

FlexTron

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What is this?

- › It is a complete new experience and development environment
- › FlexTron makes it possible to add Web Controls to a Windows application
- › To enhance the Windows UI using modern controls
- › Allowing local devices to be used
- › Migration path from Windows to Web

My FlexTron experience

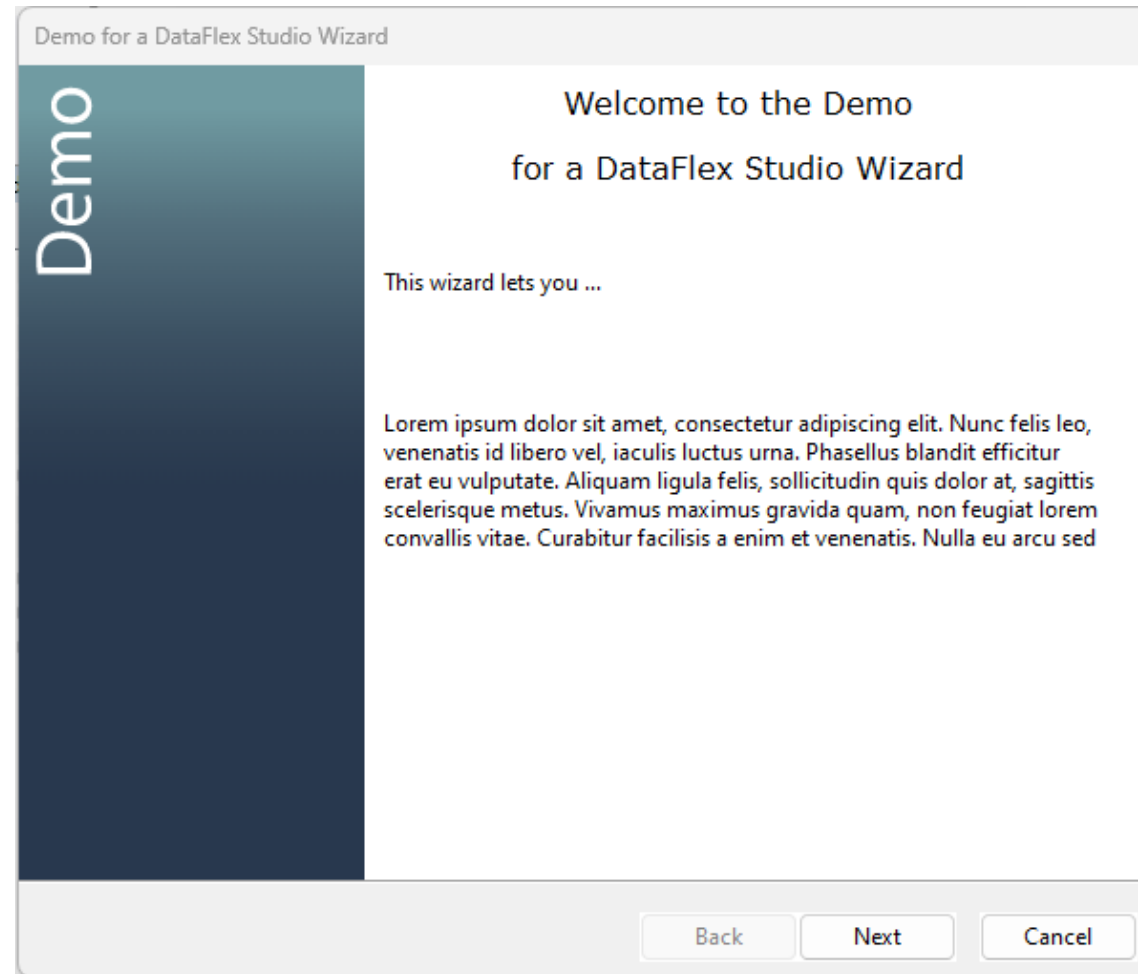
- › Used for the Building your own Studio Wizard training / library
- › Integration of DataFlex Reports HTML output in a Windows application

