

Universal Windows Apps With XAML And C

Building Apps for the Universal Windows Platform

Develop Windows 10 applications faster and more efficiently using the Universal Windows Platform. You will use Xamarin to create apps for macOS, iOS, and Android devices. Building Apps for the Universal Windows Platform is a complete guide covering PCs, tablets, phones, and other devices such as HoloLens. You will use Windows 10 to develop apps for desktop, mobile, holographic, wearable, and IoT devices. You will reuse code to easily create cross-platform apps. What You Will Learn Design and develop apps using Visual Studio and Blend Create Cortana-enabled apps for a hands-free experience Build IoT apps and apps for wearables such as the Microsoft HoloLens Monitor apps post-publication to gain insights from actionable data using Windows Store Analytics and Azure Who This Book Is For Professional developers working independently or in a team on Windows 10 applications, and students coming into the world of software development

Cross-Plattform-Apps mit .NET MAUI entwickeln

- Praktischer Leitfaden für den schnellen Einstieg mit sofort anwendbaren Codebeispielen - Migration von Xamarin.Forms-App nach .NET MAUI - Mit durchgängigem, praxisorientiertem Beispiel - Neu in der 2. Auflage: XAML-Grundlagen, eigene Steuerelemente entwickeln, Scannen von Barcodes, Lokalisierung von Apps, Deployment in die App Stores - Ihr exklusiver Vorteil: E-Book inside beim Kauf des gedruckten Buches Programmieren Sie bereits Desktop- oder Webanwendungen mit C# und .NET und möchten nun auch Apps für Android, iOS und macOS entwickeln? Dann ist dies das richtige Buch für Sie. Der langjährige Microsoft MVP André Krämer zeigt Ihnen, wie Sie mit C# 12 und .NET 8 innovative Apps für Android, iOS, macOS und Windows entwickeln können. Machen Sie mehr aus Ihrem Wissen und gehen Sie den nächsten Schritt in Ihrer Karriere zum .NET-App-Entwickler! Was erwartet Sie in diesem Buch? Praxisorientiert: Entwickeln Sie eine innovative Lebens - mittelverwaltungs-App, die reale Herausforderungen wie Lebensmittelverschwendung adressiert. Dieses Projekt vermittelt nicht nur grundlegende Fähigkeiten, sondern auch fortgeschrittene Techniken der modernen App-Entwicklung. Umfassend: Von der einheitlichen Codebasis über Oberflächendesign und Datenbankbindung bis hin zum Zugriff auf Geräte-APIs – dieses Buch deckt alles ab, was Sie benötigen, um sofort loslegen zu können. End-To-End: Von der Planung über die Entwicklung bis hin zum Deployment: Dieses Buch führt Sie kompetent durch alle Phasen der App-Entwicklung. Alle Codebeispiele finden Sie im zugehörigen Git-Hub-Repository. AUS DEM INHALT // • Schnelleinstieg: Ihre erste App mit .NET MAUI in einer Stunde • Überblick über .NET for Android, .NET for iOS und .NET MAUI • Architektur von Cross- Plattform-Apps • XAML-Grundlagen • Eingabeformulare anlegen • Eingabevalidierung • Eigene Steuerelemente entwickeln • Navigation und die .NET MAUI Shell • Listen/Bilder, Icons und Schriftarten • Styles und Themes in .NET MAUI • Lokalisierung • Aufruf von Webservices • Lokale Datenhaltung • Geräte-APIs aufrufen, Barcodes scannen • Deployment in die App Stores

Mobile Development with .NET

A mobile applications development masterclass for .NET and C# developers Key FeaturesUncover the new features and capabilities of the .NET 5 framework in this updated and improved second editionOptimize the time required to develop highly performant cross-platform applicationsUnderstand the architectural patterns and best practices for mobile application developmentBook Description Are you a .NET developer who wishes to develop mobile solutions without delving into the complexities of a mobile development platform? If so, this book is a perfect solution to help you build professional mobile apps without leaving the .NET

ecosystem. Mobile Development with .NET will show you how to design, architect, and develop robust mobile applications for multiple platforms, including iOS, Android, and UWP using Xamarin, .NET Core, and Azure. With the help of real-world scenarios, you'll explore different phases of application development using Xamarin, from environment setup, design, and architecture to publishing. Throughout the book, you'll learn how to develop mobile apps using Xamarin and .NET Standard. You'll even be able to implement a web-based backend composed of microservices with .NET Core using various Azure services including, but not limited to, Azure Active Directory, Azure Functions. As you advance, you'll create data stores using popular database technologies such as Cosmos DB and data models such as the relational model and NoSQL. By the end of this mobile application development book, you'll be able to create cross-platform mobile applications that can be deployed as cloud-based PaaS and SaaS. What you will learnDiscover the latest features of .NET 5 that can be used in mobile application developmentExplore Xamarin.Forms Shell for building cross-platform mobile UIsUnderstand the technical design requirements of a consumer mobile appGet to grips with advanced mobile development concepts such as app data management, push notifications, and graph APIsManage app data with Entity Framework CoreUse Microsoft's Project Rome for creating cross-device experiences with XamarinBecome well-versed with implementing machine learning in your mobile appsWho this book is for This book is for ASP.NET Core developers who want to get started with mobile development using Xamarin and other Microsoft technologies. Working knowledge of C# programming is necessary to get started.

C# 8 and .NET Core 3 Projects Using Azure

Get up to speed with using C# 8 and .NET Core 3.0 features to build real-world .NET Core applications Key FeaturesLearn the core concepts of web applications, serverless computing, and microservicesCreate an ASP.NET Core MVC application using controllers, routing, middleware and authenticationBuild modern applications using cutting-edge services from Microsoft AzureBook Description .NET Core is a general-purpose, modular, cross-platform, and opensource implementation of .NET. The latest release of .NET Core 3 comes with improved performance and security features, along with support for desktop applications. .NET Core 3 is not only useful for new developers looking to start learning the framework, but also for legacy developers interested in migrating their apps. Updated with the latest features and enhancements, this updated second edition is a step-by-step, project-based guide. The book starts with a brief introduction to the key features of C# 8 and .NET Core 3. You'll learn to work with relational data using Entity Framework Core 3, before understanding how to use ASP.NET Core. As you progress, you'll discover how you can use .NET Core to create cross-platform applications. Later, the book will show you how to upgrade your old WinForms apps to .NET Core 3. The concluding chapters will then help you use SignalR effectively to add real-time functionality to your applications, before demonstrating how to implement MongoDB in your apps. Finally, you'll delve into serverless computing and how to build microservices using Docker and Kubernetes. By the end of this book, you'll be proficient in developing applications using .NET Core 3. What you will learnUnderstand how to incorporate the Entity Framework Core 3 to build ASP.NET Core MVC applicationsCreate a real-time chat application using Azure's SignalR serviceGain hands-on experience of working with Cosmos DBDevelop an Azure Function and interface it with an Azure Logic AppExplore user authentication with Identity Server and OAuth2Understand how to use Azure Cognitive Services to add advanced functionalities with minimal codeGet to grips with running a .NET Core application with KubernetesWho this book is for This book is for developers and programmers of all levels who want to build real-world projects and explore the new features of .NET Core 3. Developers working on legacy desktop software who are looking to migrate to .NET Core 3 will also find this book useful. Basic knowledge of .NET Core and C# is assumed.

Building End-to-End Apps with C# 11 and .NET 7

Learn how to use C# 11 to build apps for any platform, from the ground up KEY FEATURES ? Discover the latest C# 11 features and improvements. ? Master C# application development in Visual Studio 2022 with engaging and relatable examples. ? Learn how to test and deploy C# applications with ease. DESCRIPTION

C# 11 is the latest version of C#, a popular programming language for building cloud, web, and desktop applications. It is a powerful and versatile language that can create a wide range of applications, from simple command-line tools to complex enterprise systems. This book teaches you how to use C# 11, the latest version of C#, to build real-world applications. It introduces the new language features in C# 11, such as global using directives, file-scoped namespaces, and top-level statements. Then, it shows you how to use these features to write code that is more concise and expressive. Next, the book teaches you how to build various applications using C# 11, including web apps, mobile apps, desktop apps, and machine learning models. You'll learn to use ASP.NET Core, gRPC, Blazor, Angular, WPF, WinUI 3, .NET MAUI, and ML.NET. Throughout the book, you'll also learn the best practices for writing clean, efficient, and maintainable codes. By the end of the book, you will have a deep understanding of C# 11 and how to use it to build a wide range of cloud, web, and desktop applications.

