Chapter 9.

Introduction to Mobile

Get a great user experience…

The UX (User Experience) Component can be used in all types of applications – desktop, web and mobile. It's all about speed for mobile devices and this component is fast. And, it works on the desktop!

Mobile device simulator

The UX Component has an exciting feature that will have you longing to create Mobile applications. This chapter will show how to create these sweet babies!*

iPhone

iPad

*. iPhone and iPad are trademarks of Apple, Inc.

Who needs this?

This is more than just an *Introduction to Mobile* – you can use most of this chapter on the desktop and web, too!

If you are considering a *Mobile* or *Web* application now or in the near future, learning about the UX (User Experience) Component is critical.

- Suitable for Desktop, Web and Mobile applications.
- Suitable for SQL & DBF file formats.

Understanding the UX Component

Currently, most mobile support is limited by speed, primarily network speed and the processing speed of the device – so the data packet size is critical to get reasonable performance. The data payload for a UX Component is much smaller than a grid. In most cases, unless you need some feature of a grid, the UX is a much better mobile solution.

Most mobile devices don't have much screen room, so the apps and pages tend to be very minimalistic. There is even a trend in conventional web applications toward single page applications. There is even an acronym for it – SPA – it seems to be the new hot concept.


NOTE

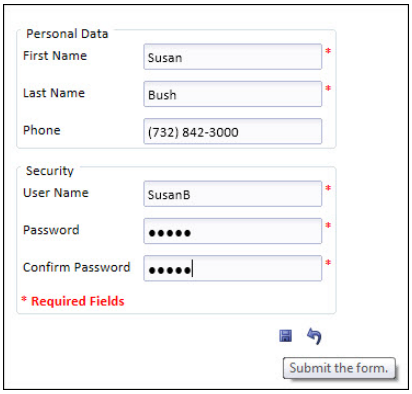
The UX Component was previously known as the Dialog Component. It was completely redesigned for Version 11 and ***greatly*** enhanced for Alpha Anywhere (Alpha Five V12). This is important to remember when you are searching the Help files for assistance. The following apply:

- *Dialog* Component pages and videos.
  - This group explains the features, how to set-up and use.
- *UX* Component pages and videos.
  - Focus on Panel Cards (p. 323) and List Controls, as well as features added in v12. Require basic understanding as described in Dialog Component videos above.

UX Components can be designed to look and behave like Grid Components, but there is a major difference between them.

- A Grid is always connected to a database.
- The UX may or may not be connected to a database.

When it is not connected, it behaves like a “dialog.”



What is a dialog?

A dialog is a form that asks the end user for information. For example, when you buy something on the web and fill in the name/address form – or register your name and security information as at left – you are using a dialog. The information is then evaluated for correct input (validated). If you have filled in all the entries correctly, the data is sent to the server. At that time, it is entered into the database and/or used in some other way determined by the developer.

What's the difference?

Understanding the difference between Grid Components and UX is critical because you need to know which to use when.

GRID COMPONENT

Always bound to a table.

- Data submission is automatic.
- When the Submit button is clicked, data is entered into the table.

- For employees and other authorized users familiar with the company, its policies and procedures.
- May require training for end user.
  - Example: Company rep enters an order.

UX COMPONENT

May or not be bound to a table.

- Creates variables.*
- Data submission is manually determined by developer with Action Scripting and/or Xbasic.
- When the Submit button is clicked, the data in the variables may be entered into a table and/or used in another way.

- Gathers information from users inside or outside the company.
- No training necessary for end user.
  - Example: Customer places an order on-line.

May replace a Grid in web applications when additional speed is required.

Previewing UX Components

With a simple preview selection, you will be able to see exactly how your applications will appear on mobile and on the web and on the desktop. Besides looking fantastic, this serves a much more important purpose. Since mobile device screens are smaller than computer windows, seeing how much will fit is vital to their design.

Because it is the pathway to Mobile, the UX Component is the single most important feature of Alpha Anywhere. It sets the program apart from the competition. Nobody has anything like it. Spread the word!

*. See "Understanding Variables" on page 397.

This chapter shows how to create a basic UX component. To understand exactly how basic, consider that, at this writing, there are more than 100 video *topics* on the UX/Dialog component, many with multiple videos. We will look at only a few.*

Preparation for the lesson

The exercises in this chapter should be placed in the *Desktop* web project that was created in Chapter 8 (see “Creating a new Web Project” on page 265).

The **Desktop** web project also has completed examples.

