Address
1	Mr	Bob	Jones	1 Apple Lane
2	Miss	Jane	Smith	2 Banana Drive
3	Mr	John	Black	3 Parrot Street

## Using **Replace**

You can let Approach find specific data and replace it with other data using the **Replace** command

- Click the **Browse** button on the action bar
- Select the **Edit...Find & Replace Text...** menu item



- Enter **Mr** into the **Find:** box
- Enter **Mister** into the **Replace with:** box
- Select the **Entire worksheet** option
- Click the **Replace All** button

- (Click the **Yes** button to confirm your intention)
- Click **OK**

CustomerID	Title	First Name	Surname
1	Mister	Bob	Jones
2	Miss	Jane	Smith
3	Mister	John	Black

- Change **Mister** back to **Mr** in the same way

## Deleting Records

Deleting unwanted records is a common task:

- Click the **Record Selector** button next to the record you want to delete

CustomerID	Title	First Name	Surname	Address
1	Mister	Bob	Jones	1 Apple Lane
2	Miss	Jane	Smith	2 Banana Drive
3	Mister	John	Black	3 Parrot Street

This selects the record

- Hit the **[Delete]** key on your keyboard
- If you are sure you want to delete the selected record, click the **YES** button. Your record will be permanently deleted

### Exercise

*Replacing text in a Table*

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### Exercise

*Deleting a Record from your Database*