WHAT YOU WILL LEARN ?

- Get an overview of the new language enhancements in C# 11.
- Create simple applications from start to finish using a built-in project template step-by-step.
- Learn related concepts, and be aware of the nuances, pitfalls, and workarounds while creating each application.
- Reflect on the testing and deployment strategies for each application type.
- Challenge yourself to think deeper and learn more with end-of-chapter exercises.

WHO THIS BOOK IS FOR

This book is for experienced C# programmers who want to learn about the latest enhancements to the language, project types, tools, technologies, and design approaches. The book assumes readers are familiar with C# and can build applications using the .NET Platform in Visual Studio.

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9. .NET MAUI
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Azure und IoT

Dieser shortcut dreht sich um die Themen Azure und IoT. Zunächst werden die Azure Notification Hubs und die Azure Event Hubs behandelt. Anschließend geht es um das .NET Micro Framework, das es ermöglicht, hardwarenahe Embedded-Anwendungen auf kleinen Geräten in ungewohnter Umgebung zu entwickeln. Abschließend wird Software und Hardware gemeinsam in der Cloud betrachtet. Der shortcut zeigt anhand von Visual Studio in einer Entwicklungsumgebung, was für die Anbindung eines Embedded Systems an die Cloud benötigt wird.

C# 7 and .NET Core: Modern Cross-Platform Development

Modern Cross-Platform Development

About This Book Build modern, cross-platform applications with .NET Core Get up to speed with C#, and up to date with all the latest features of C# 7 Start creating professional web applications with ASP.NET Core Who This Book Is For This book is targeted towards readers who have some prior programming experience or have a science, technology, engineering, or mathematics (STEM) background, and want to gain a solid foundation with C# and to be introduced to the types of applications they could build and will work cross-platform on Windows, Linux, and macOS. What You Will Learn Build cross-platform applications using C# 7 and .NET Core Explore ASP.NET Core and learn how to create professional web applications Improve your application's performance using multitasking Use Entity Framework Core and find out how to build code-first databases Master object-oriented programming with C# to increase code reuse and efficiency Familiarize yourself with cross-device app development using the Universal Windows Platform and XAML Query and manipulate data using LINQ Protect your data by using encryption and hashing In Detail If you want to build powerful cross-platform applications with C# 7 and .NET Core, then this book is for you. First, we'll run you through the basics of C#, as well as object-oriented programming, before taking a quick tour through the latest features of C# 7 such as tuples, pattern matching, out variables, and so on. After quickly taking you through C# and how .NET works, we'll dive into the .NET Standard 1.6 class libraries, covering topics such as performance, monitoring, debugging, serialization and encryption. The final section will demonstrate the major types of application that you can build and deploy cross-device and cross-platform. In this section, we'll cover Universal Windows Platform (UWP) apps, web applications, mobile apps, and web services. Lastly, we'll

look at how you can package and deploy your applications so that they can be hosted on all of today's most popular platforms, including Linux and Docker. By the end of the book, you'll be armed with all the knowledge you need to build modern, cross-platform applications using C# and .NET Core. Style and approach This book takes a step-by-step approach and is filled with exciting projects and fascinating theory. It uses three high-impact sections to equip you with all the tools you'll need to build modern, cross-platform applications using C# and .NET Core.

Das Unity-Buch

Möchten Sie eigene Spiele entwickeln? Fürs Web, den Desktop oder für Smartphones und Tablets? In 2D, 3D oder gar Virtual Reality? Mit der beliebten Game Engine "Unity 5" ist das keine Zauberei. Unity-Kenner Jashan Chittesh nimmt Sie in seinem Buch virtuell an die Hand und führt Sie durch Unity und den gesamten Prozess der Spieleentwicklung. Sie brauchen nur grundlegende Programmierkenntnisse mitbringen, und schon geht es los. Anschaulich und praxisorientiert lernen Sie, wie Sie:

- 2D-Spiele entwickeln mit Sprites, 2D-Animation, 2D-Physik und Parallax Scrolling
- Schritt für Schritt ein anspruchsvolles 3D-Spiel programmieren
- 3D-Spiele Virtual-Reality-tauglich machen, für Oculus Rift und Co. Dabei setzen Sie zahlreiche Techniken und Tricks ein, die eindrucksvolle Spiele ermöglichen, u.a.:
- Materialien und Shader, inkl. physikbasiertes Shading (neu in Unity 5)
- Audio und Effekte mit dem neuen Unity Audio Mixer
- animierte Benutzerschnittstellen mit dem neuen Unity UI (ehemals uGUI)
- einfache Splitscreen-Multiplayer-Funktionalitäten
- Systematisch Fehler suchen, finden und beheben
- Drawcalls und Batches verstehen, Performance optimieren
- Projekte und Szenen ordentlich aufbauen, den Überblick behalten

Über Unity hinaus lernen Sie die grundlegenden Konzepte und Arbeitsweisen der Spieleentwicklung kennen und erfahren, welche weiteren Tools hilfreich sind, z.B. für Grafik, 3D, Audio und Versionsverwaltung. Nach der Lektüre sind Sie mit den wichtigsten Fähigkeiten von Unity 5 vertraut. Sie können sie kreativ nutzen, um eigene Spielideen umzusetzen und auf verschiedenen Zielplattformen zu veröffentlichen. Auf der Website zum Buch finden Sie die kompletten Beispielprojekte mit Code, Aktualisierungen und eine Vielzahl weiterführenden Links. Außerdem: Über zwei Stunden Videotutorials und ein eigenes Forum, in dem der Autor Fragen zum Buch und zu Unity beantwortet.

Professional C# 6 and .NET Core 1.0

A true professional's guide to C# 6 Professional C# 6 and .NET Core 1.0 provides complete coverage of the latest updates, features, and capabilities, giving you everything you need for C#. Get expert instruction on the latest changes to Visual Studio 2015, Windows Runtime, ADO.NET, ASP.NET, Windows Store Apps, Windows Workflow Foundation, and more, with clear explanations, no-nonsense pacing, and valuable expert insight. This incredibly useful guide serves as both tutorial and desk reference, providing a professional-level review of C# architecture and its application in a number of areas. You'll gain a solid background in managed code and .NET constructs within the context of the 2015 release, so you can get acclimated quickly and get back to work. The new updates can actively streamline your workflow, with major changes including reimagined C# refactoring support, a new .NET Web app stack, and the .NET compiler platform that makes C# and Visual Basic compilers available as APIs. This book walks you through the changes with a comprehensive C# review. Explore the new Visual Studio templates for ASP.NET Core 1.0, Web Forms, and MVC Learn about the networking switch to HttpClient and ASP.NET Web API's replacement of WCF Data Services Work with the latest updates to the event log, Windows Runtime 2.0, and Windows 8.1 deployment and localization Dig deep into the new .NET 5.0 GC behaviors and the Migrations addition to ADO.NET Microsoft has stepped up both the cadence and magnitude of their software releases. Professional C# 6 and .NET Core 1.0 shows you everything you need to know about working with C# in a real-world context.

Professional C# 7 and .NET Core 2.0

The professional's guide to C# 7, with expert guidance on the newest features Professional C# 7 and .NET Core 2.0 provides experienced programmers with the information they need to work effectively with the

world's leading programming language. The latest C# update added many new features that help you get more done in less time, and this book is your ideal guide for getting up to speed quickly. C# 7 focuses on data consumption, code simplification, and performance, with new support for local functions, tuple types, record types, pattern matching, non-nullable reference types, immutable types, and better support for variables. Improvements to Visual Studio will bring significant changes to the way C# developers interact with the space, bringing .NET to non-Microsoft platforms and incorporating tools from other platforms like Docker, Gulp, and NPM. Guided by a leading .NET expert and steeped in real-world practicality, this guide is designed to get you up to date and back to work. With Microsoft speeding up its release cadence while offering more significant improvement with each update, it has never been more important to get a handle on new tools and features quickly. This book is designed to do just that, and more—everything you need to know about C# is right here, in the single-volume resource on every developer's shelf. Tour the many new and enhanced features packed into C# 7 and .NET Core 2.0 Learn how the latest Visual Studio update makes developers' jobs easier Streamline your workflow with a new focus on code simplification and performance enhancement Delve into improvements made for localization, networking, diagnostics, deployments, and more Whether you're entirely new to C# or just transitioning to C# 7, having a solid grasp of the latest features allows you to exploit the language's full functionality to create robust, high-quality apps. Professional C# 7 and .NET Core 2.0 is the one-stop guide to everything you need to know.

