Chapter 2.

Workspaces and Tables

Once upon a time…

Businesses stored their files in cabinets. If you are still in the land before time, we will show you how to convert your paper to electronic power. If you are in the forefront of technology and looking for a better way, Alpha Anywhere's flexibility is just what you've been dreaming about.

Choose your file type – DBF or SQL. Alpha Anywhere is for non-programmers and experts alike. Its Xbasic programming language puts developers on a quick, easy path to further customizing. Or let the genies do the work in the background. The choice is yours.

Notes:

Who needs this?

While this chapter does discuss DBF tables, it contains fundamental elements that apply to all users.

Creating a New Workspace

We stated above that Alpha Anywhere is more than just a workspace. As a result, the term "workspace" is now used instead. In this exercise, we will create a new DBF workspace and enter a table into it. If you have several projects, it may be best for each to have its own workspace.
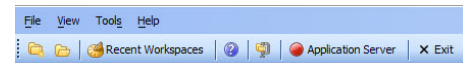
 VERY IMPORTANT!

Be sure to put each workspace in its own folder. Many files will be created and you don't want them mixed up with the Alpha Anywhere program files.
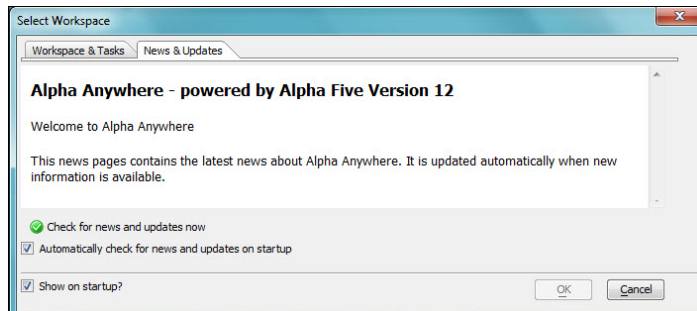
1. Start *Alpha Anywhere* from the Start menu or the program icon.

If you do not see the screen at left, click Top Menu > Recent Workspaces.

There are 2 tabs on the opening screen:[*]

- *News & Updates:* This screen is actually a web page.[†] It reports new information from Alpha Software and gives helpful links. If your software is out of date, a warning advises and provides a link to the latest patch download.[‡] You can also access the download files from within Alpha Anywhere: From the Top Menu, choose *Help > Download patches.*

- *Workspace & Tasks:* Opens and creates workspaces; also opens a collection of Sample and Tutorial workspaces (see inset below).

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*. This screen is sometimes referred to as the **Welcome Screen.**

†. As in many other instances, this screen is dynamic, meaning it may change from time to time depending on your most recent update.

‡. Updating always follows the same procedure: 1. At the Alpha website, choose the appropriate file for your software edition. 2. Download. 3. Before running, close Alpha Anywhere—not always required, but a good practice. 4. Follow instructions.
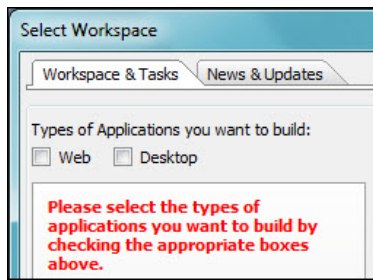
The first time you open Workspace and Tasks, you will probably see the screen at left that asks you to choose the type of workspace you would like. This is just a starting point and can be changed at any time.

Once Alpha Anywhere is opened, you can also move freely between the desktop and web sides, so this choice is not critical.

Since we're working on a desktop application, however, I suspect you can guess what our choice will be.
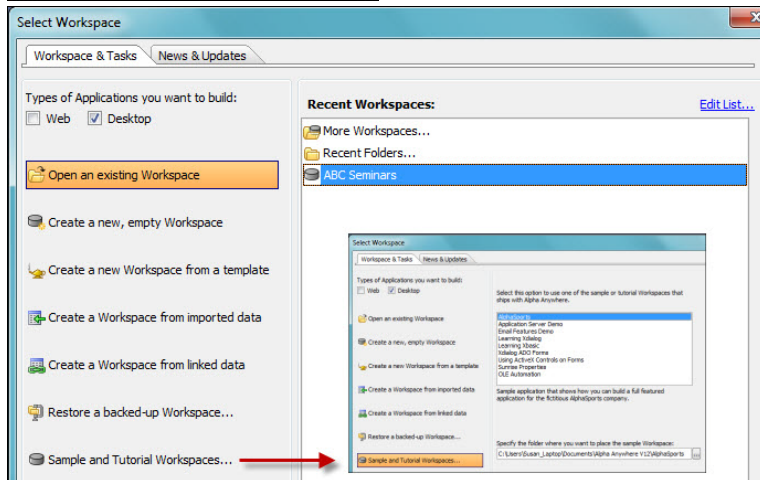
2. *Tab: Workspace & Tasks:* Types of Applications you want to build: Choose **Desktop**.

