

Flex 3 : Architecting Applications Using Cairngorm

Description

In the *Flex 3: Architecting Applications Using Cairngorm* course, students will use their object-oriented skills using the Cairngorm framework to build extended applications. Experienced Flex developers will have an opportunity to explore hands-on, practical code examples for creating applications that use the Cairngorm MVC.

Course length

One day

Audience

To gain the most from this class, you should:

- Have attended the Flex 3: Developing Rich Client Applications course.
- Have equivalent knowledge of the topics covered in Flex 3: Developing Rich Client Application

This course targets experienced Adobe Flex developers who:

- Want to learn how to build complicated applications with the use of a MVC-framework

Course Outline

Unit 1 : Introducing Adobe Cairngorm

- Introducing the MVC Design Pattern
- Understanding the MVC Design Pattern
- Conceptualizing MVC as a Layers
- Introducing Cairngorm MVC Micro-Architecture
- Outlining Cairngorm MVC
- Reviewing the History of Cairngorm
- Reviewing Layers and Components of the Cairngorm Architecture
- Understanding Cairngorm MVC as a Structural Organization
- Reviewing the Primary Components of Cairngorm MVC
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Unit 2 : Converting an Application to use Cairngorm MVC

- Introducing the Original Adobe Flex Store
- Learn about the FlexStore

- Review Organization and Coupling Concerns
- Preparing to Convert to Cairngorm
- Reviewing Organization Changes
- Reviewing Refactoring Tasks

Unit 3 : Architecting the Model Layer

- Introducing the Model Layer in MVC
- Introducing the Model Layer
- Understanding the Model Layer as a Concept
- Understanding the Model Layer as a Structural Organization
- Introducing the ModelLocator Pattern
- Introducing the AS3 Singleton design pattern
- Understanding the purpose of the ModelLocator pattern
- Reviewing what constitutes a ModelLocator class
- Walkthrough 1 : Implementing a ModelLocator to cache catalog data

- Using the ModelLocator Singleton
- Using a ModelLocator Singleton in the View Layer
- Walkthrough 2 : Creating a instance of the ModelLocator
- Exploring the Benefits of Using the ModelLocator & Business Objects
- Learning the benefits of using the ModelLocator pattern
- Reviewing the purpose of the OrderCart business object
- Walkthrough 3 : Adding shopping cart features to the ModelLocator

Unit 4 : Architecting the Control Layer

- Introducing the Control Layer in MVC
- Introducing the Control layer
- Understanding the Control layer as a concept
- Understanding the Control layer as a structural organization
- Introducing the ServiceLocator Pattern
- Understanding the purpose of the ServiceLocator pattern
- Reviewing what constitutes a Services repository
- Creating a Services repository using the ServiceLocator
- Walkthrough 1: Creating the Services repository for a catalog RDS.
- Using the Services repository
- Instantiating and using the Services repository
- Understanding the impacts of using a Services repository
- Using AsyncToken and IResponders with RDS
- Walkthrough 2: Using the Services Repository for Catalog Data

Unit 5 : Using Delegates in Cairngorm

- Introducing the Delegate within the Control Layer
- Understanding the role of the Delegate in the Control layer
- Understanding the concept of the Delegate in the Control layer
- Understanding the Delegate as a structural organization
- Introducing the Delegate Pattern

- Understanding the purpose of the Business Delegate pattern
- Reviewing what constitutes a Delegate
- Creating a Delegate within the Control layer
- Walkthrough 1: Creating the CatalogDelegate for a catalog remote data service
- Using a Delegate Implementation
- Instantiating and using a Delegate
- Understanding the impacts of using a Delegate
- Walkthrough 2: Using the CatalogDelegate to load Catalog Data Transforming data inside the Delegate
- Transforming XML data to VOs
- Understanding how the Delegate can transform incoming data
- Walkthrough 3: Using the CatalogDelegate to transform load Catalog Data

Unit 5 : Using Commands in Cairngorm

- Introducing the Command within the Control Layer
- Understanding the role of the Command in the Control layer
- Understanding the concept of the Command in the Control layer
- Understanding the Command as a structural organization
- Introducing the Command Pattern
- Understanding the purpose of the Command pattern
- Reviewing what constitutes a Command
- Creating a Command within the Control layer
- Walkthrough 1: Implement the LoadCatalog feature using the Command pattern
- Using a Command Implementation
- Understanding the impacts of using a Command
- Instantiating and using a Command
- Walkthrough 2: Using the LoadCatalogCommand to load Catalog Data
- Exploring Other Feature Implementations as Commands
- Exploring ShoppingCart Features Implemented as Commands
- Review how Commands Processing affects the Model and View layers

Unit 6 : Using Business Events in Cairngorm

- Introducing Business Events within the Control Layer
- Understanding the role of the Business Event in the Control layer
- Understanding the concept of Business Events in the Control layer
- Understanding the Business Event as a structural organization
- Introducing the Business Event
- Introducing the concept of Business Events
- Understanding the purpose of the Business Event
- Reviewing what constitutes a Business Event
- Creating an Event within the Control layer
- Walkthrough 1: Implement the LoadCatalog Event
- Using Business Events with Business Objects and Commands
- Understanding the impacts of using a Business Event
- Walkthrough 2: Creating and Using the AddProductToCartEvent

Unit 7 : Using the FrontController in Cairngorm

- Introducing the FrontController Concept
- Understanding the role of the FrontController in the Control layer
- Conceptualizing the FrontController in the Control layer
- Understanding the FrontController as a Structural Organization
- Understanding the FrontController Pattern
- Introducing the concept of the FrontController pattern
- Understanding the purpose of the FrontController pattern
- Reviewing what constitutes a FrontController implementation
- Creating an FrontController within the Control layer
- Walkthrough 1: Create and configure the StoreController
- Using the FrontController in the View Layer

- Understanding how to instantiate the <FrontController>
- Walkthrough 2: Creating and Using the StoreController
- Understanding <FrontController> impacts to View layer components
- Walkthrough 3: Updating the View layer to use Business Events

Unit 8 : Enhancing Application Architecture

- Consolidating Command Components
- Reviewing traditional implementations of Commands
- Understanding how to consolidate Commands
- Removing the CED from the View Layer
- Removing the CairngormEventDispatcher (CED) for the View layer
- Walkthrough 1: Use Event Self-Dispatching in the View Layer
- Using the Compiled Cairngorm Library
- Using the Cairngorm.swc library
- Walkthrough 2: Using the Cairngorm.swc library

Unit 9 : Understanding Architecture Methodologies

- Reviewing Cairngorm Usage Methodologies
- Adding Cairngorm MVC to existing Flex applications
- Using Cairngorm MVC with new Flex applications

Lab: Patient Visitations

- Walkthrough 1: Create a new Cairngorm MVC Project
- Walkthrough 2: Create a form to request a patient visitation
- Walkthrough 3: Submit the Visitation Request
- Walkthrough 4: Create Business Components to Process the Visitation Request
- Walkthrough 5: Send Visitation XML Data to the LiveCycle Server