Raspberry Pi für Windows 10 IoT Core

Raspberry Pi für Windows 10 IoT Core Realisieren Sie gerne hardwarenahe Projekte? Ziehen Sie die Werkzeuge aus der Windows-Welt denen von Linux vor? Dann hielt sich Ihre Begeisterung für den Raspberry Pi bislang sicher in Grenzen. Doch damit ist jetzt Schluss! Der Raspberry Pi ist nun fit für den Einsatz im Microsoft-Umfeld. In diesem Buch erfahren Sie alles, was Sie wissen müssen, um Ihre Projekte mit dem Raspberry Pi und Windows 10 IoT Core erfolgreich in die Tat umzusetzen. Schritt für Schritt führt Stephan Hüwe Sie in die Welt von Windows 10 IoT Core auf dem Raspberry Pi ein. Folgende Themen erwarten Sie: - Einstieg in die Welt des Raspberry Pi: Aufbau, Schnittstellen, Breadboarding, Kaufempfehlungen u.v.m. - Elektrotechnische Grundlagen & Energieversorgung am Raspberry Pi - Installation, Inbetriebnahme & Administration von Windows 10 IoT Core - Umsetzung, Deployment & Debugging von Projekten mit dem Raspberry Pi, Windows 10 IoT Core & Visual Studio - Raspberry Pi, Cloud & Internet der Dinge: Anbindung an Azure IoT Hub - Exkurs: Windows 10 IoT Core mit Arduino Zahlreiche Beispielanwendungen, z.B. für Licht- und Kamerasteuerung, Temperatursensoren oder mobile Datenerfassung, liefern Ihnen Impulse für eigene Projekte. Die Codebeispiele basieren auf C#. Für schnelle Lernerfolge sollten Sie über Grundkenntnisse in einer .NET-Programmiersprache verfügen. Wenn Sie darauf brennen, Ihre eigenen Projekte mit dem Raspberry Pi zu verwirklichen, aber kein Fan von Linux sind, dann liefert Ihnen dieses Buch alle wichtigen Skills, um das Dreigespann von Raspberry Pi, Windows 10 IoT Core und Visual Studio souverän zu meistern.

C# 9 and .NET 5 – Modern Cross-Platform Development

Publisher's Note: Microsoft stopped supporting .NET 5 in May 2022. The newer 8th edition of the book is available that covers .NET 8 (end-of-life November 2026) with C# 12 and EF Core 8. Purchase of the print or Kindle book includes a free PDF eBook Key Features Explore the newest additions to C# 9, the .NET 5 class library, Entity Framework Core and Blazor Strengthen your command of ASP.NET Core 5.0 and create professional websites and services Build cross-platform apps for Windows, macOS, Linux, iOS, and Android Book DescriptionIn C# 9 and .NET 5 – Modern Cross-Platform Development, Fifth Edition, expert teacher Mark J. Price gives you everything you need to start programming C# applications. This latest edition uses the popular Visual Studio Code editor to work across all major operating systems. It is fully updated and expanded with a new chapter on the Microsoft Blazor framework. The book's first part teaches the fundamentals of C#, including object-oriented programming and new C# 9 features such as top-level programs, target-typed new object instantiation, and immutable types using the record keyword. Part 2 covers the .NET APIs, for performing tasks like managing and querying data, monitoring and improving

performance, and working with the file system, async streams, serialization, and encryption. Part 3 provides examples of cross-platform apps you can build and deploy, such as websites and services using ASP.NET Core or mobile apps using Xamarin.Forms. The best type of application for learning the C# language constructs and many of the .NET libraries is one that does not distract with unnecessary application code. For that reason, the C# and .NET topics covered in Chapters 1 to 13 feature console applications. In Chapters 14 to 20, having mastered the basics of the language and libraries, you will build practical applications using ASP.NET Core, Model-View-Controller (MVC), and Blazor. By the end of the book, you will have acquired the understanding and skills you need to use C# 9 and .NET 5 to create websites, services, and mobile apps. What you will learn Build your own types with object-oriented programming Query and manipulate data using LINQ Build websites and services using ASP.NET Core 5 Create intelligent apps using machine learning Use Entity Framework Core and work with relational databases Discover Windows app development using the Universal Windows Platform and XAML Build rich web experiences using the Blazor framework Build mobile applications for iOS and Android using Xamarin.Forms Who this book is for This book is best for C# and .NET beginners, or programmers who have worked with C# in the past but feel left behind by the changes in the past few years. This book doesn't expect you to have any C# or .NET experience; however, you should have a general understanding of programming. Students and professionals with a science, technology, engineering, or mathematics (STEM) background can certainly benefit from this book.

Beginning Microsoft Kinect for Windows SDK 2.0

Develop applications in Microsoft Kinect 2 using gesture and speech recognition, scanning of objects in 3D, and body tracking. Create motion-sensing applications for entertainment and practical uses, including for commercial products and industrial applications. Beginning Microsoft Kinect for Windows SDK 2.0 is dense with code and examples to ensure that you understand how to build Kinect applications that can be used in the real world. Techniques and ideas are presented to facilitate incorporation of the Kinect with other technologies. What You Will Learn Set up Kinect 2 and a workspace for Kinect application development Access audio, color, infrared, and skeletal data streams from Kinect Use gesture and speech recognition Perform computer vision manipulations on image data streams Develop Windows Store apps and Unity3D applications with Kinect 2 Take advantage of Kinect Fusion (3D object mapping technology) and Kinect Ripple (Kinect projector infotainment system) Who This Book Is For Developers who want to include the simple but powerful Kinect technology into their projects, including amateurs and hobbyists, and professional developers

Learn WinUI 3.0

A beginner's guide to building Windows applications with WinUI for UWP and desktop applications Key Features Create modern Windows 10 applications and gain access to UI controls that were previously limited to UWP applications Discover how to modernize your existing Win32 apps with a modern Windows 10 UI Learn to embed a single page application (SPA) in a WinUI application with a web framework like Blazor Book Description WinUI 3.0 takes a whole new approach to delivering Windows UI components and controls, and is able to deliver the same features on more than one version of Windows 10. Learn WinUI 3.0 is a comprehensive introduction to WinUI and Windows apps for anyone who is new to WinUI, Universal Windows Platform (UWP), and XAML applications. The book begins by helping you get to grips with the latest features in WinUI and shows you how XAML is used in UI development. You'll then set up a new Visual Studio environment and learn how to create a new UWP project. Next, you'll find out how to incorporate the Model-View-ViewModel (MVVM) pattern in a WinUI project and develop unit tests for ViewModel commands. Moving on, you'll cover the Windows Template Studio (WTS) new project wizard and WinUI libraries in a step-by-step way. As you advance, you'll discover how to leverage the Fluent Design system to create beautiful WinUI applications. You'll also explore the contents and capabilities of the Windows Community Toolkit and learn to create a new UWP user control. Toward the end, the book will teach you how to build, debug, unit test, deploy, and monitor apps in production. By the end of this book,

you'll have learned how to build WinUI applications from scratch and modernize existing WPF and WinForms applications using WinUI controls. What you will learn Get up and running with WinUI and discover how it fits into the landscape of Project Reunion and Windows UI development Build new Windows apps quickly with robust templates Develop testable and maintainable apps using the MVVM pattern Modernize WPF and WinForms applications with WinUI and XAML Islands Discover how to build apps that can target Windows and leverage the power of the web Install the XAML Controls Gallery sample app and explore available WinUI controls Who this book is for This book is for anyone who wants to develop Windows applications with a modern user experience (UX). If you are familiar with UWP and WPF and are looking to enhance your knowledge of Windows development and modernize existing apps, you will find this book useful. Hands-on experience with C# and .NET is expected but no prior knowledge of WinUI is required.