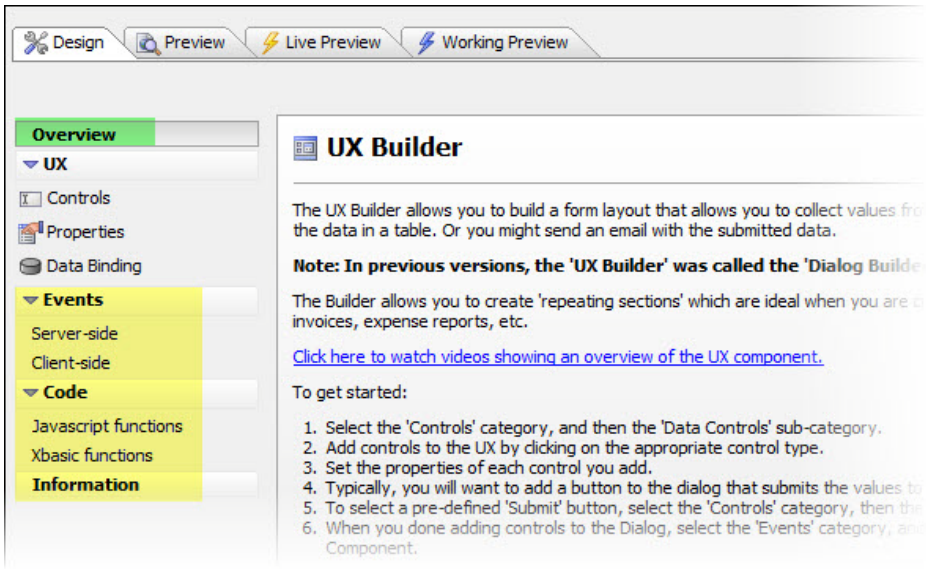
Creating a UX Component

VIDEO! SEE P. 314

Overview of the UX Builder

To begin, we will take a look at the design process for UX Components.

1. *Web Projects Control Panel* > *New* > *Web Component* > *UX:* **Start with a blank UX Component**. (Click OK)



Dialog: Overview

- The UX Builder appears with getting started instructions and a link to explanatory videos. You can return to this page at any time by clicking Overview in the left menu (green). These videos are also available in the Video Finder.
- The left menu navigates to the other elements of the builder (yellow).

Understanding the Menus

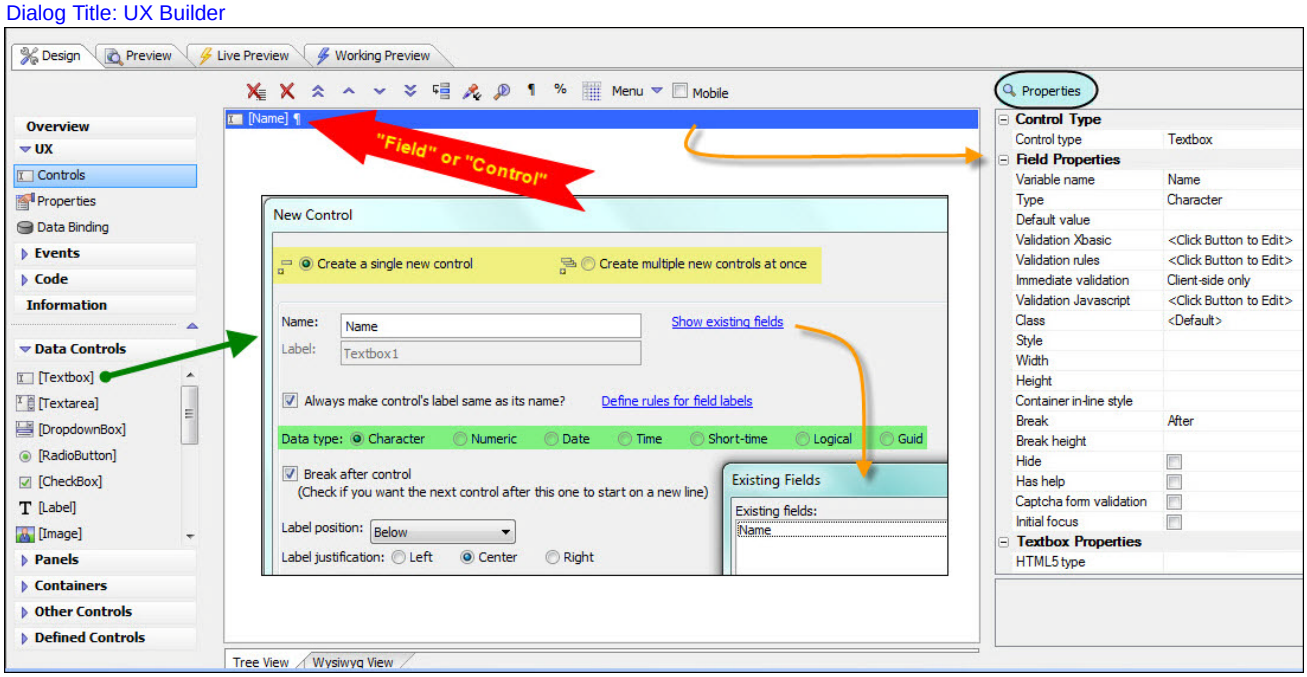
The menu options are extensive, permitting extreme flexibility for this component.

