

Course Outline

Xamarin Programming for Cross-Platform Applications

Duration: 4 days

Course Description

This instructor-led class introduces participants to using Xamarin to create cross-platform, mobile applications that run on both iOS and Android devices. Through a combination of instructor-led presentations, demonstrations, and hands-on labs, students learn how to use C# and Xamarin to layout mobile forms, build scrollable lists, interact with device data and present data from web services.

Learning Objectives

At the end of this course, participants will be able to:

- Compare the challenges of native and cross-platform mobile development
- Leverage Xamarin and C# to create cross-platform, mobile applications
- Understand how Xamarin is used for native Windows, Android, and iOS development
- Layout screen using Xamarin. Forms that work for iOS and Android devices
- Build complex views using layouts and advanced controls
- Create scrollable lists
- Control application navigation
- Bind data to forms and save data to local databases
- Deploy applications to the App store and the Google Play store

Prerequisites

Programming experience in an object-oriented language like C# or Java is assumed. Experience with Visual Studio is helpful. Knowledge of XAML and/or HTML is also helpful.

Course Outline

Xamarin for Mobile Development

- Overview of Xamarin
- iOS
- Android
- Form

- Windows Universal Apps
- Windows Phone Apps

Architecting Solutions for Cross-Platform Development

- Creating Shared Code Projects
- Portable Class Libraries
- MVC Design Pattern
- Service-Oriented Architecture
- Testing

Building Windows Universal and Phone Applications

- XAML
- Layout Controls
- Navigation Controls
- Form Controls
- Windows Universal Applications
- Windows Phone Applications

Android Development with Xamarin

- Setting Up an Android Development Environment
- Creating Android Views
- Activities and Intents
- Calling Android Services
- OAuth 2
- Testing and Debugging Xamarin. Android Applications

iOS Development with Xamarin

- Setting Up an iOS Development Environment
- Creating iOS Views
- iOS Controllers
- Table Views
- Navigation Controllers
- Testing and Debugging Xamarin. iOS Applications

Cross-Platform Development with Xamarin. Forms

- Understanding XAML
- Page Views

- Controls
- Layout Views
- Scrollable Views

Navigation

- Navigation Patterns
- Modal Views
- Drill-Downs
- Master-Detail Views
- Tabbed Views

Data-Binding

- MVVM Design Pattern
- XAML Binding Syntax
- Data Access Classes
- NET
- Binding to SQLite Database Data

Using Web Services

- Building Services with Web API
- Calling Services

Deployment

Deploying iOS Apps to the App Store

Deploying Android Apps to Google Play Store

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