C# 7.1 and .NET Core 2.0 – Modern Cross-Platform Development

C# 7.1 and .NET Core 2.0 – Modern Cross-Platform Development, Third Edition is a practical guide to creating powerful cross-platform applications with C# 7 and .NET Core 2.0. About This Book Build modern, cross-platform applications with .NET Core 2.0 Get up to speed with C#, and up to date with all the latest features of C# 7.1 Start creating professional web applications with ASP.NET Core 2.0 Who This Book Is For This book is targeted towards readers who have some prior programming experience or have a science, technology, engineering, or mathematics (STEM) background, and want to gain a solid foundation with C# and to be introduced to the types of applications they could build and will work cross-platform on Windows, Linux, and macOS. What You Will Learn Build cross-platform applications using C# 7.1 and .NET Core 2.0 Explore ASP.NET Core 2.0 and learn how to create professional websites, services, and applications Improve your application's performance using multitasking Use Entity Framework Core and LINQ to query and manipulate data Master object-oriented programming with C# to increase code reuse and efficiency Familiarize yourself with cross-device app development using the Universal Windows Platform Protect and manage your files and data with encryption, streams, and serialization Get started with mobile app development using Xamarin.Forms Preview the nullable reference type feature of C# 8 In Detail C# 7.1 and .NET Core 2.0 – Modern Cross-Platform Development, Third Edition, is a practical guide to creating powerful cross-platform applications with C# 7.1 and .NET Core 2.0. It gives readers of any experience level a solid foundation in C# and .NET. The first part of the book runs you through the basics of C#, as well as debugging functions and object-oriented programming, before taking a quick tour through the latest features of C# 7.1 such as default literals, tuples, inferred tuple names, pattern matching, out variables, and more. After quickly taking you through C# and how .NET works, this book dives into the .NET Standard 2.0 class libraries, covering topics such as packaging and deploying your own libraries, and using common libraries for working with collections, performance, monitoring, serialization, files, databases, and encryption. The final section of the book demonstrates the major types of application that you can build and deploy cross-device and cross-platform. In this section, you'll learn about websites, web applications, web services, Universal Windows Platform (UWP) apps, and mobile apps. By the end of the book, you'll be armed with all the knowledge you need to build modern, cross-platform applications using C# and .NET. Style and approach This book takes a step-by-step approach and is filled with exciting projects and fascinating theory. It uses three high-impact sections to equip you with all the tools you'll need to build modern, cross-platform applications using C# and .NET Core 2.0.

Hands-On Visual Studio 2022

Unlock the power of Visual Studio 2022 with this step-by-step illustrated guide and leverage its powerful features Key Features Ride the wave of artificial intelligence using the new GPT-based extensions Explore tips, tricks, and best practices to discover ways to overcome source-code challenges Get to grips with Visual Studio's basic and advanced features to harness its full potential and enhance your coding journey Purchase of the print or Kindle book includes a free PDF eBook Book Description Visual Studio 2022 is widely recognized as the best IDE for application development across various domains. This book is a

comprehensive guide for both beginners and experienced .NET developers who wish to familiarize themselves with its basic, advanced, and new features. This book is divided into three sections: the first is an overview of Visual Studio, the second part explores tools for productivity within the IDE, and the third delves into integration with GitHub and Visual Studio extensions. In this second edition, we've also expanded the chapters on the use of Visual Studio to environments beyond web development, such as Azure, Desktop, .NET MAUI, and others. Updates to the IDE introduced since the release year of the first edition of the book in 2022 have also been included, such as the use of GPT-based extensions like GitHub Copilot and GitHub Copilot Chat, as well as profiling tools. The book reviews breakpoint groups, a new way to configure breakpoints, as well as tools for web development, such as Browser Link, Dev Tunnels, and Web API Endpoints Explorer. For more advanced developers, the book addresses the topic of developing extensions through the use of the new Visual Studio SDK. By the end of this book, you'll have a better understanding of Visual Studio 2022 and how to use it to its fullest potential.

What you will learn

- Discover what's new in Visual Studio 2022
- Get to grips with the new features in code tools to improve productivity
- Explore latest compilation and debugging tips
- Unveil shortcuts, tricks, tips, and tools to improve productivity within Visual Studio 2022
- Leverage remote and collaborative work with Visual Studio 2022
- Find out how to create new projects and templates in Visual Studio 2022
- Enhance your skills by learning general tools, shortcuts, and tips for .NET developers
- Implement version control with Git Integration into your workflow

Who this book is for

This book is for .NET developers who want to learn how to use the latest features, tools, and extensions available in Visual Studio 2022. To get the most out of the book, general knowledge of C# is recommended. Knowledge of web development, Azure, .NET MAUI, and Desktop with .NET will help you follow along, but it's not a prerequisite.

C# 10 and .NET 6 – Modern Cross-Platform Development

Publisher's Note: Microsoft will stop supporting .NET 6 from November 2024. The newer 8th edition of the book is available that covers .NET 8 (end-of-life November 2026) with C# 12 and EF Core 8. Purchase of the print or Kindle book includes a free PDF eBook

Key Features

- Explore the newest additions to C# 10, the .NET 6 class library, and Entity Framework Core 6
- Create professional websites and services with ASP.NET Core 6 and Blazor
- Build cross-platform apps for Windows, macOS, Linux, iOS, and Android

Book Description

Extensively revised to accommodate all the latest features that come with C# 10 and .NET 6, this latest edition of our comprehensive guide will get you coding in C# with confidence. You'll learn object-oriented programming, writing, testing, and debugging functions, implementing interfaces, and inheriting classes. The book covers the .NET APIs for performing tasks like managing and querying data, monitoring and improving performance, and working with the filesystem, async streams, and serialization. You'll build and deploy cross-platform apps, such as websites and services using ASP.NET Core. Instead of distracting you with unnecessary application code, the first twelve chapters will teach you about C# language constructs and many of the .NET libraries through simple console applications. In later chapters, having mastered the basics, you'll then build practical applications and services using ASP.NET Core, the Model-View-Controller (MVC) pattern, and Blazor.

What you will learn

- Build rich web experiences using Blazor, Razor Pages, the Model-View-Controller (MVC) pattern, and other features of ASP.NET Core
- Build your own types with object-oriented programming
- Write, test, and debug functions
- Query and manipulate data using LINQ
- Integrate and update databases in your apps using Entity Framework Core, Microsoft SQL Server, and SQLite
- Build and consume powerful services using the latest technologies, including gRPC and GraphQL
- Build cross-platform apps using XAML

Who this book is for

Designed for both beginners and C# and .NET programmers who have worked with C# in the past and want to catch up with the changes made in the past few years, this book doesn't need you to have any C# or .NET experience. However, you should have a general understanding of programming before you jump in.

Neuronale Netze mit C# programmieren

NEURONALE NETZE MIT C# PROGRAMMIEREN // - Aufbau und Training von neuronalen Netzen - Wichtige Machine-Learning-Algorithmen verstehen und einsetzen - Arbeiten mit ML.NET und Infer.NET -

Vorstellung des Open Source Framework TensorFlow.NET - Erstellen eines Lex-Chatbot für .NET - Alle Beispiele sind mit Visual Studio und C# umsetzbar Sie wollen neuronale Netze und Machine-Learning-Algorithmen mit C# entwickeln? Dann finden Sie in diesem Buch eine gut verständliche Einführung in die Grundlagen und es wird Ihnen gezeigt, wie Sie neuronale Netze und Machine-Learning-Algorithmen in Ihren eigenen Projekten praktisch einsetzen. Mithilfe von Beispielen erstellen und trainieren Sie Ihr erstes neuronales Netz zur vorausschauenden Wartung einer Produktionsmaschine. Im Praxisteil lernen Sie dann, wie Sie TensorFlow-Modelle in ML.NET benutzen oder Infer.NET direkt verwenden können. Des Weiteren nutzen Sie die Predictive- und Sentiment-Analyse, um sich mit Machine-Learning-Algorithmen vertraut zu machen. Alle im Buch vorgestellten Projekte sind in C# programmiert und stehen als Download zur Verfügung. Grundkenntnisse in C# werden für die Arbeit mit dem Buch vorausgesetzt. Alle Projekte lassen sich ohne größere Rechnerressourcen umsetzen. AUS DEM INHALT // Künstliche Intelligenz: Grundlagen/Konzepte und Methoden von Machine Learning/Neuronale Netze bauen und trainieren/Maschinensimulation mit Multilayer Perceptron (MLP)/Backpropagation/Recurrent Neural Networks/Convolutional Neural Networks/Machine Learning as a Service/Predictive Analytics/Objekterkennung/Sentiment-Analyse Daniel Basler arbeitet als Lead Developer und Softwarearchitekt. Seine Schwerpunkte liegen auf Cross-Platform-Apps, Android, JavaScript und Microsoft-Technologien. Er entwickelt u.a. Software für Regal- und Flächenlagersysteme sowie Anlagenvisualisierung und setzt in diesem Umfeld verstärkt Machine-Learning-Methoden ein. Darüber hinaus schreibt er regelmäßig Artikel für die Fachzeitschriften dotnetpro und web&mobile Developer.

