The Learning Continuum Company, Ltd.

The Leader in Notes and Domino Training, and now, the leader in XPages Training

Developing XPages for Domino Designer 8.5

Detailed Description

TLCC.COM

(As of 4/7/2011)

What's included in TLCC's TOTAL ACCESS XPages Training:

- ✓ 32 hours of instructor led class sessions for both lectures and activities
- ✓ Access to TLCC's Self-paced course (no expiration date!)
- ✓ Six months of follow-on instructor support via course discussions
- ✓ Six months access to course updates

Schedule:

Note that all classes will run from 9:00AM to 1:00PM, U.S. Central time for eight days (during the week). Private online and onsite classes can also be scheduled.
For the current schedule go to http://www.tlcc.com/ilo

Summary Description:

XPages are the first new application design element for Domino in years and will change the way you think about Notes/Domino application design. ***Developing XPages using Domino Designer 8.5*** takes a deep dive into XPages development. Learn the basic building blocks of XPages, from controls to events to the JavaScript editor. All the XPages controls are covered. The available programming languages for XPages along with the various supporting libraries including the new @Functions and the Domino Object Model are covered in detail. Discover how Cascading Style Sheets are fully implemented in XPages along with an all new design element called Themes. Another new design element, Custom Controls, allows controls to be easily re-used on multiple XPages (just like a subform). This course also covers the use of XPages in the Notes client. This course covers advanced techniques such as:

- ✓ Combine a view and a document on one page with complete edit capabilities
- ✓ Combine multiple documents or multiple views on a page
- ✓ Create dynamic tables with repeat controls
- ✓ Join data from different views and databases into one view
- ✓ Filter views to show only certain categories or the results of a full-text search
- ✓ Integrate Java and web services in XPages
- ✓ Use the built-in AJAX functionality to enable type ahead and partial page refresh
- ✓ Display a responses-only column so it appears just like the Notes client
- ✓ Enable Authors and Readers fields

Audience and Prerequisites:

Experienced Notes and Domino 8.5 application developers with JavaScript experience. Experience with the Document Object Model is helpful using either LotusScript or Java.
The following TLCC courses (or their equivalent) are recommended prerequisites for this course:

- ✓ *Notes Domino 8.5 Application Development 1 (or Notes Domino 8.5 Application Development Update)*
- ✓ *JavaScript for XPages Development (8.5)*

System Requirements:

The system requirements for this course are:

- ✓ Domino Designer 8.5.1 or 8.5.2
- ✓ A current web browser client
- ✓ Access to the Internet for instructor support

Course Modules:

XPages are the new design element introduced in the Lotus Notes Designer 8.5. XPages are a new way to develop web applications for Domino 8.5 (and starting in 8.5.1 for the Notes client as well). This module provides an introduction to this exciting new design element as well as an overview of the new Eclipse based IDE used in Designer 8.5. The general XPages architecture as well as the XPages design features are discussed in this module. This module discusses the supported programming languages used in XPages design. The nature of the XPages design element, and the process of compiling the XPages source code in Designer is covered. XPages can also be used in the Notes Client allowing Domino developers to create a single design element used by both Web browsers and the Notes client.

- ✓ The new Domino Designer interface in Eclipse (DDE)
- ✓ The general architecture and design features of XPages
- ✓ Supported programming languages used in XPages; JavaScript, the Expression Language, @Functions, and Java
- ✓ Understand the nature of the XPages design element, compiling the XPages source code and compatibility considerations
- ✓ Considerations for rendering XPages in the Notes client such as launching the "Home XPage", applying different Themes for Notes
- ✓ XPages security in the Notes client

Module 2 - Creating XPages

This module covers the basic components used when creating XPages. Understanding each of these basic components will provide you with the necessary skills to create XPages. For example, learning how to add and use the different control types on XPages, and understanding the importance of data sources and data bindings for creating XPages is covered in this module. You will discover how to use the new Domino Designer views such as the Outline, Properties and Events views necessary for XPages development. This module also demonstrates how to use simple actions and the JavaScript editor to code client-side and server-side events.

