

## D8510 Fundamentals of IBM Lotus Domino 8 Application Development

Days of Training: 4

### Overview

The course provides the information that developers need to know to successfully create and modify database applications in IBM Lotus Domino Designer 8. It provides an overview of the Lotus Domino 8 and Domino Designer 8 environments, introduces the elements and skills that are used in creating single-database Domino applications, describes how the formula language can be used to enhance the functionality of a Domino application, and explains how Domino applications can be secured

### Prerequisites

The prerequisites for this course include :

- Experience using the Lotus Notes client, Web browser or both to access applications.
- (Recommended) Experience developing one or more applications using other application development tools.

### Next Steps

Test LOT-834 - IBM Lotus Notes Domino 8 Application Development Foundation Skills

Course D8520: Building Web Applications with IBM Lotus Domino Designer 8

### Lesson 1: Exploring Applications in Lotus Domino 8

Identifying Application Types and Data Sources  
Examining the Lotus Domino Architecture  
Examining Lotus Domino Application Components  
Investigating Replication and Application Design Considerations  
Extending Lotus Domino Collaboration Capabilities

### Lesson 2: Exploring the Lotus Domino 8 Design Environment

Exploring the Lotus Domino Designer User Interface  
Accessing Design Elements

### Lesson 3: Creating Databases

Creating a New, Blank Database in Lotus Domino Designer  
Creating a Copy of an Existing Database  
Creating a Database from a Template  
Organizing the Lotus Domino Designer Environment the Execution Control List

### Lesson 4: Creating Pages

Exploring Page Content, Layout, and Navigation Basics  
Creating Pages  
Adding Text to Pages  
Using Tables to Lay Out Pages  
Adding Images to Pages

### Lesson 5: Creating Forms

Creating Forms  
Adding Fields to Forms  
Hiding Form Elements

### Lesson 6: Creating Views

Creating Views  
Adding View Columns  
Organizing Documents  
Formatting Views

### Lesson 6: Introducing Formulas

Identifying Programming Languages Supported by Lotus Domino  
Identifying Formula Components  
Identifying Event Triggers  
Working with @Functions  
Computing and Compare Values  
Exploring Formatting and Comments

### Lesson 7: Using Formulas in Forms

Creating Window Titles  
Working with Computed Values  
Working with Field Values  
Working with Lists  
Prompting Users  
Creating Reusable Code  
Implementing Error Checking

### Lesson 8: Using Formulas in Views

Creating Selection Formulas  
Concatenating Values in a View Column  
Displaying Icons In A View

### Lesson 9: Enhancing Forms

Working with Layers  
Working with Subforms  
Creating Shared Fields  
Enabling Inheritance in Forms and Documents  
Creating Related Forms  
Enabling AutoSave  
Implementing Lotus Sametime Instant Messaging in Forms

### Lesson 9: Enhancing Views

Defining Hierarchical Views  
Displaying Response Data in Views  
Implementing Shared Columns  
Enabling Lotus Sametime Instant Messaging in Views  
Creating Views for the Web

### Lesson 10: Working with Actions

Creating Actions  
Creating Shared Actions  
Controlling the Display of Actions  
Creating Action Hotspots

### Lesson 11: Working with Agents

Investigating Agents  
Creating Agents

### Lesson 12: Securing Applications

Exploring Database Access  
Implementing Roles  
Using Readers and Authors Fields  
Controlling Access for Anonymous Users  
Deploying Applications

# D8520 Building Web Applications with IBM Lotus Domino Designer 8



Course Outlines

## D8520 Building Web Applications with IBM Lotus Domino Designer 8

Days of Training: 2

### Overview

This course extends participants' Domino application development skills by teaching them how to use the Domino tools to design and develop dynamic Web applications. Participants learn how to efficiently use Domino fields and page layout design elements in the Web pages. They learn how to use JavaScript in their Domino application. Participants do not need to know how to program in this language to acquire an understanding of how and where to apply the programming capabilities to the best advantage. Finally, this course covers security topics specific to the Domino Web environment.

