Mobile Development Using HTML 5

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Prerequisites: This course assumes you have some programming background and experience using Visual Studio 2010 or some other programming platform. In addition, this course assumes knowledge of HTML. A very basic understanding of XML is also required.

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Course description: HTML 5 is the new web based code that will allow developers to create web applications for Android, iOS, and Windows Phone OS platforms with little to no changes between platforms. The course will explore many aspects of HTML 5 mobile development starting with an overview of HTML 5, then the use of CSS and JavaScript with HTML 5. Then it will show the building of the standard Hello World application and then moving into forms, layouts and the all important MVVM. The course will then move into data usage with local storage and SQL. Next the course will cover the Cloud and related services. Then the course will start to work with many different features of the phones, working with phone sensors and GEO location. At the end of the course it will touch upon working with contacts, design philosophy, CSS animations and more.

Course outline:

Introduction
• Introduction
• Started with Dev Accounts
• Demo: Apple Dev Account
• Demo: Android Dev Account
• Demo: Logging in Android
• Demo: WP 7 Dev Account
• Cross Platform Mobile Apps
• Other Accounts / Frameworks
• Summary

Getting Started
• Introduction
• Installation and Setup
• Demo: PhoneGap
• Demo: Apple Developer
• Demo: Eclipse Downlaod
• Demo: Android SDK
• Demo: WP7 SDK
• Summary

Application Deployment
• Introduction
• Platform Differences
• Application Revenue Models
• Free vs Trial
• Impressions Paid vs Trial
• Advertising in your Apps
• Demo: AdMob
• Demo: Microsoft Advertising

• Demo: WP7 App Deployment
• Demo: Android Deployment
• Demo: iPhone Deployment
• Summary

Limitations
• Introduction
• HTML Application Limitations
• Platform Limitations
• Example
• Cross Platform Strategies
• Web vs. Mono vs. All Natural
• Summary

Hello World
• Introduction
• Getting Framework Setup
• Hello World
• Demo: Windows Phone 7
• Demo: iPhone X-Code
• Demo: Android
• Demo: PhoneGap Build
• Summary

Icons
• Introduction
• Application Icons
• Demo: Android Icons
• Demo: Phone 7 Icons
• Summary

Forms
• Introduction
• HTML Form Basics

• Demo: WP7 Forms
• Demo: JavaScript Event Handlers
• Demo: CSS
• Demo: Running Form
• Demo: Internet Browser
• Demo: Adding a var
• Summary

Layout
• Introduction
• Demo: Form Layout
• Demo: Style Sheet
• Demo: Style Sheet for Devices
• Summary

MVVM
• Introduction
• Demo: MVVM
• Demo: Knockout
• Demo: View Model Class
• Demo: Function
• Demo: Running the App
• Summary

Validation
• Introduction
• Validation and Form Processing
• Demo: Validation
• Demo: Function Validate
• Demo: How to use a Library
• Summary

Local Data Storage
• Introduction

• Local Data Storage
• Demo: WP7 Local Storage
• Demo: Android Local Storage
• Demo: iOS Local Storage
• Summary

PhoneGap API
• Introduction
• JavaScript PhoneGap API"s
• Demo: PhoneGap API
• Demo: Network Connection
• Demo: Pause and Resume
• Demo: Alerts
• Demo: PhoneGap API in iOS
• Summary

SQL Database
• Introduction
• Local Database API
• Demo: Using SQL Android
• Demo: iOS SQL Database
• Summary

Extending APIs
• Introduction
• Creating and Extending APIs
• Demo: Creating APIs
• Demo: Extending APIs
• Summary

Cloud and Services
• Introduction
• Services and Protocols
• Serialization/Deserialization

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• Demo: Services
• Demo: iOS Cloud Integration
• Summary

Sockets Workers and the Cloud
• Introduction
• Web Sockets
• Web Workers
• The Clouds
• Summary

Sensors
• Introduction
• Devices and Sensors
• Demo: Accelerometer
• Demo: Cameras
• Summary

Working with Media
• Introduction
• Multi Media On Device
• Demo: Media
• Demo: Recording Audio
• Summary

Uploading Media
• Introduction
• Media in the cloud
• Demo: Uploading Media
• Summary

Geolocation
• Introduction
• Maps and Geolocation
• Demo: GPS
• Demo: Compass
• Summary

Working with Contacts
• Introduction
• Working with Contacts
• Demo: Contacts
• Summary

Tools and Support
• Introduction
• Tools and Support
• Demo: Tools
• Summary

Design Philosophy
• Introduction
• Mobile Design Philosophy
• Demo: Apple Design
• Demo: Android Design
• Demo: Windows Design
• Summary

CSS Animations
• Introduction
• CSS Animation Basics
• Demo: Animation Basics
• Demo: jQuery for Animation
• Demo: Pivot
• Demo: Style Sheet
• Demo: Testing the App
• Demo: Logic for Animation

• Demo: Helper Functions
• Demo: Switch Statement
• Demo: Logic for Pivots
• Demo: Run the App
• Demo: Animation in iOS
• Demo: Style Sheet
• Demo: Run the App in iPhone
• Summary

Touch and Hybrid
• Introduction
• Touch APIs and Gestures
• Hybrid Applications
• Demo: Hybrid Application
• Demo: Run Hybrid Application
• Demo: Create a XAML Page
• Demo: Run the XAML Page
• Summary