# Universal Windows Apps With XAML And C

# Universal Windows Apps with XAML and C# Unleashed

Full Color: Figures and code appear as they do in Visual Studio. Universal Windows apps are a total gamechanger. You can now write once and deploy your app to any modern PC, tablet, phone, or other Windows device. Suddenly, it's quick and easy to serve new devices and form factors, sharing unified assets ranging from code to styles to user controls. It has never been easier to reach multiple-device markets! Now, the world's #1 expert on Microsoft XAML brings together all the knowledge Windows developers need to build universal apps that adapt smoothly for any device running Windows 8.1, Windows Phone 8.1, or their successors. Drawing on his unsurpassed personal experience and direct input from Microsoft's Windows and Visual Studio teams, Adam Nathan illuminates core development concepts, answers your most important questions, and candidly assesses the technology's strengths and limitations. This full-color guide walks you through every key task involved in building a universal Windows app: layout and input, working with the app model, using advanced controls, leveraging XAML's powerful rich media features, and much more. Detailed information on how to... Quickly build universal, localized apps that exploit the vast global scale of the Windows Store Size, position, and transform elements within layouts that gracefully adapt to different devices Handle input from touch, mouse, pen, keyboard, and any sensor Monetize apps with Windows Store sales, in-app purchases, and advertising Make the most of controls for managing content, items, text, images, media, speech, and more Create efficient 2D vector graphics and animations Use styles, templates, and visual states to redesign controls without losing functionality Bind data sources to simplify data presentation and updates Easily integrate data from apps, users, and networks Support Windows app commands: Search, Share, Print, Play, Project, Settings Use contracts to build apps that cooperate to perform complex tasks Improve the user experience even when your app isn't running

# **Programming Windows Store Apps with C#**

Annotation If you want to build Windows 8 applications for desktops and the forthcoming Microsoft Surface tablet PC, this book will show you how to work with the Metro design language and the Windows RT operating system. You'll learn this new landscape step-by-step, including the minute system details and design specifications necessary to innovate and build a variety of Windows 8 apps. It's ideal for .NET developers who use C?. Throughout the book, you'll follow one app from idea to the Windows Store to understand what's involved in every step of the process. You'll learn how to create in-app purchases, link with social networks, and incorporate the charm bar, which opens the Windows 8 start screen. Get a jump on developers looking to cash in on the demand for Windows 8 apps. Order your copy of Programming Metro-Style Applications with C? today.

# **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 orin a team on Windows 10 applications, and students coming into the world of software

#### Learn WinUI 3.0

A beginner's guide to building Windows applications with WinUI for UWP and desktop applications Key FeaturesCreate modern Windows 10 applications and gain access to UI controls that were previously limited to UWP applicationsDiscover how to modernize your existing Win32 apps with a modern Windows 10 UILearn to embed a single page application (SPA) in a WinUI application with a web framework like BlazorBook 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 learnGet up and running with WinUI and discover how it fits into the landscape of Project Reunion and Windows UI developmentBuild new Windows apps quickly with robust templates Develop testable and maintainable apps using the MVVM patternModernize WPF and WinForms applications with WinUI and XAML IslandsDiscover how to build apps that can target Windows and leverage the power of the webInstall the XAML Controls Gallery sample app and explore available WinUI controlsWho 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.

#### **XAML Unleashed**

Full Color: Figures and code appear as they do in Visual Studio. If you want to write Windows apps with XAML, one person can help you more than anyone else: Adam Nathan. He has built a well-deserved reputation as the world's #1 expert on putting it to work. Now, he's written the definitive, practical XAML tutorial and reference: XAML Unleashed. Nathan answers the questions you're most likely to ask, walks through the tasks you're sure to perform, and helps you avoid problems as you use XAML. You'll learn how to create effective user interfaces for line-of-business apps, consumer apps, reusable controls, or anything else. These techniques will be invaluable whether you're creating universal Windows apps or working with Silverlight or WPF. XAML Unleashed is packed with C# and XAML code examples that are fully colorcoded to match their appearance in Visual Studio--the same approach that has made Nathan's previous Unleashed books so popular. Detailed information on how to... Understand and apply XAML's syntax, namespaces, and keywords Organize controls and other elements in a smooth and intuitive user interface Make the most of XAML's rich controls for content, items, images, text, and media Build exceptionally powerful user and custom controls Master reliable and efficient ways to mix XAML with procedural code Extend XAML with type converters, markup extensions, and other third-party desktop classes Use data binding to link and synchronize controls with in-memory representations of data Leverage XAML's support for binary and logical resources Use styles, templates, and visual states to radically redesign controls without sacrificing their built-in functionality Access the Windows animation library to create stunning theme transitions and animations Build custom panels to enforce consistency in unusual user interfaces Understand