•There are several ways to create new workspaces. We will create a new, empty one and you can explore the other options on your own.

•Note the Sample and Tutorial Workspaces that have been included with Alpha Anywhere.

3. Choose **Create a new, empty workspace.**
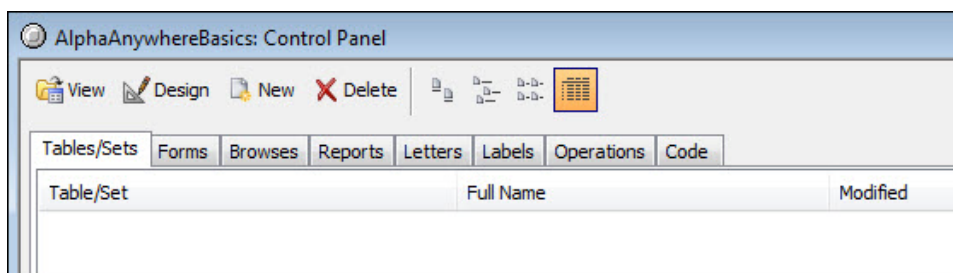
4. **Click OK** at the following screen.

5. At the *Create New Workspace* window, navigate to the **c:\Alpha_MadeEasyDesktopBook**\ folder.

6. Create and open a new folder* with the following name:

c:\Alpha_MadeEasyDesktopBook\MyNewDB.

7. File Name: Enter the name of the workspace.

AlphaAnywhereBasics

8. Click **Save**.

The workspace is created and the **Alpha Anywhere Control Panel** appears.

Understanding Tables and Fields

PLEASE TAKE A MOMENT TO READ THIS

Tables are composed of 15 types of fields.

*. Putting the workspace in its own folder is very important.

- Character
- Numeric
- Date
- Logical
- Time
- ShortTime
- ExponentNumeric
- Memo
- Bitmap
- OLE
- Rich Text Memo
- JPeg Image
- Image File Reference
- HTML Memo
- UUID

CHARACTER

The most common field type, it holds alphanumeric data. Character fields may contain letters and numbers.

When you are planning to store numbers in a field, consider the following:

- Character fields can show leading 0's. [For example, Zip Code= 07760] Numeric fields can not.

- Character fields can have both letters and numbers [C 0556]. Numeric fields can not.

- Character fields can have other symbols: [Phone = (732) 842-3000] Numeric fields can not.

For some character fields, the width is arbitrary, such as first name, company, city, etc. Others, such as phone numbers and zip codes are determined by the complete number of characters they will hold. For example, in the next lesson, we will use field rules to set up phone numbers to be viewed as (732) 842-3000 (14 characters) and zip code as 07760-0453 (10 characters).

NUMERIC

Fields on which you might want to perform calculations. Numeric fields accept only numbers and the decimal point.

- When planning the width of a numeric field, include the decimal point, decimal places and one extra space for a minus sign, even if you do not plan to enter negative numbers. For example, if the largest number you plan to store in a field is 9999.99, make the field width 8 with 2 decimal places.

- In the Form and Report editors, you will be able to format numbers to display dollar signs ($500.00) and commas (400,000.00).You will be able to show fewer decimals on reports, forms, etc. than created in Structure Table, but not more.

- For example, a field structured at 4 decimals could read 400.9099 on a report. It could also be set to 2 decimals at the report level, in which case it would round to 400.91.[*]

DATE

This field type only accepts valid dates. It is aware of the calendar, including leap years. Automatically set to a width of 8. See "Enter Date Field" on page 84 and "Creating a Rich Text object" on page 230.

LOGICAL

Contains one character, which is used to represent a TRUE or FALSE value.

TIME

Shows date and time. This field type only accepts valid time format. Automatically set to a width of 17. See "Creating a Rich Text object" on page 230.

- 11/30/2005 12:00 00 pm

SHORT TIME

This field type only accepts valid time format. Automatically set to a width of 9. See "Creating a Rich Text object" on page 230.

- 12:00 00 pm

EXPONENT NUMERIC

A fixed precision decimal number.

MEMO

A 10-character width is automatically created. In actual use, the field expands. The only limit to the number of characters is available disk space.

- Formatting of characters not available. (see Rich Text Memo below.)

BITMAP

Stores bitmap (.BMP) pictures as data in the table.

OLE

Used to link a document, such as a spreadsheet or graph, using the OLE method.

RICH TEXT MEMO

This is the second type of memo field available. It, too, is automatically set to a width of 10. It differs from the Memo Field in the following manner:

- Paragraph formatting is available.
- Character formatting, such as bold, underline, color, etc., is available.
- Fields can be inserted.