### Prerequisites

D8510 Fundamentals of IBM Lotus Domino 8 Application Development

### Next Steps

Test LOT-836 - IBM Lotus Notes Domino 8 Developing Web Applications

Course D8530: Developing IBM Lotus Domino 8 Applications: Intermediate Skills

### Lesson 1: Building IBM Lotus Domino Forms for the Web

Exploring Lotus Domino Forms Rendered to a Browser  
Creating Links  
Customizing Input Tags for Lotus Domino Fields  
Working with Lotus Domino Fields for the Web

### Lesson 2: Enhancing the Appearance of Web Pages

Using Cascading Style Sheets  
Enhancing Views for the Web  
Controlling View Display  
Working with Target Frames

### Lesson 3: Using JavaScript in Forms

Exploring JavaScript in Lotus Domino  
Validating and Translate Input Data  
Using JavaScript  
Reusing Code

### Lesson 4: Customizing Web Site Functionality

Using Agents to Customize Web Site Functionality  
Personalizing the User Experience  
Creating a Lotus Domino Web Log  
Incorporating Web Services in Lotus Domino Web Applications  
Using Java in Your Web Site

### Lesson 5: Securing a Domino Web Application

Examining Lotus Domino Web Site Access  
Controlling Access to Domino Web Applications

# D8530 Developing IBM Lotus Domino 8 Applications - Intermediate Skills



Course Outlines

## D8530 Developing IBM Lotus Domino 8 Applications - Intermediate Skills

Days of Training: 3

### Overview

The course explores advanced formula techniques including looping, and user interaction with the application. The course explains different methods for accessing data sources outside the current Domino database including other Domino databases and relational databases. Other topics include adding workflow functionality to route documents and notify users that a document requires their attention, and security issues such as encrypting data. This course also examines navigation elements such as links, outlines, and framesets that bind the components of the application together and allow users to locate information quickly and easily.

### Prerequisites

You should have:

- D8510 Fundamentals of IBM Lotus Domino 8 Application Development course or equivalent knowledge, skills, and experience.
- Three or more months experience developing Lotus Domino 8 applications.

### Next Steps

Test LOT-835 - IBM Lotus Notes Domino 8 Application Development Intermediate Skills

Test LOT-951 - IBM Lotus Notes Domino 8.5 Application Development Update

### Lesson 1: Working with Strings, Lists, and Loops

- Topic 1A: Writing Formulas to Manipulate Text Values
- Useful Functions for Inspecting and Searching Text
  - Inspecting and Searching Strings
  - Useful Functions for Parsing a String
  - Examples of Parsing a String
- Topic 1B: Working with Lists Creating Lists
- List Operations
  - Using the List Subscript Operator
  - Useful Functions for Inspecting Lists
  - Useful Functions for Modifying Lists
  - Useful Functions for Converting Lists
- Topic 1C: Creating Iterative Formulas Iterative Statement Functions
- Using a For Loop
  - Using a While Loop
  - Using a DoWhile Loop

### Lesson 2: Writing Formulas to Interact with the User

- Topic 2A: Using the @Prompt Function
- Introducing The @Prompt Function
  - Examples of User Prompts
  - The @Prompt Function
  - @Prompt Styles
- Topic 2B: Working with the @DialogBox Function
- The @DialogBox Function
  - Using the @DialogBox Function
  - Creating a Form for @DialogBox
- Topic 2C: Using Layout Regions
- Layout Regions
  - Creating a Layout Region
  - Adding Elements to a Layout Region

### Lesson 3: Advanced View Design

- Topic 3A: Using a Background Image in a View
- Background Images
  - Background Image Formatting Options
  - Adding a Background Image to a View
- Topic 3B: Hiding a View Column
- Hiding Columns
  - Using a Formula to Hide a Column
- Topic 3C: Modifying View Elements
- Highlighting View Documents
  - Programmatically Setting Colors in a View
  - Creating a View Column to set the Colors of a Row
  - Using Values to Specify the View Text Color
  - Using Values to Specify the View Background Color and Text Color
  - Hiding the Color Column
  - Expanding a Column to Use the Available Width
- Topic 3D: Working with Embedded Elements
- Adding an Embedded Editor to the Form
  - Preventing a Document from Being Saved
  - Combining Embedded Elements
  - Embedded Schedulers

### Lesson 4: Adding Navigational Elements Using Links and Imagemaps

- Topic 4A: Linking to Other Documents and Pages
- Types of Links
  - Creating a Link Hotspot on a Page or Form
  - The Hotspot Resource Link Properties
  - Named Element Links
  - Creating a Named Element Link in the Properties Box
  - URL Links
  - Creating a URL Link
- Topic 4B: Creating Imagemaps Imagemaps
- Describing Hotspots on an Image
  - Creating a Hotspot on an Image

## D8530 Developing IBM Lotus Domino 8 Applications - Intermediate Skills (Continued)

Days of Training: 3

### Overview

The course explores advanced formula techniques including looping, and user interaction with the application. The course explains different methods for accessing data sources outside the current Domino database including other Domino databases and relational databases. Other topics include adding workflow functionality to route documents and notify users that a document requires their attention, and security issues such as encrypting data. This course also examines navigation elements such as links, outlines, and framesets that bind the components of the application together and allow users to locate information quickly and easily.