2. Click **UX** twice.

*. *Alpha Five Web Applications Made Easy* greatly expands on these lessons. Available at www.libertymanuals.com.

- First click opens the Events, Code and Information menus.
- Second click opens all menus.

Dialog Title: UX Builder



UX MENU

We do not start out with fields in the UX because it creates variables instead. The variables are called **Controls**. The above screen shot shows the builder after one has been created.

The **Properties** section in the left menu is for the UX itself (like Grid > Properties).

The controls (aka fields) have properties too.

- In the above screen shot, control **Properties** are at the right, just like in Grids.

REMEMBER THIS!

The Properties button (aqua above) opens the *Search Properties* dialog to quick find settings (see “About searching and finding properties” on page 297)

Data Binding is for mapping the controls to a table, if desired. This permits data to be entered into a table as in a Grid.

EVENTS & CODE

All components permit code to be added or modified.

- We prefer to work with these sections collapsed in order to open more space for the ones that follow.
- You may need to re-click UX after collapsing them in order to see the rest.

DATA CONTROLS

These controls are like the ones we saw in Grid > Field Properties > Control Types (page 272), with some additions:

- Textbox, Textarea, DropdownBox, RadioButton, CheckBox, Label, Image, Hidden, Slider, Switch, Button List, List, Calendar, Tree, Map and Chart.

PANELS

Panels are used for Mobile devices. They make the change from portrait to landscape automatic when the device is rotated. Options include:

- Panel Layout, Panel Navigator, Panel Card, Quick Panels genie.

CONTAINERS

Containers wrap controls and divide them into one or more sections:

- Tab Control, Tab Pane, Frame, Container and Free-form layout.

OTHER CONTROLS

Another selection of controls:

- Static Text, Image, Button, Hyperlink, iFrame*, Spacer, TabStop, Embedded Object, Placeholder, FileUpload/Download.

DEFINED CONTROLS

Controls for

- Delete Record, New Record, Row Number, Update Source Grid.
- JS (JavaScript) Command Window.
- List Controls: Debugging, Navigation Buttons & Icons, Page number, Page selector, Record count, Selector, Twitter example.
- Record navigation buttons and icons.
- Submit-reset buttons.

Understanding UX Component design

UX design is different than Grid design.

- Since a **Grid** is bound to a table, it already has fields to which we can assign control types, such as Textbox, Radio Button, etc.
- A **UX** begins without fields, so we reverse the process, selecting the control type and then defining the **Controls** (aka fields).

TERMINOLOGY

Controls receive input from the end user. There as several types, most of which should be familiar to you: *Textbox*, *TextArea*, *DropdownBox*, *Radio Button*, *Checkbox*, *etc.*†

- Once created, they are listed in the UX Builder and are referred to as **Controls or Fields** (red arrow above).
- Like fields, their **Data Type** (aka **Field Type**) must be identified: *Character*, *Numeric*, *Date*, *Time*, *Short-Time*, *Logical*, *GUID*.

It is important to remember that even though the terms **Control** and **Field** are used interchangeably in UX design, the controls actually create **Variables**, not fields.

The contents of the variables can, however, be placed in table fields with a process called **Data Binding**.

*. An IFrame control can be linked to a URL to show a web page.

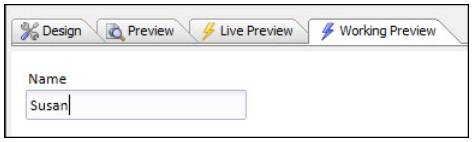
†. For more information on these controls, see “Creating Checkbox, Radio Button and Drop Down Box controls” on page 247.