Building a Studio Wizard using FlexTron

Building a Studio Wizard

- › We took the current wizard approach
 - › Using the Windows 97 Style
- › A wizard contains a series of property pages
- › All pages are 'simple' steps for guiding people thru a – usually – more complex process
- › Pages should be focused on just a couple of options, questions
- › Pages can be skipped based on choices made

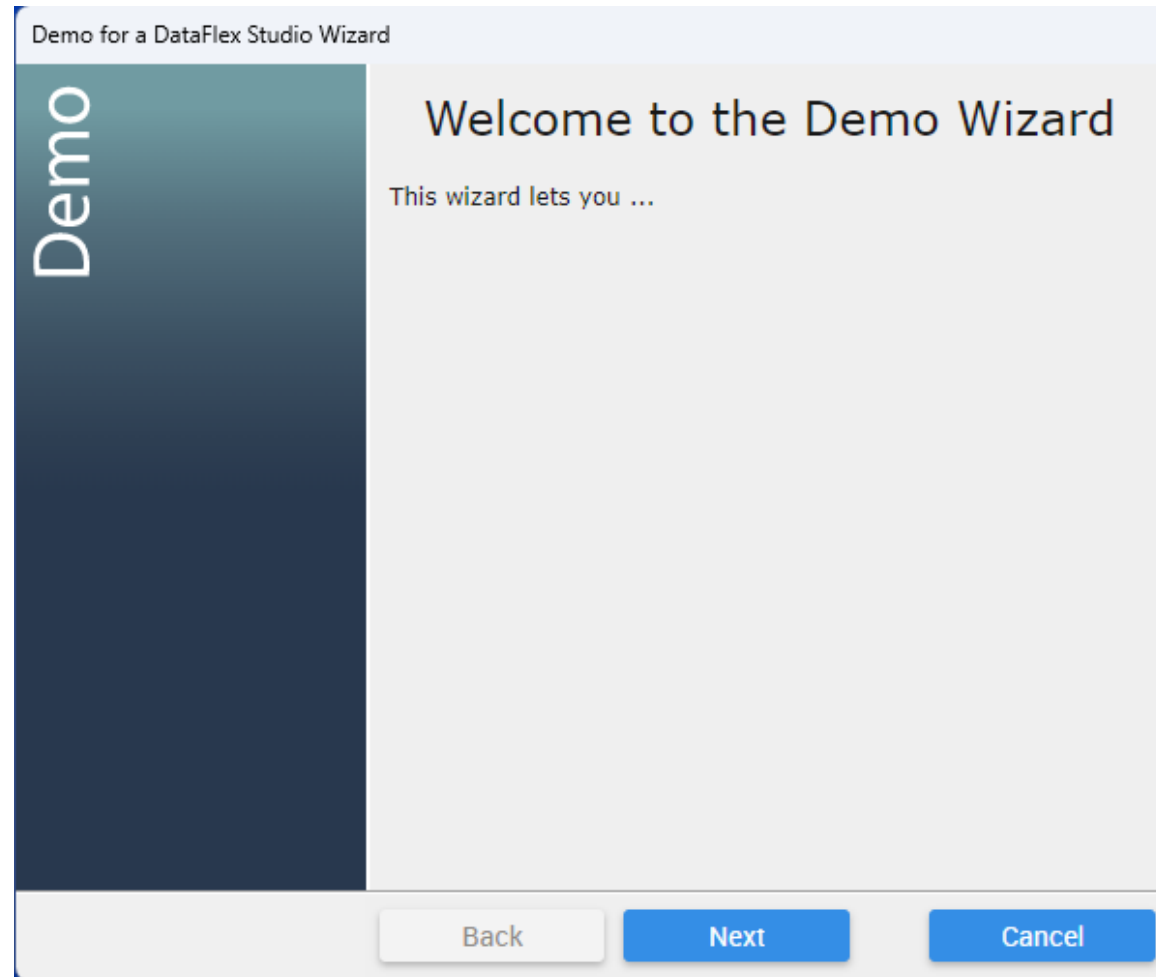
With a Windows UI



Building a Studio Wizard

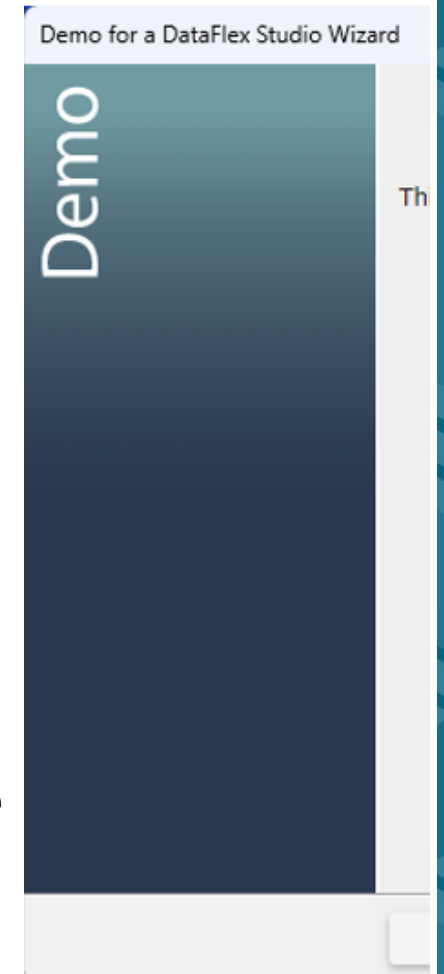
- › Enhance that interface!
- › Watermark and buttons were our first target

Building a Studio Wizard

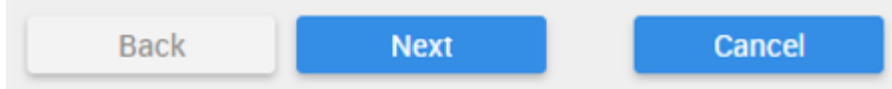


What am I looking at?