#### **Head First C#**

What will you learn from this book? Dive into C# and create apps, user interfaces, games, and more using this fun and highly visual introduction to C#, .NET Core, and Visual Studio. With this completely updated guide, which covers C# 8.0 and Visual Studio 2019, beginning programmers like you will build a fully functional game in the opening chapter. Then you'll learn how to use classes and object-oriented programming, create 3D games in Unity, and query data with LINQ. And you'll do it all by solving puzzles, doing hands-on exercises, and building real-world applications. By the time you're done, you'll be a solid C# programmer--and you'll have a great time along the way! What's so special about this book? Based on the latest research in cognitive science and learning theory, Head First C# uses a visually rich format to engage your mind rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multisensory learning experience is designed for the way your brain really works.

# **Programming the Windows Runtime by Example**

Master Windows 8.1/Windows Runtime Programming Through 80 Expert Projects This is the most complete, hands-on, solutions-focused guide to programming modern Windows applications with the Windows Runtime. Leading Windows development consultants Jeremy Likness and John Garland present easy-to-adapt C# and XAML example code for more than 80 projects. Their real-world application examples help you apply Windows 8.1's best improvements, including large tiles, the new search control, flyouts, command bars, native WinRT networking, and new deployment and sideloading options. Drawing on their pioneering experience, they illuminate key areas of the Windows Runtime API, offering uniquely detailed coverage of encryption, cloud connectivity, devices, printers, and media integration. You'll find cutting-edge tips and tricks available in no other book. This is an indispensable resource for all intermediate-to-advanced Windows developers, and for any architect building desktop, tablet, or mobile solutions with Microsoft technologies. Its focus on both C# and XAML will make it valuable to millions of Windows developers already familiar with Silverlight, WPF, and/or .NET. Coverage includes • Creating robust app interfaces with the newest XAML controls, including flyouts and command bars • Saving data in a persistent "roaming zone" for syncing across Windows 8.1 devices • Using Visual State Manager (VSM) to build apps that adapt to various device resolutions and orientations • Integrating virtually any form of data into your apps • Connecting with web services, RSS, Atom feeds, and social networks • Securing apps via authentication, encrypting, signing, and single sign-on with Microsoft Account, Facebook, Google, and more • Leveraging Windows 8.1 media enhancements that improve battery life and app performance • Networking more effectively with Windows 8.1's revamped HTTP implementation and new location APIs • Using Tiles and Toasts to keep apps alive and connected, even when they aren't running • Enabling users to send content between devices via NFC tap and send • Ensuring accessibility and globalizing your apps • Efficiently debugging, optimizing, packaging, and deploying your apps • Building sideloadable apps that don't have to be published in Windows Store "This book doesn't just focus on singular concepts, it also provides end-toend perspective on building an app in WinRT. It is one of those essential tools for Windows developers that will help you complete your software goals sooner than without it!" —Tim Heuer, Principal Program Manager Lead, XAML Platform, Microsoft Corporation