### Prerequisites

You should have:

- D8510 Fundamentals of IBM Lotus Domino 8 Application Development course or equivalent knowledge, skills, and experience.
- Three or more months experience developing Lotus Domino 8 applications.

### Next Steps

Test LOT-835 - IBM Lotus Notes Domino 8 Application Development Intermediate Skills

Test LOT-951 - IBM Lotus Notes Domino 8.5 Application Development Update

### Lesson 5: Working with Outlines

- Topic 5A: Creating an Outline
- The Outline Design Element
  - Process of Creating an Outline
  - Create an Outline
  - Default Outlines
  - Creating a Default Outline
- Topic 5B: Adding Outline Entries
- Outline Entries
  - Creating a Hierarchical Outline
  - Creating an Outline Entry
- Topic 5C: Modifying Outline Entries
- Setting Outline Entry Properties
  - Indenting and Outdenting Outline Entries
- Topic 5D: Embedding an Outline
- Embedding Outlines
  - Embedded Outline Properties
  - Formatting an Embedded Outline

### Lesson 6: Creating a Frameset

- Topic 6A: Adding a Frameset to an Application
- What are Frames?
  - What are Framesets?
  - Structuring a Frameset
  - Guidelines for Designing Framesets
  - Creating a Frameset
- Topic 6B: Adding Content to a Frame
- Specifying Frame Information
- Specifying a Content Source
  - Using a Target Frame
  - Specifying the Default Target Frame
  - Target Frame Precedence
  - Placing a Page in a Frame
- Topic 6C: Launching an Application Frameset
- Setting Database Properties to Launch a Frameset
- Topic 6D: Adjusting Framesets
- Adding New Frames to a Frameset
  - Launching Individual Elements in a Specific Frame
  - Opening Documents in a Frame
  - Setting a Target Frame

### Lesson 7: Accessing Data in IBM

#### Lotus Domino Databases

- Topic 7A: Accessing Data from a View
- Common Arguments for @Db Functions
  - Options for Caching the Results of a Lookup
  - Guidelines for Caching the Results of a Lookup
  - Specifying a Database for Lookups
  - How Lotus Notes Searches for a Replica
  - Using @DbColumn
  - Using @DbLookup
  - Optional Keywords for @DbLookup
  - Optional Keywords for @DbLookup
- Topic 7B: Using @PickList
- Advantages of @PickList
  - Styles of PickLists
  - Displaying a View with @PickList
  - Displaying a Domino Directory View with @PickList
- Topic 7C: Working with Profile Documents
- Introducing Profile Documents
  - Characteristics of Profile Documents
  - Guidelines for Using Profile Documents
  - Designing a Form for Creating Profile Documents
  - Creating a Profile Document with Formulas
  - Reading Data in Profile Documents
  - Updating Data in Profile Documents

### Lesson 8: Accessing Non-Domino Data

- Topic 8A: Introducing Microsoft Open Database Connectivity
- Using ODBC
  - Working with ODBC Drivers
  - ODBC Driver Configuration
  - ODBC Driver Configuration
  - Example dBase Table
- Topic 8B: Using @Db Functions to Access an ODBC Data Source
- Accessing Relational Data from IBM Lotus Domino with ODBC
  - Comparing the @Db Functions that use ODBC
  - Using @DbColumn
  - Using @DbLookup
  - Using @DbCommand

## D8530 Developing IBM Lotus Domino 8 Applications - Intermediate Skills (Continued)

Days of Training: 3

### Overview

The course explores advanced formula techniques including looping, and user interaction with the application. The course explains different methods for accessing data sources outside the current Domino database including other Domino databases and relational databases. Other topics include adding workflow functionality to route documents and notify users that a document requires their attention, and security issues such as encrypting data. This course also examines navigation elements such as links, outlines, and framesets that bind the components of the application together and allow users to locate information quickly and easily.