- ✓ Create new XPages, add and format text, and then save and preview XPages
- ✓ Troubleshoot errors
- ✓ The different control types available for XPages design
- ✓ Use The Outline view to select, move, and delete the XPages controls
- ✓ Use the Properties view to view and set properties for the various elements and controls on XPages
- ✓ Dynamically compute properties
- ✓ Write Client-side and Server-side JavaScript that is triggered by events
- ✓ Invoke Simple Actions from Events
- ✓ Directly edit and view XPages source code
- ✓ Use the JavaScript Editor
- ✓ Use Domino data sources to connect XPages to views and documents
- ✓ Understand data binding of Domino fields to XPages controls
- ✓ Utilize the Data palette to drag and drop Domino fields onto XPages

Module 3 - XPages Controls

This module covers the extensive palette of XPages controls available from the Controls palette in Domino Designer.

- ✓ The edit/input controls used to display Domino fields such as the Edit Box, Multiline Edit Box, Date Time Picker, and Rich Text controls
- ✓ The selection controls such as the Combo Box, List Box, Check Box Group and Radio Button Group controls
- ✓ Use various techniques to control the list of choices shown to the user when using a ComboBox or ListBox control
- ✓ The action controls such as the Button, Link, File Upload and File Download controls
- ✓ Add buttons to XPages to submit a page and control navigation between XPages
- ✓ Create buttons to perform simple actions such as switching between read and edit mode
- ✓ Use the display controls such as the Label, Image and Computed Field controls
- ✓ The different container controls such as Sections, Panel, Tables, Tabbed Panels, and Include Page controls
- ✓ Container controls used to display data such as the Repeat, and Data Table controls
- ✓ The Display Error and Display Errors controls to display error messages

Module 4 - XPages with Domino Views and Documents

This module covers the relationship between controls on XPages and Domino data (views and documents.) We begin with an overview of the Domino design elements that are required to support XPages development, whether working with an existing Domino application, or creating a new one. Details on how to display a Domino view on XPages are covered. Create XPages that can be used to display, create, and edit Domino documents. Finally, the validation of data on XPages is covered in this module.

- ✓ Understand the relationship between Domino design elements and XPages
- ✓ Use the computeWithForm property to utilize Domino form formulas (Default, Input Validation, and Input Translation)
- ✓ Display a Domino view on XPages using a View control
- ✓ Control the XPages to be used when a user clicks on document in a View control
- ✓ Hide Controls on XPages dynamically based on edit mode vs. read mode
- ✓ Set the properties for the View control including the pager, view column headers, and view columns
- ✓ Display and edit Domino documents using XPages (read mode and edit mode)
- ✓ Design navigation buttons and links on XPages for creating and saving a new document
- ✓ Create buttons to perform simple actions such as switching between read and edit mode
- ✓ Validate user entered data on XPages
- ✓ Understand the difference between client-side and server-side validation and how to set validation properties
- ✓ Use the Display Error and Display Errors controls to display error messages
- ✓ Use advanced validators including regular expressions to validate data in XPages controls

Module 5 - Formatting and Styles

This module covers the use of Cascading Style Sheets (CSS) to change the look and feel of XPages applications. Formatting and styles can be applied directly to almost every control on XPages through the Style tab. However, it is best to apply styles using a Style Sheet that sets styles via Element, ID and Class attributes. Themes are a new design element to control the look and feel of an entire application without needing to add formatting and styling to each individual XPages.

- ✓ A brief introduction to Cascading Style Sheets and how CSS is used to style a web page
- ✓ The XPages style properties and how they are used to provide style/formatting to individual XPages controls
- ✓ Create and add style sheets to XPages
- ✓ Apply style sheet rules to elements/controls on XPages
- ✓ Use the CSS Editor in Domino Designer
- ✓ Use an external CSS editor to edit Domino Style Sheet Resources
- ✓ Import and export style sheets into/out of Domino applications
- ✓ Add Style Sheet Resources to XPages
- ✓ Export styles from a control to a Style Sheet resource (CSS file)
- ✓ Learn what themes are and how they can be used to globally alter an application
- ✓ Use the provided Themes in an application
- ✓ Select a theme to be used in an application
- ✓ Create a new theme to reference a specified style sheet
- ✓ Use a theme to apply a style to all XPages controls such as all the Label controls

Module 6 - JavaScript: The Language of XPages

JavaScript is the programming language of XPages. The events for most XPages controls can be both client-side and server-side JavaScript. Server-side JavaScript can be used for computing the value of most of the properties on controls on XPages. Server-side JavaScript code has full access to Domino data in the current application or in other applications via the Domino Object Model or @Functions. Learn how to access the Domino objects using server-side JavaScript on XPages. Creating and using script libraries for storing reusable code in an application is also covered. The use of AJAX to support type ahead and partial page refresh is also covered.