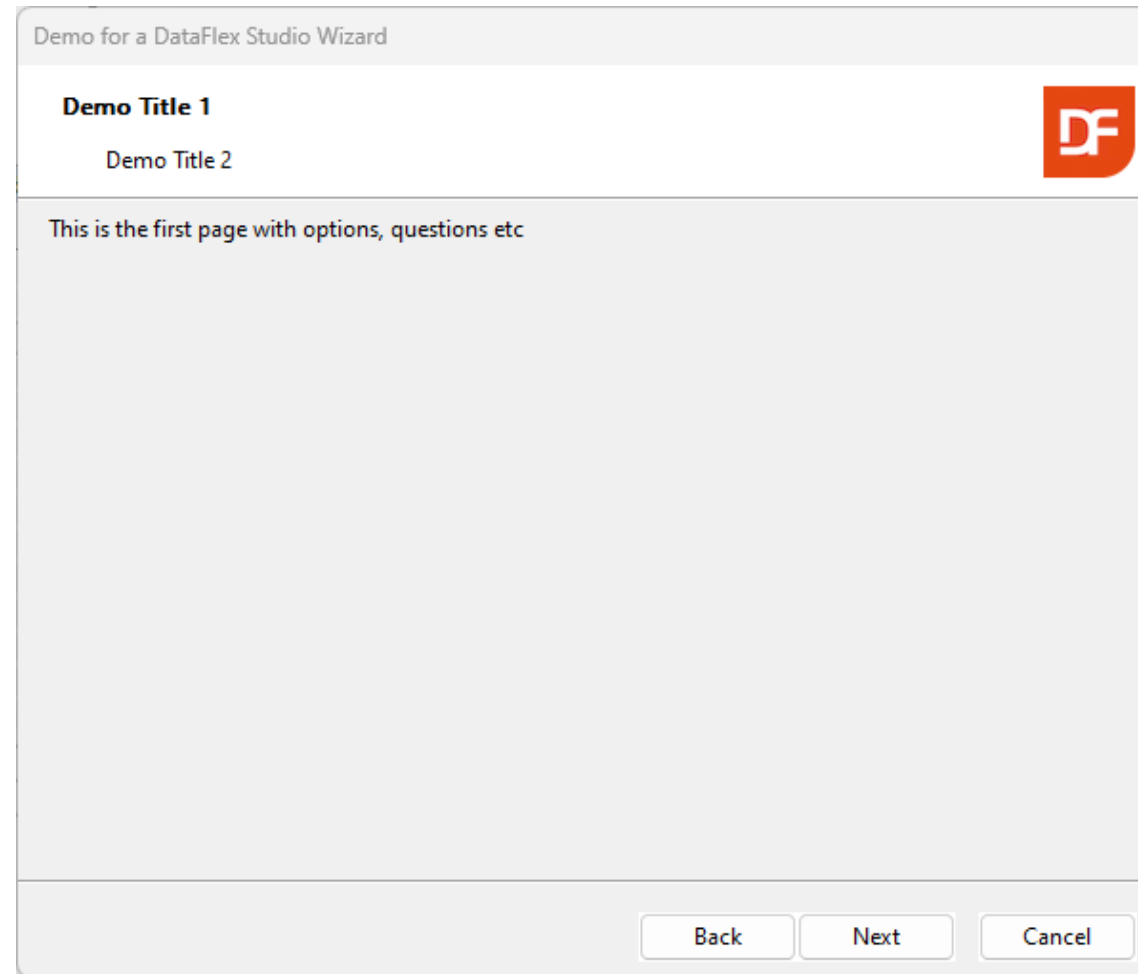
- › Watermark is a cWebView2Browser control
 - › This is based on the Microsoft Edge browser
 - › Previously a BitmapContainer object
 - › Can only show BMP and ICO files
 - › The browser can show other formats
 - › Including an SVG
 - › The watermark content is a HTML file with an SVG in there
 - › The HTML file is compiled into the wizard executable
- › This can already be used in DataFlex 20.1



