

CodingFactory

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Call-9930178430

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Learn .Net WPF with Prism & Multithreading

This syllabus is cover WPF with Prism 4.0 & multithreading

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Module 1 ORM-Object Relational Mapping

Topic 1 - Generics

- Generic collection- List<T>,Dictionary<T,T>
- Generic class
- Generic Methods

Topic 2 - LINQ [Language Integrated Query]

- What is LINQ? Why LINQ?
- Advantage & disadvantage of LINQ
- Restriction Operator-Where
- Projection Operator-Select, SelectMany
- var keyword,Anonymous Type
- Partition Operator-Skip, Take
- Element Operator- First, FirstOrDefault, Last, LastOrDefault, Single, SingleOrDefault, ElementAt
- Ordering Operator-OrderBy, OrderByDescending
- Join Operator- Join [Inner and Outer]
- Conversion Operator- Cast,ToList,ToArray, ToDictionary
- Deferred and immediate execution
- Lazy/deferred and eager loading
- Extension Method
- Best practices to improve LINQ performance

Topic 3 - Entity Framework 6

- What is Entity Framework and ORM?
- Why entity framework?
- History of EF
- Creating Visual and Code Models from Existing Databases
 - Using EF to Interact with Your Data
 - Inserting Objects
 - Querying Simple Objects
 - Updating Modified Objects
 - Retrieving Data with the Find and SqlQuery Methods
 - Deleting Simple Objects
 - Inserting Related Data
 - Loading Related Data

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- Projection Queries
- Creating a Code Based Model and Database
 - Creating an Entity Framework Model
 - Validating Your EF Model
 - Fixing How EF Interprets Your Model
 - Using Code First Migrations to Create a Database
 - Migrating a Database When Your Model Changes
- How StoreProcedure work in Entity Framework
- IQueryable verses IEnumerable verses IList verses var
- Difference between LINQ and StoreProcedure

Module 2 WPF

- Why WPF? What is WPF?
- Architecture of WPF
- Create First WPF Application, XAML, App.xaml
- Resources
- Apply Styles
- Resource Dictionary
- DataBinding
 - Path, OneWay,INotifyPropertyChanged interface
 - Twoway,ElementName,UpdateSourceTrigger
 - ValueConverter
 - GridView,Combobox
- Observable Collection
- Create User Control
- Routed Events and Command
- DataTemplate
- ControlTemplate
- Dependency and Attached Property
- Triggers
- Multithreading
 - Dispatcher class
 - Background Worker
- Deployment

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Module 3 Prism 4.0

- What is Prism?
- Benefits
- Demo: Installing Prism
- Building Blocks
- Application Design
- Demo: Prism Walkthrough
- Bootstrapper and the Shell
 - What is the Bootstrapper?
 - Bootstrapper Process
 - Demo: Organize your Solution
 - Demo: Create a Unity Bootstrapper
 - Demo: Create a MEF Bootstrapper
 - What is the Shell
 - Demo: Create a Unity Shell
 - Demo: Create a MEF Shell
- Regions
 - What are Regions?
 - RegionManager
 - Demo: Creating Regions
 - Custom Regions
 - Demo: Create a custom Region
- Modules
 - What are Modules?
 - Demo: Creating a Module
 - Registering/Discovering Modules
 - Loading Modules
 - Demo: Register/Load Modules in Code
 - Demo: Register/Load Modules from Directory
 - Demo: Register/Load Modules from XAML File
 - Demo: Register/Load Modules from App.config File
 - Demo: Register/Load Modules in Code with MEF
 - Initializing Modules
- Views
 - What is a View
 - Demo: Creating a View
 - Demo: Creating a View (MVVM)
 - View Composition
 - View Discovery
 - View Injection
 - Demo: View Injection
 - Demo: View Injection MEF

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- Communication
- Commanding
 - Delegate Commands
 - Composite Commands
- Event Aggregation
- Shared Services
- Demo: Creating a Shared Service
- RegionContext
 - Demo: Using the RegionContext
- State-Based Navigation
 - Introduction
 - What is State-Based Navigation?
- Demo: Reflecting Application State
- Demo: Displaying data in different layouts
- Demo: User Interaction
- View-Based Navigation
 - Introduction
 - Basic Region Navigation
 - View and ViewModel Participation
 - Passing Parameters
 - Navigate to Existing Views
 - Demo: Navigating to Existing Views
 - Confirm/Cancel Navigation
 - Navigation Journal

Module 4 Multithreading

- Process versus Thread
- Multithreading Use-Cases
- DEMO: Unresponsive UI
- Multithreading Caveats
- Starting Threads
- Thread Entry Point Methods
- Thread Lifetime
- Thread Shutdown Choreography
- Thread Pool Overview
 - Thread Pool Interfaces
 - ThreadPool.QueueUserWorkItem
 - DEMO: QueueUserWorkItem
- Async I/O

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Module 5 Thread Synchronization

- DEMO: Buggy Multithreaded Add
- DEMO: Interlocked. Increment
 - Solution 2: Data Partitioning
 - Solution 3: Wait-Based Synchronization
- Wait-Based Synchronization Protocol
- Wait-Based Synchronization Illustrated
- Wait-Based Synchronization in the CLR
- Monitors Illustrated
 - Monitors in the CLR
 - Monitor Usage
 - Exception-Aware Monitor Usage
 - Monitor Usage in C#
- Hold and Wait
- Using Monitor.Wait/PulseAll
- Deadlock
 - Deadlock Illustrated
 - DEMO: Buggy Bank Account Simulation
 - DEMO: Deadlock-Prone Thread Synchronization
 - DEMO: Hierarchical Lock Acquisition
- Mutexes
 - Deadlock-Free Multiple Lock Acquisition
 - DEMO: Using Mutex and WaitHandle.WaitAll