C# 9.0

Elinizdeki kitapta, C# .NET'in son sürümü olan 9.0 sürümü, Visual Studio 2019 programı kullanılarak yenilikleri ile birlikte anlatılmaktadır. C# .NET'in temel özelliklerinden başlayarak orta seviyelere kadar birçok özellik uygulamalarla incelenmiştir. Bu özellikler içerisinde C# .NET'in daha önceki sürümlerinden gelen özellikler olduğu gibi Windows form, konsol uygulamaları ve .NET Core için 9.0 sürümü ile gelen yenilikler de yer almaktadır. Kitapta konu şerhler, programcıların mantıken doğru yöntemlerle gelişimine katkıda bulunacak şekilde hazırlanmıştır. Kitap, tamamı denenip çalıştırılmaya değer olan örneklerle desteklenerek okuyucuların konuları daha iyi kavraması amaçlanmıştır. .NET Geliştirme Ortamı . Kod Yazmaya Giriş . Konsol Ekranı . Sabitler ve Değişkenler . Kullanıcı Tanımlı Veri Tipleri . Struct Oluşturmak . Enum Oluşturmak . Boxing ve UnBoxing . Operatörler . Kontrol Yapılar . Döngüler . Diziler ve Koleksiyonlar . Hata Denetimi . Formlar ve Kontroller . Diyalog Pencerelele . String İşlemleri . Tarih ve Zaman Metotları . Regular Expressions . Pattern Matching . Setup Hazırlama . System.Drawing Şerhleri . Yazdırma İşlemleri . Metotlar . Genişletme Metotları . Class Yapıları . User Control Hazırlama . Registry İşlemleri . Word ve Excel Programları . Kullanmak . Geliştirme Sistemi Kaynakları . Erişim . Windows Management Instrumentation . Dosya ve Klasör İşlemleri . Veri Tabanı İşlemleri ve Sorgular . System.Text.Json . LINQ . Generic Metotlar . Paralel Programlama . Matematiksel Metotlar . Range, Index, Span ve Record Yapılar . Tuple Deconstruction . ve Daha Fazlası

C# 7.0 All-in-One For Dummies

Sharpen your knowledge of C# C# know-how is a must if you want to be a professional Microsoft developer. It's also good to know a little C# if you're building tools for the web, mobile apps, or other development tasks. C# 7.0 All-in-One For Dummies offers a deep dive into C# for coders still learning the nuances of the valuable programming language. Pop it open to get an intro into coding with C#, how to design secure apps and databases, and even pointers on building web and mobile apps with C#. C# remains one of the most in-demand programming language skills. The language regularly ranks in the top five among "most in-demand" languages, typically along with Java/JavaScript, C++, and Python. A December 2016 ZDNet article noted "If your employer is a Microsoft developer, you better know C#." Lucky for you, this approachable, all-in-one guide is here to help you do just that—without ever breaking a sweat! Includes coverage of the latest changes to C# Shows you exactly what the language can (and can't) do Presents familiar tasks that you can accomplish with C# Provides insight into developing applications that provide

protection against hackers If you have a basic understanding of coding and need to learn C#—or need a reference on the language in order to launch or further your career—look no further.

Hands-On Mobile Development with .NET Core

Develop native applications for multiple mobile and desktop platforms including but not limited to iOS, Android, and UWP with the Xamarin framework and Xamarin.Forms Key Features Understand .NET Core and its cross-platform development philosophy Build Android, iOS, and Windows mobile applications with C#, .NET Core, and Azure Cloud Services Bring Artificial Intelligence capabilities into your mobile applications with Azure AI Book Description .NET Core is the general umbrella term used for Microsoft's cross-platform toolset. Xamarin used for developing mobile applications, is one of the app model implementations for .NET Core infrastructure. In this book, you will learn how to design, architect, and develop highly attractive, maintainable, efficient, and robust mobile applications for multiple platforms, including iOS, Android, and UWP, with the toolset provided by Microsoft using Xamarin, .NET Core, and Azure Cloud Services. This book will take you through various phases of application development with Xamarin, from environment setup, design, and architecture to publishing, using real-world scenarios. Throughout the book, you will learn how to develop mobile apps using Xamarin, Xamarin.Forms and .NET Standard; implement a webbased backend composed of microservices with .NET Core using various Azure services including but not limited to Azure App Services, Azure Active Directory, Notification Hub, Logic Apps, and Azure Functions, Cognitive Services; create data stores using popular database technologies such as Cosmos DB, SQL and Realm. Towards the end, the book will help developers to set up an efficient and maintainable development pipeline to manage the application life cycle using Visual Studio App Center and Visual Studio Services. What you will learn Implement native applications for multiple mobile and desktop platforms Understand and use various Azure Services with .NET Core Make use of architectural patterns designed for mobile and web applications Understand the basic Cosmos DB concepts Understand how different app models can be used to create an app service Explore the Xamarin and Xamarin.Forms UI suite with .NET Core for building mobile applications Who this book is for This book is for mobile developers who wish to develop cross-platform mobile applications. Programming experience with C# is required. Some knowledge and understanding of core elements and cross-platform application development with .NET is required.

Software Architecture with C# 10 and .NET 6

Design scalable and high-performance enterprise applications using the latest features of C# 10 and .NET 6 Key Features Gain comprehensive software architecture knowledge and the skillset to create fully modular apps Solve scalability problems in web apps using enterprise architecture patterns Master new developments in front-end architecture and the application of AI for software architects Book Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. This fully revised and expanded third edition, featuring the latest features of .NET 6 and C# 10, enables you to acquire the key skills, knowledge, and best practices required to become an effective software architect. Software Architecture with C# 10 and .NET 6, Third Edition features new chapters that describe the importance of the software architect, microservices with ASP.NET Core, and analyzing the architectural aspects of the front-end in the applications, including the new approach of .NET MAUI. It also includes a new chapter focused on providing a short introduction to artificial intelligence and machine learning using ML.NET, and updated chapters on Azure Kubernetes Service, EF Core, and Blazor. You will begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you will explore how to choose a cloud solution for your infrastructure, taking into account the factors that will help you manage a cloud-based app successfully. Finally, you will analyze and implement software design patterns that will allow you to solve common development problems. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your business requirements. What you will learn Use proven techniques to overcome real-world architectural challenges Apply architectural approaches such as layered

architectureLeverage tools such as containers to manage microservices effectivelyGet up to speed with Azure features for delivering global solutionsProgram and maintain Azure Functions using C# 10Understand when it is best to use test-driven development (TDD)Implement microservices with ASP.NET Core in modern architecturesEnrich your application with Artificial IntelligenceGet the best of DevOps principles to enable CI/CD environmentsWho this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

Azure IoT Development Cookbook

Over 50 recipes to drive IoT innovation with Microsoft Azure Key Features Build secure and scalable IoT solutions with Azure IoT platform Learn techniques to build end to end IoT solutions leveraging the Azure IoT platform Filled with practical recipes to help you increase connectivity and automation across IoT devices Book DescriptionMicrosoft's end-to-end IoT platform is the most complete IoT offering, empowering enterprises to build and realize value from IoT solutions efficiently. It is important to develop robust and reliable solutions for your organization to leverage IoT services. This book focuses on how to start building custom solutions using the IoT hub or the preconfigured solution of Azure IoT suite. As a developer, you will be taught how to connect multiple devices to the Azure IoT hub, develop, manage the IoT hub service and integrate the hub with cloud. We will be covering REST APIs along with HTTP, MQTT and AMQP protocols. It also helps you learn Pre-Configured IoT Suite solution. Moving ahead we will be covering topics like:-Process device-to-cloud messages and cloud-to-device messages using .Net-Direct methods and device management-Query Language, Azure IoT SDK for .Net-Creating and managing, Securing IoT hub, IoT Suite and many more. We will be using windows 10 IoT core, Visual Studio, universal Windows platform. At the end, we will take you through IoT analytics and provide a demo of connecting real device with Azure IoT.What you will learn Build IoT Solutions using Azure IoT & Services Learn device configuration and communication protocols Understand IoT Suite and Pre-configured solutions Manage Secure Device communications Understand Device management, alerts Introduction with IoT Analytics, reference IoT Architectures Reference Architectures from Industry Pre-Configured IoT Suite solutions Who this book is for If you are an application developer and want to build robust and secure IoT solution for your organization using Azure IoT, then this book is for you.