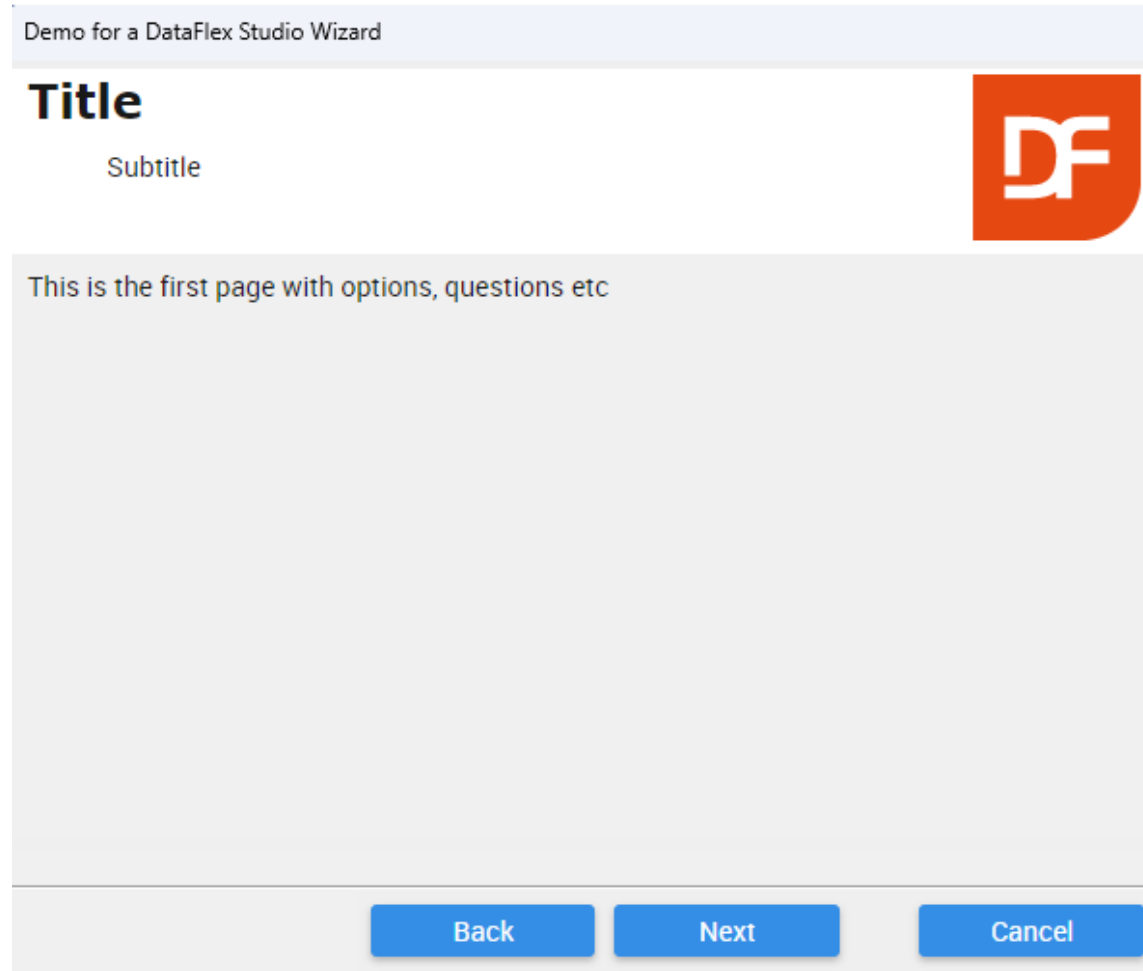
What else am I looking at?

- › The navigation buttons 
- › They are cWebButton controls inside a FlexTron container
- › Container is one of the following
 - › cLocalWebControlHost
 - › cDbLocalWebControlHost
 - › Database aware version of cLocalWebControlHost
 - › cLocalWebAppHost
 - › Typically one per application
- › All of above are based on cWebView2Browser

Next pages – Interior pages



Next pages – Let's enhance the interface



Interior page

- › Each wizard page contains a `cWizardWebControlHost` object
 - › Subclass of `cDbLocalWebControlHost`
 - › For styling the class loads an `Application.css` compiled into the executable
 - › The file comes from the wizard workspace
 - › During development this can be modified, extended

Interior page structure

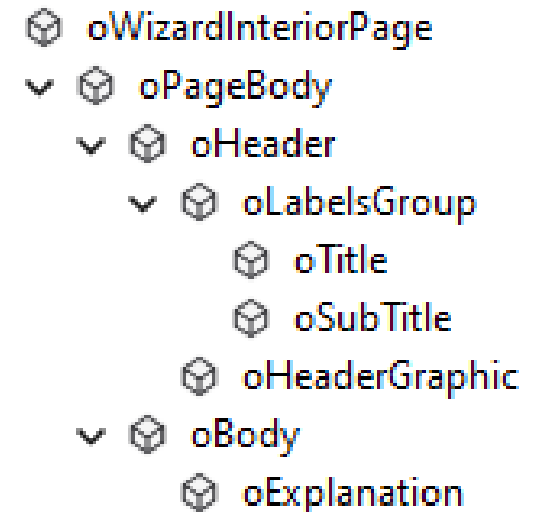
- › Two main cWebGroup objects

- › oHeader
- › oBody

- › oHeader contains a group to organize the title and subtitle label (cWebLabel) objects

- › oHeaderGraphic is a cWebHTMLBox showing a SVG compiled into the executable

- › oBody contents can be replaced with 'any' kind of web control objects



Controls?