JPEG IMAGE

Stores JPEG (.jpg) pictures *as data in the table*. JPEG files are much smaller than bitmaps. Bitmaps may also be stored in JPEG fields. When bitmaps are stored here, they are automatically converted to JPEG files.

IMAGE FILE REFERENCE

This field type is also called a "linked image field" because the image is not stored directly in the workspace. Only the reference is stored. Since graphics files can be quite large, using links can result in a significantly smaller workspace.

HTML MEMO

This is the third type of memo field available. It, too, is automatically set to a width of 10. It allows access to the HTML[†] Editor where web pages can be created and stored in the workspace, using either WYSIWYG[‡] or HTML.

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[*].The ROUND function is also available to round decimals to a certain number in calculations. See Help > References > Functions & Methods > Mathematical Functions > Round(). We'll talk lots more about functions as we work through the book.

UUID

This field returns a UUID (Universally Unique Identifier), similar to a GUID (Globally Unique ID). It is intended for advanced SQL users. An example might be {fj56co90-et23-r5i6-564w-rr45-rk34rbl5}.[*]

HINT!

If you plan to move your workspace from one drive to another, it is a good idea to set up **Aliases** in order to maintain links. (See "Understanding Aliases" on page 424.)

In planning tables, keep the following in mind:

- The width set for a field governs the size of the table because space is reserved even if the field is empty or partially filled.

GO TO ALPHA HELP

In this series of lessons, we will use the following field types: Character, Numeric, Date, Logical, Memo, Rich Text Memo, JPEG Image and Image File Reference and HTML Memo. To learn about the other types and more about fields in general, see:
Documentation > Filter: Enter **Creating a New Table**.

- Help > Tutorials > User Guide Desktop > Working with Workspaces. See also links at bottom of page.

- Remember that the above references have been shortened a bit.

  - **Help** = *Top Menu > Help > Open Help File*.

- For more information on using the help file, see "Videos in the book" on page xi.

Creating a new table.

1. On the *Alpha Anywhere Control Panel*, click the **Tables/Set**s tab.

2. Click the *New* button.

PLEASE TAKE A MOMENT TO READ THIS

There are several methods for creating a table.

- The first three, **Design mode**, **Text mode** and **by Example** are intended for Alpha Anywhere users.

- The next two, **Passive-Link** and **Active-Link**, are for remote workspace users.[†]

- **Mapped Tables** are discussed in "Understanding Mapped Tables" on page 119.

- There are two methods for importing data into tables:

  - **Import from SQL Workspace**.

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†. HTML: Hypertext Markup Language. This is the code for writing web pages.

‡. WYSIWYG: What You See Is What You Get. Even the uninitiated can create web pages by entering text and/or pictures in the HTML Editor. The code is created in the background and can be seen at the Source tab.

*. Alpha Anywhere also has an easy-to-use feature that provides a unique ID for each table. (See "Defining Auto Increment fields" on page 80.)

†. Active- and Passive-Link tables are discussed in *Alpha Anywhere and SQL* by Susan Hussey Bush. Available at www.libertymanuals.com.

- **Import > Import Genie & Import Builder**. Importing is discussed in Chapter 10.
- A **Set** is a combination of tables and is discussed in Chapter 6.
- **Create using Genie** has some interesting pre-designed tables for certain pursuits such as Artists, Home Inventory, Invoice Header and Line Items. You may want to look at the selection to see if it could be useful to you.
  - Click the **Preview** button to see the fields in the table.

We will use the classic method, **Design mode** because it best illustrates the principles of table design.

GO TO ALPHA HELP

Once table design is understood, you may wish to experiment with the other styles. To see them illustrated, go to:
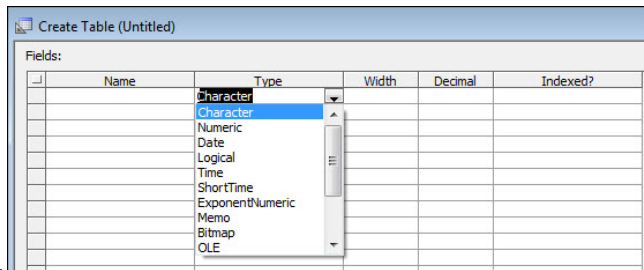
Documentation > Filter: Enter **Create a New Table from Sample Data**.

Documentation > Filter: Enter **Create a New Table by Example**.

3. Choose **New Table (Design mode)** from the drop down list.
- Be sure the Tables/Sets tab is active.
- The Create Table window appears:
- This is where fields are created.

4. Click in the **Type** field and open the selection box to see the choices.

HINT!

Since the field types all begin with a different letter, pressing the first letter will quickly insert the type. For example, pressing C will select Character.

WINDOWS HINT!

For quick keyboard access to drop down lists such as the list of field types, use ALT + DOWN ARROW. This will work in all Windows applications.