Real World Windows 10 Development

Emphasizing XAML and C#, this book provides readers with all the tools, ideas, and inspiration to begin Windows Universal App development for Windows 10. Real World Windows 10 Development addresses developers who want to break into this market by providing detailed explanations of the various aspects of Universal App development. Written by authors with deep knowledge in Windows 10 universal app development, you will learn how to make the most of the Windows 10 SDK to build applications that can be published on IoT devices, phones, tablets, laptops, desktops, Xbox, HoloLens, and the Surface Hub. Readers will learn how to: Extend the appeal of their native, web-based, or universal apps with media, shell integration, and inter-app communications Build adaptive user interfaces that scale to the screen dimensions they are displayed on Monetize your apps Introduce mapping What if you already have pre-existing software in the form of native win32 applications or a website? Real World Windows 10 Development tackles this by providing detailed tutorials on the approaches used to leverage your existing code investment. Finally, Real World Windows 10 Development provides a step-by-step walk through of the various approaches developers can use to distribute their universal apps. In this book, you'll get: Detailed descriptions of Windows 10 app development Samples emphasizing the use of XAML/C# Adherence to Windows 10 guidelines for successful app acceptance

Web Development with Blazor

Develop modern web UIs with Blazor Server and Blazor WebAssembly – now introducing Streaming and

Static Server-Side Rendering (SSR) and flexible hosting models in .NET 8 Purchase of the print or Kindle book includes a free eBook in PDF format Key Features Create a production-ready Blazor application from start to finish Find out how, when, and why to use Blazor Server and Blazor WebAssembly, as well as Blazor Hybrid Explore crucial new coverage of streaming rendering, server-side rendering (SSR), flexible hosting models, and Blazor templates Book Description Web Development with Blazor is your essential guide to building and deploying interactive web applications in C# – without relying on JavaScript. Written by an early Blazor adopter and updated for .NET 8, this book takes you through the end-to-end development of an example app, helping you to overcome common challenges along the way. You'll pick up both Blazor Server and Blazor WebAssembly and discover cutting-edge tools to enrich your development experience. Responding to evolving needs, this edition introduces flexible hosting models, allowing you to mix and match hosting approaches to create flexible and scalable Blazor applications. It also presents the new Blazor templates, which provide ready-made solutions to simplify and expedite development. You'll learn about the game-changing server-side rendering (SSR), a hybrid hosting model blending the strengths of Blazor Server and Blazor WebAssembly, as well as streaming rendering, a new technique that boosts the performance and user experience of Blazor apps. By the end of this book, you'll have the confidence you need to create and deploy production-ready Blazor applications using best practices, along with a big-picture view of the Blazor landscape. What you will learn Understand how and when to use Blazor Server, Blazor WebAssembly, and Blazor Hybrid Learn how to build simple and advanced Blazor components Explore how Minimal APIs work and build your own API Discover how to use streaming rendering and server-side rendering (SSR) Mix and match different hosting models to create flexible and scalable Blazor apps Familiarise yourself with the new Blazor templates that simplify development Debug your Blazor Server and Blazor WebAssembly applications Who this book is for This book is for .NET web developers and software developers who want to use their existing C# skills to build interactive web applications running either inside the web browser using Blazor WebAssembly, on the server using Blazor Server, or a combination of the two. You'll need basic knowledge of C# and prior exposure to .NET web development before you get started; the book will guide you through the rest.

Visual Basic 2015 Unleashed

Using Visual Basic 2015, developers can build cutting-edge applications that run practically anywhere: on Windows desktops, new Windows 10 devices, in mobile and cloud environments, and beyond. Visual Basic 2015 Unleashed is the most comprehensive, practical reference to modern programming with VB 2015. Long-time Visual Basic MVP Alessandro Del Sole walks you through the latest version of the language, helping you thoroughly master its most valuable features, most powerful programming techniques, and most effective development patterns. Next, he shows how to use Visual Basic 2015 to build robust, effective software in a wide range of environments. Extensively updated for Visual Basic 2015's major improvements, this guide covers both Visual Basic 2015 Professional Edition for professional developers and the free Community Edition for hobbyists, novices, and students. Del Sole has added detailed coverage of building new universal Windows apps for Windows 10 and using new Visual Studio 2015 capabilities to supercharge your productivity as a developer. If you want to leverage all of VB 2015's power, this is the book you need. Detailed information on how to... Understand the Visual Studio 2015 IDE, .NET Framework 4.6 and the new .NET Core 5, and the anatomy of a VB 2015 application Debug VB applications and implement error handling and exceptions Keep your code clean and well-organized with VB 2015's new refactoring tools Master modern VB object development: namespaces, modules, structures, enums, inheritance, interfaces, generics, delegates, events, collections, iterators, and more Share Visual Basic code with Portable Class Libraries and Shared Projects Access data with LINQ and ADO.NET Entity Framework Manipulate XML documents with LINQ and XML Literals Build and deploy applications to run in the Microsoft Azure cloud Develop universal Windows apps that run on any Windows 10 device Use advanced .NET 4.6 platform capabilities, including async and parallel programming, multithreading, assemblies, reflection, and coding attributes Leverage new compiler APIs to write custom domain-specific live code analysis rules Test code with unit tests and TDD Deploy apps efficiently with InstallShield for Visual Studio and ClickOnce

ASP.NET Core 5 and Angular

Build robust modern web applications using .NET 5, Entity Framework Core, and Angular 11. Key Features: Updated with the latest features and additions in ASP.NET Core 5 and Angular 11. Design, build, and deploy a Single Page Application or Progressive Web App. Adopt a full stack approach to handle data management, Web APIs, application design, testing, SEO, security, and deployment. Book Description: Learning full-stack development calls for knowledge of both front-end and back-end web development. ASP.NET Core 5 and Angular, Fourth Edition will enhance your ability to create, debug, and deploy efficient web applications using ASP.NET Core and Angular. This revised edition includes coverage of the Angular routing module, expanded discussion on the Angular CLI, and detailed instructions for deploying apps on Azure, as well as both Windows and Linux. Taking care to explain and challenge design choices made throughout the text, Valerio teaches you how to build a data model with Entity Framework Core, alongside utilizing the Entity Core Fluent API and `EntityTypeConfiguration` class. You'll learn how to fetch and display data and handle user input with Angular reactive forms and front-end and back-end validators for maximum effect. Later, you will perform advanced debugging and explore the unit testing features provided by `xUnit.net` (.NET 5) and Jasmine, as well as Karma for Angular. After adding authentication and authorization to your apps, you will explore progressive web applications (PWAs), learning about their technical requirements, testing, and converting SWAs to PWAs. By the end of this book, you will understand how to tie together the front end and back end to build and deploy secure and robust web applications. What you will learn: Implement a web API interface with ASP.NET Core and consume it with Angular using `RxJS` `observables`. Set up an SQL database server using a local instance or a cloud data store. Perform C# and TypeScript debugging using Visual Studio 2019. Create TDD and BDD unit tests using `xUnit`, Jasmine, and Karma. Perform DBMS structured logging using third-party providers such as `SeriLog`. Deploy web apps to Windows and Linux web servers, or Azure App Service, using IIS, Kestrel, and `nginx`. Who this book is for: This book is for experienced ASP.NET developers who already possess some familiarity with ASP.NET Core and Angular and are looking to learn how to use them effectively together. The fully documented code samples (also available on GitHub) and the step-by-step implementation tutorials make this book easy to follow.

Mastering PowerShell Scripting

This complete guide takes you on a tour of PowerShell from the basics to its advanced functionality, helping you automate your tedious and time-consuming system admin tasks. Key Features: Automate complex tasks, manipulate data, and secure your environment. Work with dual code for PowerShell 7 and Windows PowerShell to maintain compatibility with older versions. See PowerShell in action, from learning the fundamentals to creating classes, scripts, and modules. Book Description: PowerShell scripts offer a convenient way to automate various tasks, but working with them can be daunting. Mastering PowerShell Scripting takes away the fear and helps you navigate through PowerShell's capabilities. This extensively revised edition includes new chapters on debugging and troubleshooting and creating GUIs (online chapter). Learn the new features of PowerShell 7.1 by working with parameters, objects, and .NET classes from within PowerShell 7.1. This comprehensive guide starts with the basics before moving on to advanced topics, including asynchronous processing, desired state configuration, using more complex scripts and filters, debugging issues, and error-handling techniques. Explore how to efficiently manage substantial amounts of data and interact with other services using PowerShell 7.1. This book will help you to make the most of PowerShell's automation features, using different methods to parse data, manipulate regular expressions, and work with Windows Management Instrumentation (WMI). What you will learn: Optimize code with functions, switches, and looping structures. Test and debug your scripts as well as raising and catching errors. Work with objects and operators to test and manipulate data. Parse and manipulate different data types. Use jobs, runspaces, and runspace pools to run code asynchronously. Write .NET classes with ease within PowerShell. Create and implement regular expressions in PowerShell scripts. Make use of advanced techniques to define and restrict the behavior of parameters. Who this book is for: This book is for system administrators who want to automate and speed up their processes using PowerShell and Windows PowerShell. You'll need to know the basics of operating systems, but beginners with no prior experience with PowerShell will have no trouble

following along.