- › All web controls are the same as in a DataFlex web application
- › Created via the Data Access JavaScript framework
- › This means the JavaScript classes need to be added to the Windows host application

Wizard vs your application

- › Your application has its own working environment
 - › During development and deployment
- › A Studio wizard is a tool and typically resides in the Bin64 folder of your DataFlex installation
 - › There is no workspace
 - › For web controls no JavaScript framework

AppHtml challenge

- › It is not possible to trust the contents of the workspace AppHtml folder for which the wizard is going to be used
 - › Assuming there is a AppHtml folder containing the JavaScript!
- › The cWizardApplication class solves this!
 - › It maps itself to the WebAppMaster folder for the JavaScript and CSS files during deployment

Experiences

- › New techniques comes with challenges
 - › I expect that most of the issues we discovered during the Build a Studio Wizard with FlexTron get solved
 - › Example: ProcessDataSet (manually loaded cWebList) could not be invoked during navigation from page to page
- › While developing we got a large number of GPFs mainly on saving code
 - › The good news is that most of these are now fixed!
 - › But it was really frustrating

Demo

- › Will show you the complex 'simple' wizard

DataFlex Reports

Preview / Display options

- › Embedded preview
- › MDI View
- › Toolpanel
- › DesktopPreview
- › ModalPanel

Preview / Display options - Web

- › PDF
- › HTML
- › Image

Export options – Windows & Web

- › PDF
- › HTML
- › Image
- › RTF / Word
- › Excel
- › CSV

FlexTron - OrderMobile

- › Windows app with a cLocalWebAppHost container
- › Use the cWebViews for selection and result pages
 - › Same as in a full blown web application
- › Use of DRModalDialog.dg for a Windows Modal Dialog with report results

FlexTron - WebAndWindows

- › Windows app with Windows MDI views
 - › WebControls via a c(Db)LocalWebControlHost container per view
- › Output in a ModalPanel
 - › HTML / Image
 - › cWebDRReportViewer inside a cLocalWebControlHost container
 - › PDF
 - › cWebView2Browser control to show the PDF document

Demo

- › Will show you what I've build
 - › WebAndWindows application
 - › OrderMobile application

OrderMobile

- › Preview in a modal dialog worked easily
- › Couldn't find (yet) how to load the previewer.js and css files for a cWebDRReportViewer

WebAndWindows

- › Previewers needed to be added to a modal dialog popping up
 - › Looks like a timing issue
 - › Also got a



`resources.asset`'s server IP address could not be found.

WebAndWindows

- › On_Key Key_Escape in cWebView2Browser and cLocalWebControlHost to close the dialog on ESC
 - › In Windows containers the view will be good enough
- › No index.html
 - › loading DataFlex Reports css/js files via OnDefineScriptIncludes event

WebAndWindows

- › Windows selectionlist sends Prompt_Callback to the cLocalWebControlHost object instead of cWebForm
 - › Workaround: Use FocusObject and redirect the event
- › Selectionlist's peUpdateMode needs to be set to umPromptCustom and a self defined PromptUpdateCallback method needs to be written
- › For seed data the piUpdateColumn needs to be set
- › cWebRadio did not work (it might do now!)
- › cWebContextMenu nested in a cWebForm does not work

WebSelectionlist

- › Cannot use a cWebView with a cWebList to select
 - › cWebView needs a cLocalWebAppHost object
- › cWebList can be placed in a cLocalWebControlHost in a dbModalPanel
- › No double click as in Windows to select a row and close the dialog
- › No up and down arrow in cWebList before clicking in the list

WebSelectionlist

- › Manual coding needed to handle select and return the value to invoking from object
- › Send Stop_UI in Close_Panel
 - › Else the cursor remains in wait state

Overall

- › I am very happy with what I see and experience
- › There is work to do but you can start enhancing your applications

My FlexTron Experience



Thank you!

Are there any questions?