# C# 8.0 and .NET Core 3.0 – Modern Cross-Platform Development

Publisher's Note: Microsoft stops supporting .NET Core 3.1 in December 2022. The newer 7th edition of this book is available that covers .NET 7 (end-of-life May 2024) or .NET 6 (end-of-life November 2024), with C# 11 and EF Core 7. Key FeaturesBuild modern, cross-platform applications with .NET Core 3.0Get up to speed with C#, and up to date with all the latest features of C# 8.0Start creating professional web applications with ASP.NET Core 3.0Book Description In C# 8.0 and .NET Core 3.0 – Modern Cross-Platform Development, Fourth 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 new chapters on Content Management Systems (CMS) and machine learning with ML.NET. The book covers all the topics you need. Part 1 teaches the fundamentals of C#, including object-oriented programming, and new C# 8.0 features such as nullable reference types, simplified switch pattern matching, and default interface methods. Part 2 covers the .NET Standard APIs, such as managing and querying data, monitoring and improving performance, working with the filesystem, async streams, serialization, and encryption. Part 3 provides examples of cross-platform applications you can build and deploy, such as web apps using ASP.NET Core or mobile apps using Xamarin. Forms. The book introduces three technologies for building Windows desktop applications including Windows Forms, Windows Presentation Foundation (WPF), and Universal Windows Platform (UWP) apps, as well as web applications, web services, and mobile apps. What you will learnBuild crossplatform applications for Windows, macOS, Linux, iOS, and AndroidExplore application development with C# 8.0 and .NET Core 3.0Explore ASP.NET Core 3.0 and create professional web applicationsLearn objectoriented programming and C# multitaskingQuery and manipulate data using LINQUse Entity Framework Core and work with relational databasesDiscover Windows app development using the Universal Windows Platform and XAMLBuild mobile applications for iOS and Android using Xamarin. Forms Who this book is for Readers with some prior programming experience or with a science, technology, engineering, or mathematics (STEM) background, who want to gain a solid foundation with C# 8.0 and .NET Core 3.0.

#### Windows Runtime via C#

Delve inside the Windows Runtime - and learn best ways to design and build Windows Store apps. Guided by Jeffrey Richter, a recognized expert in Windows and .NET programming, along with principal Windows consultant Maarten van de Bospoort, you'll master essential concepts. And you'll gain practical insights and tips for how to architect, design, optimize, and debug your apps. With this book, you will: Learn how to consume Windows Runtime APIs from C# Understand the principles of architecting Windows Store apps See how to build, deploy, and secure app packages Understand how apps are activated and the process model controlling their execution Study the rich features available when working with files and folders Explore how to transfer, compress, and encrypt data via streams Design apps that give the illusion of running using live tiles, background transfers, and background tasks Share data between apps using the clipboard and the Share charm Get advice for monetizing your apps through the Windows Store About This Book Requires working knowledge of Microsoft .NET Framework, C#, and the Visual Studio IDE Targeted to programmers building Windows Store apps Some chapters also useful to those building desktop apps Technologies Covered Windows 8.1 Microsoft Visual Studio 2013

# **Developing Windows 10 Applications With C#**

Microcontrollers like Arduino provide a great introduction to physical computing, allowing you to design: environment sensors and controls; visual and auditory alerts based on input; and devices comprising the Internet of Things. In Arduino, author Marko Svaljek explains the fundamentals of the Arduino Uno board and how it interacts with common components. This updated and expanded second edition of Book provides a user-friendly introduction to the subject, Taking a clear structural framework, it guides the reader through the subject's core elements. A flowing writing style combines with the use of illustrations and diagrams throughout the text to ensure the reader understands even the most complex of concepts. This succinct and enlightening overview is a required reading for all those interested in the subject. We hope you find this book useful in shaping your future career & Business.

# 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.

# Microsoft Visual C# Step by Step

Your hands-on guide to Microsoft Visual C# fundamentals with Visual Studio 2015 Expand your expertise-and teach yourself the fundamentals of programming with the latest version of Visual C# with Visual Studio 2015. If you are an experienced software developer, you'll get all the guidance, exercises, and code you need to start building responsive, scalable Windows 10 and Universal Windows Platform applications with Visual C#. Discover how to: Quickly start creating Visual C# code and projects with Visual Studio 2015 Work with variables, operators, expressions, and methods Control program flow with decision and iteration statements Build more robust apps with error, exception, and resource management Master the essentials of Visual C# object-oriented programming Use enumerations, structures, generics, collections, indexers, and other advanced features Create in-memory data queries with LINQ query expressions Improve application throughput and response time with asynchronous methods Decouple application logic and event handling Streamline development with new app templates Implement the Model-View-ViewModel (MVVM) pattern Build Universal Windows Platform apps that smoothly adapt to PCs, tablets, and Windows phones Integrate Microsoft Azure cloud databases and RESTful web services About You For software developers who are new to Visual C# or who are upgrading from older versions Readers should have experience with at least one programming language No prior Microsoft .NET or Visual Studio development experience required