Variables can also be used in other ways. In either case, Action Scripting and/or Xbasic are used to execute the **Server Side Event**.

- There are six ways to add controls: We will take them in turn.
  - Single control: See “Adding a single control” on page 308.
  - Multiple control: See “Adding multiple controls at the same time” on page 308.
  - Pre-defined list: See “Pre-defined lists” on page 310.

Adding a single control

3. *Data Controls:* Click **Textbox** to open the **New Control** dialog (inset above).
4. Choose **Create a single new control**.
5. *Name:* Enter **Name**.
6. *Always make control’s label same as its name:* **Yes**.
7. *Data type:* **Character**.
8. Click OK.
   - Alpha Anywhere creates the control and its Properties section opens.
9. Go to **Working Preview**.
10. Enter **your first name**.

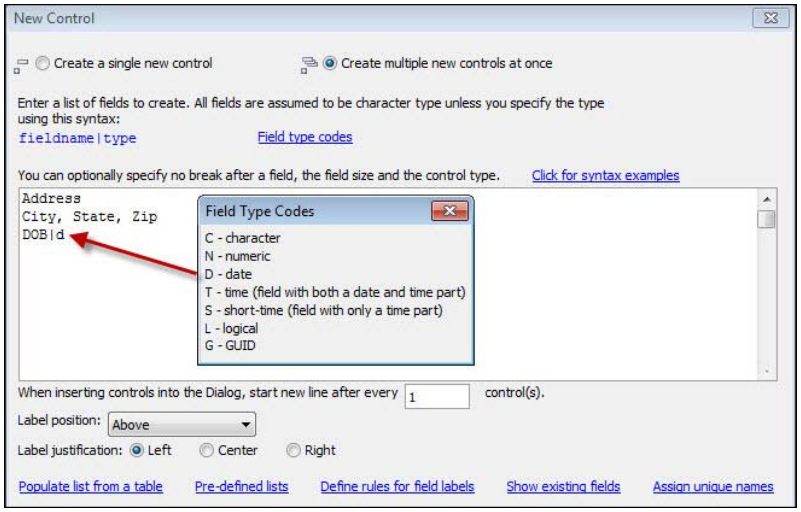


At this point, the control won’t do anything for several reasons. There is no way for the end user to submit the data. And even if there were a submit button, Alpha Anywhere wouldn’t know what to do with the variable. Before we get into these things, let’s add a few more controls (aka fields).

11. Return to Design mode.

Adding multiple controls at the same time

You can add several controls at once and assign their field (data) types at the same time.



12. *Data Controls*: Click **Textbox**.

13. Choose **Create multiple controls at once**.

14. Enter **Address, City, State, Zip** as at left.

- Press ENTER to create a new line.
- Be sure to place commas between **city, state, zip**. We'll explain more about this later.

CHANGING THE FIELD (DATA) TYPE

The default field (data) type is character. You can change it for non-character fields.

a. Click the Field type codes hyperlink to see the code list (inset above).

b. Note that the code for date fields is "D."

c. Press ESC to close the dialog.

15. Start a new line.

16. Enter the following for "Date of Birth": **DOB | d**

- This uses the "pipe" key as a separator. It is above the backslash key on most computers.

IMPORTANT NOTE

You would not ordinarily use an abbreviation such as DOB in a dialog because the end user might have difficulty understanding what you mean. Fortunately, we can spell out *Date of Birth* in the Label.

However, as you design UX Components, remember to keep it simple because, in most cases, the end user will be not be trained in dialog completion.

LABEL POSITIONING & JUSTIFICATION

You can specify the location of the labels and their justification. Defaults are **Below, Center, Left**. They can also be changed after the control is created.*

SYNTAX EXAMPLES

There is an extensive help dialog that explains how to:

- Add controls.
- Use line breaks.
- Enter the field (data) type.
- Enter the field size (width of textbox).
- Combine field size and type.
- Combine field size, data type and control type.

a. Click the Click for syntax examples hyperlink.

*. To change the position or justification of a control after it has been created. At the UX Builder, right click on the control.

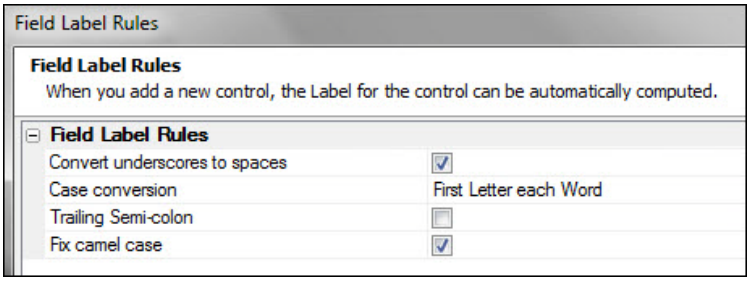
b. Look over the options and press ESC to close the dialog when finished.

