MS40539 - Build iOS Apps with C# and .NET using the Xamarin Tools for Visual Studio

Microsoft - Xamarin - Sviluppo

Durata:	Lingue:	Certificazione:
5 Giorni	**Italiano**	**-**

Descrizione del corso

During this course, C# .NET developers will learn how to build iOS applications using Visual Studio and Xamarin. Topics include the basics of mobile development, storing, retrieving, and displaying data in iOS, and building a responsive, native UI using the Xamarin.iOS designer to publish an app in the App store. This course is intended for developers with at least basic C# knowledge with 6-12 months of .NET experience. Students should own and/or have used an iOS device and be familiar with the paradigms of the platform.

Programma

Module 1: Getting Started with Xamarin (XAM101)

- Define the state of mobile technology today
- Discuss mobile app trends
- Identify approaches to development
- Discover the Xamarin Approach
- Set up your development environment
  Lab : Building Cross Platform Applications with Xamarin
- Demonstration – Cross Platform Applications with Xamarin
- Demonstration – View a Xamarin.Forms Project
- Setup Validation – Validate your development environment ready

Module 2: Introduction to Xamarin.iOS (IOS101)

- Introduce the development tools

- (De)constructing the application
- Add views and behavior
  Lab : Create a Tip Calculator for iOS in Xamarin
- Group Exercise: Create and run your first iOS application
- Add a root view controller to the Tip Calculator
- Create the UI for the Tip Calculator
- Add logic to your Tip Calculator

Module 3: Using the Xamarin.iOS Designer (IOS102)

- Create a single screen application
- Describe and use Auto Layout
- Interact with designer-defined views programmatically
- Navigate between view controllers
  Lab : Use the iOS Designer to create a multi-screen application
- Create the UI for a single view application
- Add constraints to the fireworks app
- Add a second screen to your app and code a button to navigate to it
- Add segues to define the navigation

Module 4: TableViews in iOS (IOS110)

- Explore Table Views
- Utilize built-in cell styles
- Add selection behavior
- Implement cell reuse
  Lab : Use a Table View, populate it with data and perform basic customizations
- Add a Table View to an application
- Populate a Table View
- Use built-in cell styles
- Use the accessory styles and row selection
- Implement cell reuse

Module 5: Customizing Table Views (IOS115)

- Customize table view cells in code
- Customize table view cells in the designer

- Group data in the table view
- Customize a default table cell
- Create a custom table view cell in code
- Create a prototype table view cell using the designer
- Create static cells in the designer
- Create a grouped table with an index

Module 6: Consuming REST-based Web Services (XAM150)

- Obtain the device's network capabilities
- Introduce REST
- Consume REST services with Xamarin
- Determine the network connectivity
- Communicate with a Book Service
- Demonstration: Leverage the native platform network stack

Module 7: SQLite and Mobile Data (XAM160)

- Choose a data storage strategy
- Store data locally with SQLite
- Use SQLite asynchronously
- Determine your database file path
- Add SQLite.Net to your projects
- Access a SQLite database with SQLite.Net
- Access a SQLite database using asynchronous methods

Module 8: Navigation Patterns (IOS205)

- Progress through pages of data with stack-based navigation
- Show different views of related data with tab navigation
- Display hierarchical relationships with master/detail navigation
- Implement Stack Navigation
- Implement Tab Navigation
- Implement Master/Detail

Module 9: Backgrounding Modes and File Transfers in iOS (IOS210)

- Understand the iOS Backgrounding Model
- Work with Finite-Length Tasks

- Integrate a Finite-Length Task with the application lifecycle
- Code a cancellable Finite-Length Task

Module 10: Editing TableViews (IOS215)

- Work with built-in editing operations
- Add support for modern editing operations
- Integrate a search bar
  Lab : Create a Table view with advanced features
- Turn on editing features on a Table View
- Committing editing operations
- Add support for swipe-gesture edit actions
- Add support for the “pull-to-refresh” gesture
- Add search support to a Table View Controller

Module 11: Maps and Location (IOS230)

- Explore iOS mapping options
- Use location data
- Adjust the viewport of the map
- Add annotations to the map
  Lab : Create an iOS map with markers, viewports and annotations
- Group Exercise: Add a map and set the properties
- Show the device’s current location
- Changing the map’s viewport with the camera
- Add an annotation to your map

Module 12: Touch and Gestures (IOS240)

- Respond to touch events
- Handle multi-touch events
- Utilize gestures
  Lab : Implementing Automation
- Group Exercise: Override touch methods
- Drag and snap
- Create the Xam Paint app
- Add pan gestures
- Add Multiple gestures to add scale and rotation

Module 13: AutoLayout in Xamarin.IOS (IOS300)

- Create adaptive UIs using the iOS Designer
- Create and update constraints programmatically
- Animate constraint changes
- Use Size Classes to customize your UI for different screen sizes
  Lab : Create a responsive UI using Size Classes and constraints
- Use Auto Layout in the Designer
- Update Constraints Programmatically
- Animate Constraints
- Update your UI based on the Size Class

Module 14: Diagnosing Memory Issues (XAM370)

- Identify and fix memory leaks in your code
- Recognize and fix Xamarin.iOS specific memory problems
- Recognize and fix Xamarin.Android specific memory problems
  Lab : Track down and correct memory leaks in your Xamarin.Forms app
- Using the Xamarin Profiler to monitor allocations
- Finding and fixing delegate reference leaks
- Identifying and breaking strong reference cycles
- Watch out for peer promotions
- Show ListView memory and performance with a custom adapter

Module 15: Preparing for Publishing (XAM220)

- Getting ready to publish your app
- Understanding publishing styles
- Publishing to a store