#### Professional C# and .NET

Professional C# and .NET: 2021 Edition covers C# 9.X and .NET 5.X, and the improvements in the 2021 releases. It's expected that many developers who held out on upgrading will go directly to these latest versions. Book topics include: • Reflection - updates for .NET Core 5.X, and different behaviors • Visual Studio 2019 - new UI, new templates, editor enhancements • Deployment - Windows 10 deployment updates

• Diagnostics - event log updates • Threads, Tasks, and Synchronization - data flow • Networking - HttpClient (instead of WebClient) • Localization - update Windows 10 localization • Windows Runtime - Windows Runtime updates As with previous editions, the book provides everything the professional developer will need to know about C# and .NET. The book also includes the code examples for download from wrox.com.

#### Mobile App Development with Ionic, Revised Edition

Learn how to build app store-ready hybrid apps with Ionic, the framework built on top of Apache Cordova (formerly PhoneGap) and Angular. This revised guide shows you how to use Ionic's tools and services to develop apps with HTML, CSS, and TypeScript, rather than rely on platform-specific solutions found in Android, iOS, and Windows Universal. Author Chris Griffith takes you step-by-step through Ionic's powerful collection of UI components, and then helps you use it to build three cross-platform mobile apps. Whether you're new to this framework or have been working with Ionic 1, this book is ideal for beginning, intermediate, and advanced web developers. Understand what a hybrid mobile app is, and what comprises a basic Ionic application Learn how Ionic leverages Apache Cordova, Angular, and TypeScript to create native mobile applications Create a Firebase-enabled to-do application that stores data across multiple clients Build a tab-based National Park explorer app with Google Map integration Develop a weather app with the Darksky weather API and Google's GeoCode API Debug and test your app to resolve issues that arise during development Walk through steps for deploying your app to native app stores Learn how Ionic can be used to create Progressive Web Apps

# **Mastering Visual Studio 2017**

A guide to mastering Visual Studio 2017About This Book\* Focus on coding with the new, improved, and powerful tools of VS 2017\* Master improved debugging and unit testing support capabilities\* Accelerate cloud development with the built-in Azure toolsWho This Book Is For.NET Developers who would like to master the new features of VS 2017, and would like to delve into newer areas such as cloud computing, would benefit from this book. Basic knowledge of previous versions of Visual Studio is assumed. What You Will Learn\* Learn what's new in the Visual Studio 2017 IDE, C# 7.0, and how it will help developers to improve their productivity\* Learn the workloads and components of the new installation wizard and how to use the online and offline installer\* Build stunning Windows apps using Windows Presentation Foundation (WPF) and Universal Windows Platform (UWP) tools\* Get familiar with .NET Core and learn how to build apps targeting this new framework\* Explore everything about NuGet packages\* Debug and test your applications using Visual Studio 2017\* Accelerate cloud development with Microsoft Azure\* Integrate Visual Studio with most popular source control repositories, such as TFS and GitHubIn DetailVisual Studio 2017 is the all-new IDE released by Microsoft for developers, targeting Microsoft and other platforms to build stunning Windows and web apps. Learning how to effectively use this technology can enhance your productivity while simplifying your most common tasks, allowing you more time to focus on your project. With this book, you will learn not only what VS2017 offers, but also what it takes to put it to work for your projects. Visual Studio 2017 is packed with improvements that increase productivity, and this book will get you started with the new features introduced in Visual Studio 2017 IDE and C# 7.0. Next, you will learn to use XAML tools to build classic WPF apps, and UWP tools to build apps targeting Windows 10. Later, you will learn about .NET Core and then explore NuGet, the package manager for the Microsoft development platform. Then, you will familiarize yourself with the debugging and live unit testing techniques that comes with the IDE. Finally, you'll adapt Microsoft's implementation of cloud computing with Azure, and the Visual Studio integration with Source Control repositories. Style and approach This comprehensive guide covers the advanced features of Visual Studio 2017, and communicates them through a practical approach to explore the underlying concepts of how, when, and why to use it.

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.

# **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 applications Understand 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.

