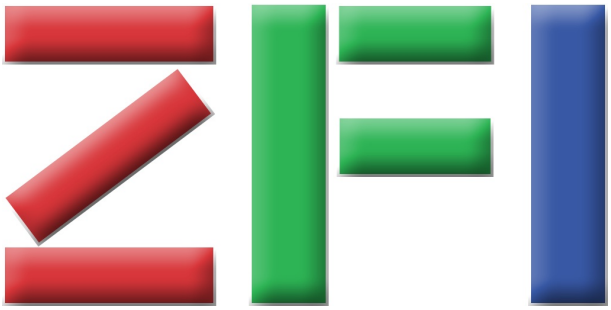
Kurs-Dokumentation



Zentrum für Informatik ZFI AG

Developing Windows Applications with MS Visual Studio 2010 (NWIA)

http://mobile.zfi.ch/NWIA

Weitere Infos finden Sie unter mobile.zfi.ch oder via Adresse:

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Titel	**Developing Windows Applications with MS Visual Studio 2010**
Untertitel	**für den fortgeschrittenen Windows/WPF-Entwickler**
Einleitung	**Visual Studio 2010 Professional ist die moderne Entwicklungsumgebung mit allen Kernfunktionen für die professionelle Entwicklung von SingleCore- und MultiCore-Anwendungen für Windows, Web, SharePoint, die Cloud und weitere Plattformen.Zahlreiche neue Funktionen erleichtern das Programmieren, Testen oder Debuggen, darunter Multi-Monitor-Unterstützung sowie eine komplett überarbeitete und individuell anpassbare Benutzeroberfläche auf Basis der Windows Presentation Foundation.Softwareentwickler können ihre vorhandenen Kenntnisse nutzen und neue Anwendungen für die unterschiedlichsten aktuellen und zukünftigen Plattformen entwickeln. Neue Funktionen für testgetriebene Entwicklung und neue Debugging-Tools helfen dabei, Fehler leichter zu finden und so schneller zu hochwertigen Ergebnissen zu kommen.Webentwickler profitieren von Verbesserungen des Microsoft-ASP.NET AJAX-Frameworks und IntelliSense für JavaScript. Neben den gängigen .NET-Sprachen ist auch die neue funktionale Programmiersprache F# enthalten, ausserdem gibt es viele Verbesserungen für das Programmieren mit C++.Dieses ZFI/Microsoft-Seminar unterstützt den erfahrenen .NET-Windows-Entwickler, sich in die im Inhaltsverzeichnis beschriebenen Themen zu vertiefen.Das Seminar wird von einem erfahrenen Microsoft-zertifizierten .NET-Entwickler geleitet.**
Ihr Nutzen	**After completing this course, students will be able to:** **- understand how varying business requirements influence the design decisions when planning a Windows Client application.** **- understand the new features of Visual Studio 2010 WPF** **- design and build a UI that provides the expected end-user experience and UI functionality** **- create a consistent and manageable user interface** **- understand best practices when testing and learn how to debug their applications** **- use advanced exception handling in Windows Client application scenarios** **- implement advanced data binding scenarios** **- use coding techniques to improve the responsiveness of their applications** **- implement localization, user assistance, and accessibility features within an application** **- understand the basics of graphics in WPF** **- customize controls and introduce students to custom controls** **- implement application behaviors based on user actions or events by using attached properties and Expression Blend behaviors** **- develop data visualization within their applications in a manner that enables the application user to drill down into data visually** **- manage application state and settings throughout the application lifecycle** **- deploy their applications using the various methods supported by Visual Studio 2010**
Vorausetzungen	**Before attending this course, students must have:** **- An understanding of the problem-solving techniques that apply to**

software development, including the following principles of software development:
- modern software development models
- typical phases of a software development lifecycle
- concepts of event-driven programming
- concepts of object-oriented programming
- creating use-case diagrams
- designing and building a user interface
- developing a structured application

- A general understanding of the purpose, function, and features of following .NET Framework topics:
- Common Language Runtime
- .NET Framework class library
- Common Type System
- Component interoperation
- Cross-Language Interoperability
- Assemblies in the Common Language Runtime
- Application Domains
- Runtime hosts supported by the .NET Framework

- Experience using Visual Studio 2008 in the following task areas:
- Declaring and initializing typed variables using the Camel case naming convention
- Using arithmetic, relational, and logical operators in code statements
- Using branching statements to control code execution
- Using looping statements to iterate through collections or repeat steps until a specified condition is met
- Creating classes and methods to establish the basic structure of an application
- Using methods and events to implement the programming logic of an application
- Identifying syntax and logic errors
- Accessing and managing data from a data source