C# 6 and .NET Core 1.0: Modern Cross-Platform Development

Create powerful cross-platform applications using C# 6, .NET Core 1.0, ASP.NET Core 1.0, and Visual Studio 2015 About This Book Build modern, cross-platform applications with .NET Core 1.0 Get up-to-speed with C#, and up-to-date with all the latest features of C# 6 Start creating professional web applications with ASP.NET Core 1.0 Who This Book Is For Are you struggling to get started with C#? Or maybe you're interested in the potential of the new cross-platform features that .NET Core can offer? If so, C# 6 and .NET Core 1.0 is the book for you. While you don't need to know any of the latest features of C# or .NET to get started, it would be beneficial if you have some programming experience. What You Will Learn Build cross-platform applications using C# 6 and .NET Core 1.0 Explore ASP.NET Core 1.0 and learn how to create professional web applications Improve your application's performance using multitasking Use Entity Framework Core 1.0 and learn how to build Code-First databases Master object-oriented programming with C# to increase code reuse and efficiency Familiarize yourself with cross-device app development using the Universal Windows Platform and XAML Query and manipulate data using LINQ Protect your data by using encryption and hashing In Detail With the release of .NET Core 1.0, you can now create applications for Mac OS X and Linux, as well as Windows, using the development tools you know and love. C# 6 and .NET Core 1.0 has been divided into three high-impact sections to help start putting these new features to work. First, we'll run you through the basics of C#, as well as object-orient programming, before taking a quick tour through the latest features of C# 6 such as string interpolation for easier variable value output, exception filtering, and how to perform static class imports. We'll also cover both the full-feature, mature .NET Framework and the new, cross-platform .NET Core. After quickly taking you through C# and how .NET works, we'll dive into the internals of the .NET class libraries, covering topics such as performance, monitoring, debugging, internationalization, serialization, and encryption. We'll look at Entity Framework Core 1.0 and how to develop Code-First entity data models, as well as how to use LINQ to query and manipulate that data. The final section will demonstrate the major types of applications that you can build and deploy cross-device and cross-platform. In this section, we'll cover Universal Windows Platform (UWP) apps, web applications, and web services. Lastly, we'll help you build a complete application that can be hosted on all of today's most popular platforms, including Linux and Docker. By the end of the book, you'll be armed with all the knowledge you need to build modern, cross-platform applications using C# and .NET Core. Style and approach This book takes a step-by-step approach and is filled with exciting projects and fascinating theory. It uses three high-impact sections to equip you with all the tools you'll need to build modern, cross-platform applications using C# and .NET Core.

Apps and Services with .NET 7

Bestselling author Mark Price is back to guide you through the coolest and most common technologies a .NET developer should know: Blazor, .NET MAUI, gRPC, GraphQL, SQL Server, Cosmos DB, OData, SignalR, Azure Functions, and more! Purchase of the print or Kindle book includes a free eBook in PDF format. Key Features Build services using a variety of technologies including Web API, OData, gRPC, GraphQL, SignalR, and Azure Functions Learn how to use specialized libraries to improve all aspects of your applications, including performance and localization Leverage .NET MAUI to develop cross-platform desktop and mobile apps with ease Book Description Apps and Services with .NET 7 is for .NET 6 and .NET 7 developers who want to kick their C# and .NET understanding up a gear by learning the practical skills and knowledge they need to build real-world applications and services. It covers specialized libraries that will help you monitor and improve performance, secure your data and applications, and internationalize your code and apps. With chapters that put a variety of technologies into practice, including Web API, OData, gRPC, GraphQL, SignalR, and Azure Functions, this book will give you a broader scope of knowledge than other books that often focus on only a handful of .NET technologies. It covers the latest developments, libraries, and technologies that will help keep you up to date. You'll also leverage .NET MAUI to develop mobile apps for iOS and Android as well as desktop apps for Windows and macOS. What you will learn Learn how to

build more efficient, secure, and scalable apps and servicesLeverage specialized .NET libraries to improve your applicationsImplement popular third-party libraries like Serilog and FluentValidationBuild cross-platform apps with .NET MAUI and integrate with native mobile featuresGet familiar with a variety of technologies for implementing services like gRPC and GraphQLExplore Blazor WebAssembly and use open-source Blazor component librariesStore and manage data locally and in the cloud with SQL Server and Cosmos DBWho this book is for This book is for .NET developers interested in exploring more specialized libraries and implementation fundamentals behind building services and apps. You'll need to know your way around .NET and C# quite well before you can dive in, so if you want to work your way up to this book, pick up Mark's other .NET book, C# 11 and .NET 7 – Modern Cross-Platform Development Fundamentals, first.

Windows 10 for the Internet of Things

Manage and control Internet-connected devices from Windows and Raspberry Pi. Master the Windows IoT Core application programming interface and feature set to develop Internet of Things applications on the Raspberry Pi using your Windows and .NET programming skills. Windows 10 for the Internet of Things presents a set of example projects covering a wide range of techniques designed specifically to jump start your own Internet of Things creativity. You'll learn everything you need to know about Windows IoT Core in order to develop Windows and IoT applications that run on the Pi. Microsoft's release of Windows IoT Core is groundbreaking in how it makes the Raspberry Pi and Internet of Things programming accessible to Windows developers. Now it's possible to develop for the Raspberry Pi using native Windows and all the related programming skills that Windows programmers have learned from developing desktop and mobile applications.Windows 10 becomes a gateway by which many can experience hardware and Internet of Things development who may never have had the opportunity otherwise. However, even savvy Windows programmers require help to get started with hardware development. This book, Windows 10 for the Internet of Things, provides just the help you need to get started in putting your Windows skills to use in a burgeoning new world of development for small devices that are ubiquitously connected to the Internet. What You Will Learn Learn Windows 10 on the Raspberry Pi Read sensor data and control actuators Connect to and transmit data into the cloud Remotely control your devices from any web browser Develop IOT applications under Windows using C# and Python Store your IOT data in a database for later analysis Who This Book Is For Developers and enthusiasts wanting to take their skills in Windows development and jump on board one of the largest and fastest growing trends to hit the technology world in years – that of connecting everyday devices to the Internet. This book shows how to develop for Microsoft's operating-system for devices, Windows 10 IoT Core. Readers learn to develop in C# and Python using Visual Studio, for deployment on devices such as the Raspberry Pi and the Arduino.

Arduino Programming with .NET and Sketch

Leverage .NET and Sketch in your Arduino development implementation and integrate it into your .NET program. There are many Arduino models and compatible shields that can be used in Arduino boards. Integrating between an Arduino platform and .NET technology or Sketch can produce more advantages. Arduino Programming using .NET and Sketch shows readers how to do so with practical Arduino projects, such as preparing a development environment, performing sensing and actuating with external devices, implementing Windows Remote Arduino and building a simple IoT program. Use this quick reference to learn the basics of the Arduino platform for multiple models and start your Arduino programming in .NET and Sketch today. What You'll Learn: Learn the basics of the Arduino platform Prepare and set up an Arduino development environment Develop an Arduino program using .NET and Sketch Implement Windows Remote Arduino Build a simple IoT program Who This Book Is For: .NET and Sketch developers who want to learn Arduino programming.

C#: A Beginner's Tutorial, Second Edition

Designed as a beginner's tutorial to the latest version of C#, this informative guide discusses the most

important features of the language and teaches how to use .NET Framework. Written with clarity and readability in mind, it introduces important programming concepts and explains the process of building real-world applications, both desktop and web-based. With the most comprehensive coverage possible in a book for beginners, it includes such topics as C# language syntax, object-oriented programming, working with numbers and dates, error handling, input output, generics, annotations, LINQ, lambda expressions and WPF.