# **Programming C#8.0**

C# is undeniably one of the most versatile programming languages available to engineers today. With this comprehensive guide, you'll learn just how powerful the combination of C# and .NET can be. Author Ian Griffiths guides you through C# 8.0 fundamentals and techniques for building cloud, web, and desktop applications. Designed for experienced programmers, this book provides many code examples to help you work with the nuts and bolts of C#, such as generics, LINQ, and asynchronous programming features. You'll get up to speed on .NET Core and the latest C# 8.0 additions, including asynchronous streams, nullable references, pattern matching, default interface implementation, ranges and new indexing syntax, and changes in the .NET tool chain. Discover how C# supports fundamental coding features, such as classes, other custom types, collections, and error handling Learn how to write high-performance memory-efficient code with .NET Core's Span and Memory types Query and process diverse data sources, such as in-memory object models, databases, data streams, and XML documents with LINQ Use .NET's multithreading features to exploit your computer's parallel processing capabilities Learn how asynchronous language features can help improve application responsiveness and scalability

#### 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.

### 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.

# 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-tospeed 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 crossplatform 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.

#### **Windows Presentation Foundation Development Cookbook**

Gain comprehensive insight into WPF mechanics and capabilities. Key Features Gain a strong foundation in WPF features and patterns Leverage the MVVM pattern to build decoupled, maintainable apps Increase efficiency through Performance tuning and UI automation Book Description Windows Presentation

Foundation (WPF) is Microsoft's development tool for building rich Windows client user experiences that incorporate UIs, media, and documents. With the updates in .NET 4.7, Visual Studio 2017, C# 7, and .NET Standard 2.0, WPF has taken giant strides and is now easier than ever for developers to use. If you want to get an in-depth view of WPF mechanics and capabilities, then this book is for you. The book begins by teaching you about the fundamentals of WPF and then quickly shows you the standard controls and the layout options. It teaches you about data bindings and how to utilize resources and the MVVM pattern to maintain a clean and reusable structure in your code. After this, you will explore the animation capabilities of WPF and see how they integrate with other mechanisms. Towards the end of the book, you will learn about WCF services and explore WPF's support for debugging and asynchronous operations. By the end of the book, you will have a deep understanding of WPF and will know how to build resilient applications. What you will learn Understand the fundamentals of WPF Explore the major controls and manage element layout Implement data binding Create custom elements that lead to a particular implementation path Customize controls, styles, and templates in XAML Leverage the MVVM pattern to maintain a clean and reusable structure in your code Master practical animations Integrate WCF services in a WPF application Implement WPFs support for debugging and asynchronous operations Who this book is for The book is intended for developers who are relatively new to WPF (Windows Presentation Foundation), or those who have been working with WPF for some time, but want to get a deeper understanding of its foundation and concepts to gain practical knowledge. Basic knowledge of C# and Visual Studio is assumed.

#### Microsoft Visual Studio 2015 Unleashed

Microsoft Visual Studio 2015 empowers you to write next-generation applications for any modern environment: mobile, web, cloud, universal Windows 10/8.x, database, and beyond. This end-to-end deep dive will help working developers squeeze maximum productivity out of Microsoft's powerful new toolset. The authors combine authoritative and detailed information about Microsoft's latest IDE, with extensive insights and best practices drawn from decades of development experience. Developers will quickly get comfortable with Visual Studio 2015's updated interface, master its new capabilities, leverage its extensive new support for open standards, and discover multiple opportunities to leverage its .NET 4.6 platform and language improvements. By focusing entirely on Visual Studio 2015 Professional, the authors go deeper into Microsoft's core product than ever before. You'll find expert coverage of everything from debugging through deploying to Azure, IDE extension and automation through cross-platform mobile development. Throughout, this book's focus is relentlessly practical: how to apply Microsoft's tools to build better software, faster. Detailed information on how to... Master Visual Studio 2015's updated interface and key tools: Solutions, Projects, Browsers, Explorers, Editors, and Designers to improve productivity Develop robust cross-platform mobile apps for Windows, iOS, and Android using Apache Cordova templates for Visual Studio Use the new ASP.NET 5 to build modern web solutions that run on Windows, Mac, or Linux Develop Single Page Applications (SPAs) based on HTML5 and rich client-side JavaScript frameworks such as Knockout, AngularJS, Bootstrap, and more Accelerate cloud development with the Azure SDK, QuickStart templates, and Azure management portal Create mobile service solutions using ASP.NET Web API and WCF Streamline data development across multiple platforms with Entity Framework 7 Develop modern Microsoft Office business applications Perform robust, automated unit testing as you code, increasing your confidence in changes and refactoring Extend the VS 2015 IDE and Code Editor by creating custom, productivityenhancing solutions Download all examples and source code presented in this book from informit.com/title/9780672337369 as they become available.