- ✓ Use client-side JavaScript for events on XPages controls
- ✓ Learn how to write client-side JavaScript to access XPages controls
- ✓ Use server-side JavaScript.for events on XPages controls
- ✓ Use sever-side JavaScript to get and set the values in controls on XPages
- ✓ Use Global Objects and Global Functions in server-side JavaScript
- ✓ Use Scoped Variables to store data, such as the application scope, session, scope, request scope and view scope variables
- ✓ Debug server-side JavaScript using either the log file or using a Computed Field control

- ✓ Write server-side JavaScript to get full access to Domino applications via the Domino Object Model or @Functions
- ✓ The Domino @Functions
- ✓ Using @DbColumn and @DbLookup in Server-side JavaScript
- ✓ Dynamically hide XPages controls
- ✓ Use the Domino Object Model such as the NotesSession, NotesDatabase, NotesView and NotesDocument classes
- ✓ The XSP Library classes that support XPages development
- ✓ Create and use client-side and server-side JavaScript libraries to store reusable code
- ✓ Use the Dojo library on XPages
- ✓ Implement the type ahead and partial page refresh features of the included AJAX functionality

Module 7 - Advanced Techniques

The XPages basics including how to display a Domino view and how to link the view to Domino documents have already been covered. XPages are very powerful and can do much more than that. This module will cover some examples of how to harness the full power of XPages in a Domino application. These advanced techniques will be very practical to a Domino developer and will also provide some ideas on how to move even beyond these techniques and take advantage of the power of XPages for your specific needs. Techniques that were once either not possible or very difficult to perform in standard Domino development are accomplished quite simply due to the underlying key difference in XPages; the separation between the presentation and the data source. This module will show how to exploit this key difference by learning how to combine a view and document on the same XPages, have multiple data sources per page, and effectively display categorized and response-only views for example. Several other advanced techniques and XPages related properties will be covered in this module. Also covered is how to integrate Java code from both a Java class file or a web service on XPages.

- ✓ Add a dynamic view filter to a View control on XPages
- ✓ Display data from multiple data sources on XPages
- ✓ Link a view and form on the same XPages together so the document is displayed when a user clicks in the view
- ✓ Create dynamic tables using a Repeat control to display information from a Domino view
- ✓ Join together information from two different Domino views in one view control
- ✓ Use a Repeat control to display the contents of a multi-value field
- ✓ Write, compile, and execute Java code from XPages
- ✓ Call a web service and return data to the XPages script
- ✓ Implement advanced XPages techniques for views such as categorized views and displaying responses only columns
- ✓ Compute the values in a view column of a view control
- ✓ Explore the relationship between the Domino form design and XPages
- ✓ Use the 'Run form validation' property on XPages to implement Domino field formulas
- ✓ Implement "Authors" and "Readers" names fields on XPages
- ✓ Use the XPages events to take the place of the Domino WebQuerySave and WebQueryOpen agents
- ✓ The XPages server and application properties
- ✓ Add XPages as a component in a composite application

Module 8 - Building Custom Controls

Custom Controls provide the same functionality for XPages as subforms do for Domino forms. Custom Controls can be used to group common elements and controls on a "subXPage", perhaps to create a common header or footer. The Custom Control can then be added to other XPages in the same application. A Custom Control can also use properties that can be defined when the Custom Control is used on XPages. A Custom Control can also have an "editable area" where content can be added once the control is used on XPages. The use of these properties and editable areas allow the custom control to be fine-tuned for that particular XPages it is used on. This module will cover how to create and use your own custom controls, and how to add editable areas to a Custom Control.

- ✓ Create Custom Controls and use them in XPages design
- ✓ Set up configurable properties on a Custom Control
- ✓ Define the value for a Custom Control property after it is used on XPages
- ✓ Add Editable areas to a Custom Control