DEVELOPING CROSS-PLATFORM APPS WITH C# USING XAMARIN

Course Content -

Chapter 1: C# Review

- Value and Reference Types under the hood
- Classes, Encapsulation and Properties
- SOLID
- Inheritance and Polymorphism
- Interfaces and Decoupling
- Dependency Injection
- Inversion of Control
- Generics
- Delegates
- Anonymous Delegates and Lambdas
- Tasks and async
- Useful Design Patterns
- Labs

Chapter 2: Xamarin Introduction

- What is Xamarin
- Bit of History
- Benefits and Disadvantages of using Xamarin
- Mobile Development Challenges
- Where does it fit in?
- How does it work?
- What you need to get started
- Getting started with Xamarin Studio

Chapter 3: Getting Started with Xamarin.android

- android Projects
- API Versions
- Resources and Images
- Layouts
- App Architecture
- Creating Activities
- Accessing Views
- Working with Intents
- Launching Activities
- Passing data between activities
- Working with an activities lifecycle
- Labs

Chapter 4: Designing your android UI with Layouts

- Creating the UI with the Designer
- Designing Layouts and working with
- Linear
- Relative

- Table
- Grid layouts
- Working with some of the built in views including
- Date and time picker
- Standard Views
- Spinner
- CardView
- ScrollView
- Labs

Chapter 5: Lists, Tabs and Fragments in android

- ListViews and ListAdapters
- Custom ListAdapters
- Built in and Custom Row Layouts
- Working with Fragments
- Using fragments declaratively and programmatically
- The FragmentManager
- Fragment Lifecycle
- State Management
- Tabs and the Action Bar
- Labs

Chapter 6: Additional android Issues

- Activity Lifecycle
- State Management
- Rotation and managing alternate layouts
- Drawables and resolution
- Labs

Chapter 7: Cross Platform Code Sharing

- Why Code Share
- Code sharing Options
- Shared Projects
- Portable Class Libraries
- Ramping up code reuse across platforms
- Cross Platform Data Access
- Abstracting device specificity
- Dependency Injection
- Inversion of Control Containers
- MVVM Pattern
- MVVM Light
- MVVMCross
- Labs

Chapter 8: Getting Started With iOS Development in Xamarin

- iOS Development in Xamarin
- Solutions, Projects and Files
- Intro to Storyboards, Scenes and Segues
- MVC and View Controllers
- Linking Scenes to View Controllers
- Working with Multiple View Controllers

- Modal Display
- Navigation Controllers
- Transferring Data between Scenes
- Loading Storyboards from Code
- Labs

Chapter 9: Designing an iOS Layout

- Xamarin iOS Designer Intro
- Designing a View
- Using Auto Layout
- Working with Constraints
- Understanding and Exploiting Size Classes
- iOS UI Controls
- Unwind Segues
- Labs

Chapter 10: Working with Table Views

- Table Views
- Types of Table View
- Building a Table View
- Static Table Views
- Dynamic Table Views
- Table View Controllers
- Table View Cells
- Headers and Footers
- Editing Cells
- Collection Views
- Labs

Chapter 11: Controlling iOS Navigation and Storage

- Manual Storyboards
- Navigation Controllers
- Tab Bar Controllers
- Modal View Controllers
- Split View Controllers
- Settings and plists
- Working with files
- User Defaults Database
- Labs

Chapter 12: App Deployment for android and iOS

- Preparing and app for deployment
- Configuration
- Building
- Deploying to the app store

Chapter 13: Xamarin.Forms

- What are Xamarin Forms
- Getting started with…
- How it works
- Basic elements
- Pages
- Layouts
- Sizing and Positioning
- Views
- Hooking up to Code
- Alerts
- Navigation
- Labs

Chapter 14: Forms, ListViews and Data Binding with Xamarin.Forms

- Data Binding Overview
- Page Binding
- Change Notification
- Field Binding
- Field to Field Binding
- Displaying Lists with the ListView
- Making life easier with Resources and Styles
- Labs