Xamarin Tools, Part 2 of 3: Mobile and Web Services

page 1

Meet the expert: Wallace McClure specializes in building applications that have large numbers of users and large amounts of data as well as user interface specific technologies such as AJAX, iPhone, and Android. He is a Microsoft MVP, ASPInsider, and a partner in Scalable Development, Inc. Wally has authored books on iPhone Programming with Mono/MonoTouch, Android Programming with Mono for Android, application architecture, ADO.NET and SQL Server, and finally AJAX.

Prerequisites: This course assumes that students have some programming background and experience using Visual Studio and Xcode. In addition, this course assumes knowledge of Visual C# and Mono for Android, as well as Objective C and Mono Touch. An understanding of XML is also required.

Runtime: 01:44:26

Course description: In this course, we will look at the Xamarin Mobile API. Mobile devices tend to have features that are functionally the same except for the APIs. For example, there is a geolocation api. The geolocation api is functionally the same across iOS and Android, yet the APIs are very different. Then we'll look at various other services that can be commonly used in the mobile world with iPhone and Android. We can use the same API to call out to web services to get data. When that data comes back, we can use the same API in JSON and XML to process returned data in the iPhone and Android.

Course outline:

Xamarin Mobile Introduction
- Introduction
- Devices
- Problem
- Xamarin Mobile API
- Platforms Supported
- Geolocation API
- Basic Steps for GeoLocation
- PositionEventArgs
- Location/Position Changes
- Output
- Demo: iOS GeoLocation
- Demo: Android GeoLocation
- Summary

Xamarin Mobile Contacts
- Introduction
- Contacts
- Classes
- Enumerations
- Output in Android
- Output in iPhone 5
- Demo: Address book
- Summary

Xamarin Media
- Introduction
- Accessing the Camera
- Xamarin.Media Namespace
- Enumerations
- Output
- Demo: Android Camera
- Demo: iOS Camera
- References
- Summary

Web Services
- Introduction
- Accessing Services
- Businesses Run On Data
- Architecture
- Data Terms
- Data Interchange Standards
- Limitations
- Web Services
- Web Service Options
- What is REST?
- REST over WCF
- Your WCF Interface
- JavaScript Object Notation
- XML
- Summary

Web Services Demo
- Introduction
- Demo: Web Services
- Demo: REST Service
- Demo: REST Callback
- Demo: REST and JSON
- Demo: JSON Result
- Demo: Primitave Data
- Summary

Databases
- Introduction
- Intra-Firewall
- On Device
- SQLite
- Corporate Data
- Demo: Setting up SQLite
- Demo: Creating the Database
- Demo: SQL to Avoid
- Summary

Threading
- Introduction
- Async Commands
- Threading
- Demo: Threading
- Question
- Summary