### Prerequisites

You should have:

- D8510 Fundamentals of IBM Lotus Domino 8 Application Development course or equivalent knowledge, skills, and experience.
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### Next Steps

Test LOT-835 - IBM Lotus Notes Domino 8 Application Development Intermediate Skills

Test LOT-951 - IBM Lotus Notes Domino 8.5 Application Development Update

### Lesson 9: Mapping Data Between IBM Lotus Domino and Relational Databases

Topic 9A: Introducing IBM Lotus Domino Enterprise Connection Services

- Data Mapping
- Data Mapping in Lotus Domino
- Using DECS
- How DECS Communicates with the External Data Source
- Capabilities of DECS

Topic 9B: Working with DECS

- The DECS Server Task
- Working with the DECS Administrator Database

Topic 9C: Using Data Connection Resources (DCRs)

- Working with DCRs
- The DECS Administrator Database and DCRs
- Using DCRs
- Creating a Data Source Resource for ODBC Access
- Creating a DCR
- Basic Properties of a DCR
- Optional Properties of a DCR
- Associate a Form with a DCR
- Mapping Fields to External Table Fields
- Importing External Data
- Enabling a Lotus Domino Database to Use DCRs

### Lesson 10: Adding Workflow to IBM Lotus Domino Applications

Topic 10A: Defining Workflow

- Benefits of Automating the Process
- Elements of Workflow
- Using a Workflow Diagram
- Example of an Expense Reimbursement Workflow Diagram
- Workflow Elements of the Expense Reimbursement Process

Topic 10B: Routing Workflow Objects in IBM Lotus Domino

- The Routing Process
- Ways to Route Documents
- Making a Mail Database Known to the Router
- Making an Application Database Known to the Router

Topic 10C: Designing Workflow

- Triggering Workflow
- Identifying the Recipient
- Identifying the Data to Send
- Sending the Data

Topic 10D: Notifying Users

- Sending a Doclink Using @MailSend

Topic 10E: Routing Entire Documents

- Examples of Routing Entire Documents
- Configuring the Application to Route Documents
- Enabling Recipients to Read Documents
- Using a Form Formula in a View

Topic 10F: Sending the Current Document

- Defining the SendTo Field
- Creating a SendTo Field
- Using @MailSend Without Parameters
- Using the Present Send Mail Dialog Property
- Using the MailSend @command
- Using the Send Document Simple Action
- Using the MailOptions Field
- Forcing a Document to Route Using a MailOptions Field

Topic 10G: Tracking Documents

- Collecting Information on the State of a Document
- Useful @functions for Creating a History Log
- Adding a Tracking Field to a Form
- Creating a Tracking View

## D8530 Developing IBM Lotus Domino 8 Applications - Intermediate Skills (Continued)

Days of Training: 3

### Overview

The course explores advanced formula techniques including looping, and user interaction with the application. The course explains different methods for accessing data sources outside the current Domino database including other Domino databases and relational databases. Other topics include adding workflow functionality to route documents and notify users that a document requires their attention, and security issues such as encrypting data. This course also examines navigation elements such as links, outlines, and framesets that bind the components of the application together and allow users to locate information quickly and easily.

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### Next Steps

Test LOT-835 - IBM Lotus Notes Domino 8 Application Development Intermediate Skills

Test LOT-951 - IBM Lotus Notes Domino 8.5 Application Development Update

### Lesson 11: Securing IBM Lotus Domino

#### Application Data

Topic 11A: Limiting Who Can Read and Edit Sections

- Using Access-Controlled Sections
- Creating an Access-Controlled Section
- Limiting Who Can Edit a Section

Topic 11B: Signing Documents and Mail

- Enabling Signing Documents and Mail Messages
- Creating a Sign-Enabled Field
- Signing an Access-Controlled Section

Topic 11C: Encrypting Domino Data Determining What to Encrypt

- Types of Encryption Keys
- Using Public and Private Keys
- Using Secret Keys

Topic 11D: Creating and Distributing Secret Keys

- Creating a New Secret Encryption Key
- Distributing Encryption Keys with E-mail
- Exporting a Secret Encryption Key to a File
- Merging an Encryption Key Received by E-Mail
- Importing an Encryption Key Received as a File

Topic 11E: Encrypting Fields Enabling Encryption for a Field

- Applying Encryption
- Applying Encryption Automatically
- Providing a List of Secret Encryption Keys in a Field