Learn Modern C++ and STL

The purpose of this book is to learn modern C-. The Modern C is C-11, 14, 17 and 20. Organized in themed chapters, this book allows beginners to edsend the language even by reading the chapters in a different order from that proposed by the author. It is the result of several years of work at the ISO standardization committee level, and the following versions, namely C-14, 17 and 20, are only the result of this effort. It should be noted, however, that C-20 is still partially implemented by market compilers, whether It's Microsoft's Visual C, Clang (LLVM) or CCG. On the cloud, everything is Server oriented and Linux reigns supreme. Whether it's multithread or asynchronous programming, with Docker or Azure, it's all about high-availability or hyper-scalabl environments.

Seven Mobile Apps in Seven Weeks

Answer the question \"Can we build this for ALL the devices?\" with a resounding YES. Learn how to build apps using seven different platforms: Mobile Web, iOS, Android, Windows, RubyMotion, React Native, and Xamarin. Find out which cross-platform solution makes the most sense for your needs, whether you're new to mobile or an experienced developer expanding your options. Start covering all of the mobile world today. Understanding the idioms, patterns, and quirks of the modern mobile platforms gives you the power to choose how you develop. Over seven weeks you'll build seven different mobile apps using seven different tools. You'll start out with Mobile Web; develop native apps on iOS, Android, and Windows; and finish by building apps for multiple operating systems using the native cross-platform solutions RubyMotion, React Native, and Xamarin. For each platform, you'll build simple, but non-trivial, apps that consume JSON data, run on multiple screen sizes, or store local data. You'll see how to test, how to build views, and how to structure code. You'll find out how much code it's possible to share, how much of the underlying platform you still need to know, and ultimately, you'll get a firm understanding of how to build apps on whichever devices your users prefer. This book gives you enough first-hand experience to weigh the trade-offs when building mobile apps. You'll compare writing apps on one platform versus another and understand the benefits and hidden costs of cross-platform tools. You'll get pragmatic, hands-on experience writing apps in a multi-platform world. What You Need: You'll need a computer and some experience programming. When we cover iOS, you'll need a Mac, and when we cover Windows Phone you'll need a computer with Windows on it. It's helpful if you have access to an iPhone, Android phone, and Windows Phone to run the examples on the devices where mobile apps are ultimately deployed, but the simulators or emulator versions of those phones work great.

C# 10.0 All-in-One For Dummies

Look sharp—learn or refresh your C# skills with the latest version C# is one of the most popular programming languages, and frequent updates help it keep pace as the world of coding changes. You can keep pace too, thanks to C# 10.0 All-in-One For Dummies, where you'll learn the basics of the language itself, how to code in Visual Studio, and how to take advantage of the new features in the latest release. At every stage of your career, you'll need to know the cutting-edge trends and techniques that clients want. This book has your back, with info on object-oriented programming, writing secure code, building web applications, and more. The six standalone mini-books you'll find inside this all-in-one will take you through the changes to C# and the practical applications and dev tools that you need to know. New features covered include records, init only setters, top-level statements, pattern matching enhancements, fit and finish features, and a lot more. Plus, this version is packed with more examples and code snippets, so you can sharply see C#

in action! Learn the very basics of C# programming, even if you have no prior experience Refresh your knowledge of the language and learn how to use the new features in the 10.0 version release Read six mini-books on hot coding topics like object-oriented programming, Visual Studio, and Windows 10 development Enhance your employability and join the 6.5-million-strong community of C# developers You need an easy-to-read C# guide that will help you understand the incoming updates, and this For Dummies reference is it.

C++ Programming in easy steps, 7th edition

C++ Programming in easy steps, 7th edition is a perfect companion for anyone wanting to master key concepts of one of the most powerful programming languages. Using examples and colorized source code, it'll walk you through each aspect of C++ with clarity. · Set up and Get Started. Install a free C++ compiler and download the free source code. · Learn by Doing. From variables and arithmetic to strings, data storage, and conditional logic – you'll master the building blocks of C++ with clear, hands-on examples. · Build Real Understanding. Dive into Object-Oriented Programming (OOP) and discover how to structure your code like a pro. · Create Graphical Programs. Learn to develop visually rich applications using a modern IDE like Microsoft Visual Studio – illustrated inside! For total beginners and for those wanting to brush up their skills effectively and efficiently! Table of Contents 1. Getting started 2. Performing operations 3. Making statements 4. Handling strings 5. Reading and writing files 6. Pointing to data 7. Creating classes and objects 8. Harnessing polymorphism 9. Processing macros 10. Building apps

Beginning C# 6 Programming with Visual Studio 2015

Get started with Visual C# programming with this great beginner's guide Beginning C# 6 Programming with Visual Studio 2015 provides step-by-step directions for programming with C# in the .NET framework. Beginning with programming essentials, such as variables, flow control, and object-oriented programming, this authoritative text moves into more complicated topics, such as web and Windows programming and data access within both database and XML environments. After your introduction to each of the chapters, you are invited to apply your newfound knowledge in Try it Out sections, which reinforce learning and help you understand the practical applications of the new concepts you have explored. Through this approach, you can write useful programming code following each of the steps that you explore in this essential text. Discover the basics of programming with C#, such as variables, expressions, flow control, and functions Discuss how to keep your program running smoothly through debugging and error handling Understand how to navigate your way through key programming elements, such as classes, class members, collections, comparisons, and conversions Explore object-oriented programming, web programming, and Windows programming Beginning C# 6 Programming with Visual Studio 2015 is a fundamental resource for any programmers who are new to the C# language.

Windows Application Development Cookbook

Discover over 125 solution-based recipes to help you build applications for smartphones, tablets, and desktops About This Book Learn to build applications for Windows 10, the latest Windows version Develop your applications to be compatible with smartphones, tablets, and desktops This guide is packed with recipes covering major solutions to day-to-day problems faced by Windows programmers Who This Book Is For The book is dedicated to programmers with various experience of developing applications for Windows-based smartphones, tablets, and desktops—even beginners can find suitable content. What You Will Learn Start developing universal applications for Windows 10 Design user interface in the XAML language Use the MVVM design pattern with data binding Store data in files and in a database Use multimedia content and animations Capture data from built-in sensors Handle various Internet-based scenarios Test the application and submit it to the Windows Store In Detail Need to ensure you can always create the best Windows apps regardless of platform? What you need are solutions to the biggest issues you can face, so you can always ensure you're making the right choices and creating the best apps you can. The book starts with recipes that will help you set up the integrated development environment before you go ahead and design the user

interface. You will learn how to use the MVVM design pattern together with data binding, as well as how to work with data in different file formats. Moving on, you will explore techniques to add animations and graphics to your application, and enable your solution to work with multimedia content. You will also see how to use sensors, such as an accelerometer and a compass, as well as obtain the current GPS location. You will make your application ready to work with Internet-based scenarios, such as composing e-mails or downloading files, before finally testing the project and submitting it to the Windows Store. By the end of the book, you will have a market-ready application compatible across different Windows devices, including smartphones, tablets, and desktops. **Style and approach** This quick-start book takes a cookbook format with recipes covering more than 125 solutions to help you create and build applications for Windows 10. The examples presented in the book use the free integrated development environment. A supporting set of codes that present solutions to problems described in particular chapters is available as well.

Understanding Game Application Development

Learn to build a simple data-driven mobile game application using the power of Xamarin.Forms, ASP.NET, the Web API, and SignalR with this short book. In it you will build a cross-platform mobile application that targets both iOS and Android, connect your app with your database using Entity Framework, and implement real-time syncing functionality using SignalR. Understanding Game Application Development starts by giving you an overview of the development tools, an installation guide, and a list of prerequisites. You will learn how to manage application flow, create your workspace, and set up your database. Next, you will see how to access data for handling CRUD operations and define the necessary API endpoints. Further, you will build a mobile application with Xamarin.Forms, both in iOS and in Android. You will also understand the deployment and testing process as well as how to build a real-time leader board using ASP.NET MVC and SignalR. Finally, you will understand how to publish your source code on GitHub from Visual Studio 2017. **What You Will Learn** Understand the basic concept and fundamentals of the technologies used for building the applications Set up your development environment Create a SQL database from scratch Implement a data access layer Define REST service endpoints using the Web API Deploy, test, and debug iOS and Android applications Push your source code to GitHub **Who This Book Is For** .NET developers who want to jump on mobile application development with Xamarin and learn with practical examples.

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