- Experience in object oriented design and development as follows:
- Creating and accessing classes and class properties
- Creating and accessing methods and overloaded methods
- Implementing inheritance, base classes, and abstract classes
- Declaring, raising, and handling events
- Responding to and throwing exceptions
- Implementing interfaces and polymorphism
- Implementing shared and static members
- Implementing generics
- Creating components and class libraries

- Experience in N-Tier application design and development as follows:

	- Managing a software development process **- Controlling input at the user interface level in Windows Client applications** **- Debugging, tracing, and profiling .NET applications** **- Monitoring and logging .NET applications** **- Implementing basic testing best practices** **- Performing basic Data Access tasks with LINQ** **- Basics of LINQ to XML** **- Basics of LINQ to Entities** **- Basics of LINQ to SQL** **- Implementing basic security best practices in .NET Applications** **- Basics of Code Access Security** **- Basics of Role-Based Security** **- Basics of Cryptography Services** **- Implementing basic service calls** **- Basics of consuming XML Web Services** **- Basics of consuming WCF Services** **- Using .NET Configuration Files** **- Deploying .Net Framework Applications using ClickOnce and the MS Installer**
Teilnehmerkreis	**This course is intended for Technology Specialists in the area of Windows Client Development who work in a development environment that uses Microsoft Visual Studio .NET 2010 and Microsoft .NET Framework 4.0 to create rich client applications for Windows.**
Unterlagen	**Orginal Microsoft Unterlagen**
Folgekurse	**- andere Kurse aus dem Bereich Spezialisierung, siehe Bildungsweg-«Application Design for Developers», NADD/10552**
Inhalt	**- Windows Client Application Design** **- Windows Client Technologies** **- Architectural Patterns** **- Interoperability between Windows Forms and WPF** **- Introduction to Visual Studio 2010 and WPF Version 4** **- What?s New in Visual Studio 2010?** **- What?s New in WPF Version 4** **- Designing and Developing a User Interface** **- Defining Page Layout** **- Using Content ControlsUsing Item ControlsSharing Logical Resources in a Window** **Taking Control of the User InterfaceSharing Logical Resources in an ApplicationCreating Consistent User Interfaces by Using StylesChanging**

	the Appearance of Controls by Using TemplatesHandling Events and Commands **Testing, Unit Testing, and DebuggingWPF Testing StrategiesDebugging XAMLProviding User Feedback for Unhandled ExceptionsUnderstanding Security Features** **Simple Data Binding and ValidationOverview of Data BindingCreating a Data BindingImplementing Property Change NotificationConverting DataValidating DataPresenting Data at Design Time** **Data Binding to CollectionsBinding to Collections of ObjectsUsing Collection ViewsCreating Master-Detail User InterfacesUsing Data TemplatesPresenting Design Time Data Collections** **Enhancing UI ResponsivenessImplementing Asynchronous ProcessesImplementing Responsive User Interfaces** **Integrating Localization and User Assistance FeaturesLocalization and GlobalizationImplementing User Assistance FeaturesProviding User Accessibility Features** **WPF 2D Graphics, Multimedia, and PrintingDisplaying 2D GraphicsDisplaying ImagesAdding Multimedia to WPF ApplicationsCreating and Printing Documents** **Control CustomizationOverview of Control AuthoringCreating User ControlsCreating Custom ControlsManaging Control Appearance by Using Visual StatesIntegrating WPF and Windows Forms** **Attached Properties and Behaviors in WPFImplementing Attached PropertiesImplementing Drag-and-Drop User InterfacesImplementing Expression Blend Behaviors, Triggers and Actions** **Animations in WPFUsing AnimationsUsing TriggersImplementing Data Visualizations** **Application State, Settings, and LifecycleCreating Application SettingsConsuming Application SettingsCreating Custom Configuration Sections** **Configure and Deploy Windows Client ApplicationsDeployment OptionsDeploying a Standalone WPF ApplicationDeploying an XBAP ApplicationConfiguring Security Settings**
Beitrag	**Der Teilnehmerbeitrag versteht sich rein netto. Das ZFI ist (gemäss MwSt-Gesetz) nicht Mehrwertsteuerpflichtig und erhebt somit keine MwSt. Bei länger als einen Monat dauernden Lehrgängen ist die Zahlung des Teilnehmerbeitrages in mehreren Raten möglich (pro rata temporis).**