1. Session Variables

   Try not to use session variables if your app is a data-centric application. Session variables will be over-written if the user opens several instances of the browser. Use Args instead.

2. Sql Injection

   Sql Injection. Use Args to prevent SQL Injection. This applies for any xbasic code that you write to manage the sql tables.

3. Dynamic Data

   Create drop-down lists, radio buttons, check-boxes to be data dynamic don't hard code the list. This will help when the application starts to grow and you get new requirements. On the back-end you only need one master list that holds all of your various lists data.

4. The Alpha Paradigm

   Stay within the Alpha paradigm if possible. Use the code hooks. Only about 10% needs custom code. If you are hand-coding more than that you are re-inventing the wheel.

5. New Components

   Use the New Components if possible. Don't use old components. Only use the UX and the components there. For example instead of a tabbedUI use Dynamic Panels. You will have way more control.

6. Component Size

   Keep components small. Call components in. Use embedded components. For example, the main menu should only be the menu. The buttons will call each component as needed.

7. Security

   Use 2-factor authentication

8. Security

   Encrypt columns that contain HIPPA & PCI Data
    (names, addresses, and social security numbers and income, account numbers, credit card numbers, credit score, collection history, and family member info)
       PHI (Protected Health Information) and/or
      PPI (Personally Identifiable Information) and/or
              NPI (Non-public Personal Information)

9. Security

   Dynamic Connection String is the start of making your app Multi-tenant. We recommend you build it this way from the ground up. Also, you can test in production if you need to with a test tenant. There are two flavors of Multi-tenancy. 1. Multiple tenants in a shared database. 2. Multiple databases. The Dynamic Connection String and handle both situations.

10. Design

    Design for mobile even if for app is for a Web Desktop. Use Panel layouts and Panel Cards. Panels are like a menu system on steroids and you can still use the standard drop-down menus in a control-bar in the panel header.

11. Design

    Get used to using pixels not inches. You will have more control.

12. Design

    Design your application so that it can grow. It will.

13. Design

    Always set the NULL flag in your forms. SQL loves nulls.

14. Design

Conventions. Take the time to build a templates with all of the style and colors. You will be able to build the rest of the application fast. Create buttons like the CRUD buttons with the colors and icons you want then put them in the Control library.

15. Application Server

Use IIS. It's now built into Windows 10. You can publish to your local IIS to test. Alpha-Cloud uses IIS.

16. IDE Settings
    1. Turn on the line numbers in the IDE.
    2. Turn on the comments column and make comments.
    3. In the component rename the buttons, panels, and containers with friendly names
    4. In the component you can put remarks next to each control.