- Next, we will set up the table.
  5. Click in the first entry box of the **Name** column.
  6. Enter the fields as follows:
  - Press TAB to navigate between cells.

NOTE

Notice that Alpha Anywhere replaces the spaces in field names with underscores. That is, **First Name** becomes **First_Name**. The case is also set by the program, so **first name** will also become **First_Name** *after you save the table*.

The last column, *Indexed?*, is discussed on page 416. No entry is necessary at this time.

Name	Field Type	Width	Decimal
Client ID	Character	5	0
Enter Date	Date	8	0
First Name	Character	12	0
Middle Initial	Character	2	0
Last Name	Character	20	0

| Company	Character	35	0
Address 1	Character	25	0
Address 2	Character	25	0
City	Character	25	0
State	Character	2	0
Zip Code	Character	10	0
Phone	Character	14	0
Fax	Character	14	0
E-mail	Character	30	0
Website	Character	40	0
Notes	Memo	10	0

7. Save the table:

- There are three ways to save in Alpha Anywhere. All are common Windows commands:

    a. Choose File > Save.

    b. Press CTRL + S.

    c. Click the Save button at the upper left of the screen.

BASIC SKILL: *CTRL + S

We prefer CTRL + S because it's faster and will use this method in our lesson instructions. You may prefer to use a different method.
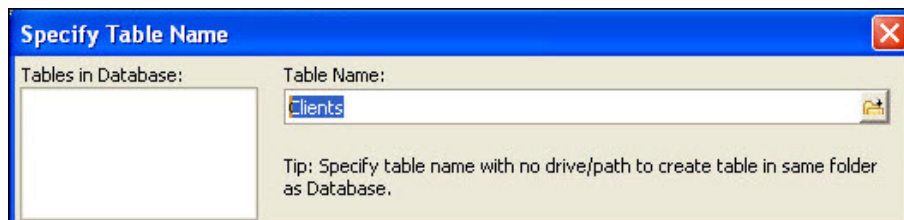
- The Specify Table Name window opens.
The left window lists the tables in the current workspace. This will help you in locating a unique name for your new table. Since this is the first table in the new workspace, the left window is empty.

    - By default, the table will be saved in the same folder as the workspace.

8. Type in the file name: **Clients.** (Click OK)

    - After saving, you are returned to the Restructure Table window.

9. Click either the X in the upper right of the Create Table window or the *Close* button on the top menu to exit.
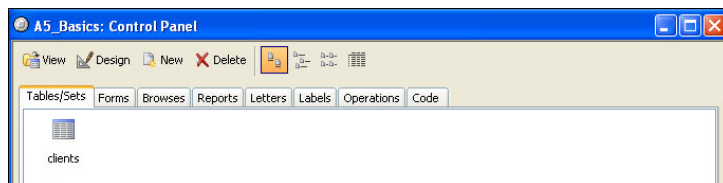
- The newly created table appears in the list.

- This table has only 3 types of fields: Character, Date and Memo.

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*. Basic Skills are preferred methods and will be used throughout this book.

- To see other types of fields and further explore the Control Panel, we will close this workspace and open the ABC_Seminars workspace, the basis for most of the lessons in this book.

Closing the workspace

You can close the workspace in several ways. The first two of the following methods also close Alpha Anywhere. The third keeps Alpha Anywhere open, but closes the current workspace and opens a different one.

- Click the EXIT button when you are at the Alpha Anywhere Control Panel.
- Click the X in the upper right corner of the Alpha Anywhere window.
- Switch to another workspace as we will do in the next exercise.

Opening multiple workspaces

You can have more than one Alpha Anywhere workspace open at one time by opening another instance at the Windows Start Menu or by clicking on the program icon on the desktop.

Understanding the Alpha Anywhere Control Panel

PLEASE TAKE A MOMENT TO READ THIS

The Alpha Anywhere Control Panel is its main menu and the heart of Alpha Anywhere design. It lists the Tables, Sets, Forms, Browses, Reports, Letters, Labels,[*] Operations and Codes that have been created for the workspace.[†]

- This exercise continues from the previous one. The AlphaAnywhereBasics workspace is still open. We will now switch to another Alpha Anywhere workspace and the first will close automatically.
- You can also open this workspace directly from the Alpha Anywhere opening screen.

1. *Top Menu:* Choose File > Open Workspace.

2. Navigate to **c:\Alpha_MadeEasyDesktopBook\ABC_DesktopLessons**
   ABC Seminars (alpha5 Document)**.**

3. Click **Open**.
   - The workspace opens at the ABC Seminars menu.

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*. Envelopes may also be made at the Labels tab.

†. Depending on the version of Alpha Anywhere that you are using, additional tab(s) may be shown. This manual covers only the tabs mentioned above. All tabs are covered in this book