LABEL RULES

Alpha Anywhere makes it easy to assure that your labels have a consistent appearance. The following settings are for the *label only.* Definition for the contents of each Control is set at its Properties, the same as for Grids.

c. Click Define rules for field labels.

The defaults make the following conversions:



- Let's say that you use an underscore in the control name (last_name), but do not want it to appear in the label.
- Or you prefer to use Camel case* (LastName) and would like to individual words for labels.
- And, you want to be sure the case is always the same. Choices are: *First Letter each Word*, *First Letter* or *None*.

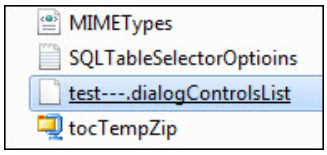
- By using the above Field Label Rules settings (default), the following would occur:
  - last_name and LastName will both be changed to Last Name.

17. Click **Cancel** to accept the defaults.

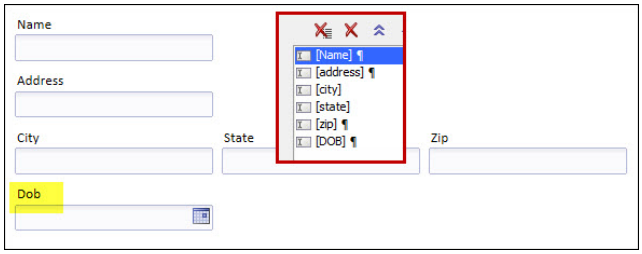
PRE-DEFINED LISTS

You can save a list of controls for future use.

- To save a list:
  - **a.** Click Pre-defined lists.
  - **b.** Choose **Save list** and give it a name and a description.
- To load a saved list:
  - **c.** Choose **Load list**. Select the desired list.
- To delete a list:
  - **d.** Choose **Manage list**.
  - **e.** Click the link to open a folder containing user defined lists.
  - **f.** Find the list and delete.



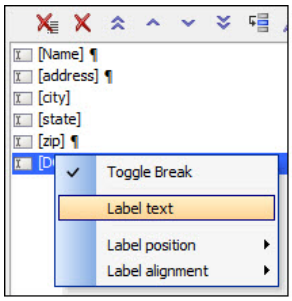
*. This term may be unfamiliar to some. It was to me, although I use the style all the time. It's when you enter field and file names as MyCamelCase.

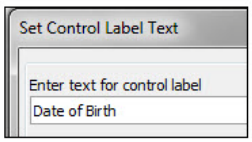


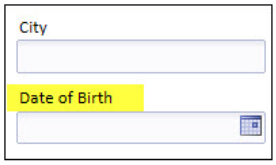
18. Click OK.
    - The entries are added to the controls/fields list (inset).
19. Go to **Working Preview** to view the results.

Looks pretty good, but notice the DOB label. Since we have the label rules set to capitalize the first letter of the word, this abbreviation has become even more confusing. The good news is that labels are easy to change.

20. Go to **Design** mode.







CHANGING THE CONTROL LABEL

This will change the name of the *label* in Working Preview, but not the name of the control itself.

a. Right click on the **DOB** field.

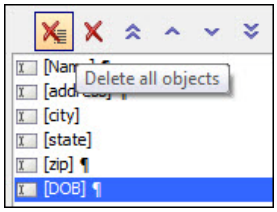
b. Choose **Label text**.

c. Enter text for control label: **Date of Birth**.
- Field Label Rules are not honored here, so you will need to enter desired capitalization.

d. Click OK.

e. Go to **Working Preview** to see the change.
- Much clearer, don't you agree?

21. Return to **Design** mode.



DELETING CONTROLS

You can delete one control or the entire list. The buttons are on the toolbar above the list of controls. You can delete all or selected objects.

- Next we will use the table method for adding controls to the UX.

Adding controls from a table

When you have a table that contains some or all of the fields that you would like to use as controls, you can import the fields into the UX. This saves the time of creating them manually.

This method can be set to automatically bind the data to the table.*

But. That's not a requirement. You could import a list from any table in order to save development time and then use it for an entirely different purpose.

*. See "Binding the UX fields to an existing table" on page 314.