### **Django Unleashed**

Django is an amazingly powerful system for creating modern, dynamic websites. But programming Django hasn't always been easy—until now. Django Unleashed is your step-by-step, beginner-friendly guide to leveraging Django's core capabilities and its powerful contributed library. You'll learn in the most effective way possible: hands on, by building a fully functional Django website from scratch. You'll even deploy the website to the cloud. As you build your website, expert Django consultant and trainer Andrew Pinkham

reveals how websites operate; how Django makes building websites easy; how to write Python code that leverages its immense capabilities; and how to build solutions that are robust, reliable, and secure. You'll start simply and learn to solve increasingly challenging problems: mastering new features and understanding how Django's architecture shapes their behavior, and gaining essential knowledge for working with any web framework, not just Django.

# The Fundamentals of C/C++ Game Programming

This book is aimed at giving novice coders an understanding of the methods and techniques used in professional games development. Designed to help develop and strengthen problem solving and basic C/C++ skills, it also will help to develop familiarity targeting and using fixed/restricted hardware, which are key skills in console development. It allows the reader to increase their confidence as game programmers by walking them through increasingly involved game concepts, while maintaining the understanding that despite the increased complexity, the core methods remain consistent with the advancement of the technology; the technology only enhances the gaming experience. It also demonstrates underlying principles of game coding in practical step by step ways to increase exposure and confidence in game coding concepts. Key Features: Increases the confidence of new coders by demonstrating how to get things done. Introduces evolving projects to reinforce concepts, both directly and indirectly that the reader will use to produce and then enhance the project. Provides tutorials on Graphics API's that can be easily understood by a novice. Demystifies hardware used to gain new effects without blinding the user to the technical wizardry going on under the system. Gives a sense of achievement to the reader and pushes them toward improvement.

### **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

### Begin to Code with C#

Become a C# programmer—and have fun doing it! Start writing software that solves real problems, even if you have absolutely no programming experience! This friendly, easy, full-color book puts you in total control of your own learning, empowering you to build unique and useful programs. Microsoft has completely reinvented the beginning programmer's tutorial, reflecting deep research into how today's beginners learn, and why other books fall short. Begin to Code with C# is packed with innovations, from its "Snaps" prebuilt operations to its "Make Something Happen" projects. Whether you're a total beginner or you've tried before, this guide will put the power, excitement, and fun of programming where it belongs: in your hands! Easy, friendly, and you're in control! Learn how to... • Get the free tools you need to create modern programs • Work with 150 sample programs that illustrate important concepts • Use the sample programs as starting points for your own programs • Explore exactly what happens when a program runs • Approach program development with a professional perspective • Use powerful productivity shortcuts built into Microsoft Visual Studio • Master classes, interfaces, methods, and other essential concepts • Organize programs so they're easy to construct and improve • Capture and respond to user input • Store and manipulate many types

of real-world data • Create interactive games that are fun to play • Build modern interfaces your users will love • Test and debug your code—and avoid problems in the first place

#### 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.

#### 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 DescriptionExtensively 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 objectoriented 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.

### 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 crossdevice 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 DescriptionVisual 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# 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 indemand programming language skills. The language regularly ranks in the top five among \"most indemand\" 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.

#### 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 FeaturesGain comprehensive software architecture knowledge and the skillset to create fully modular appsSolve scalability problems in web apps using enterprise architecture patternsMaster new developments in front-end architecture and the application of AI for software architectsBook 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 learnUse 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 environments Who 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.

### The Technology Basics Dictionary

The Technology Basics Dictionary: Tech and Computers Simplified is a dictionary for anyone. Whether you're completely inexperienced with technology or you're an experienced technology expert, this dictionary defines complex terms in an easy-to-understand fashion. It was created by Jack Stanley and Erik Gross, the Co-Founders of The Tech Academy. If you want to easily define words you hear every day, this is the dictionary for you! Purchase your copy today! Learn more about The Tech Academy here: learncodinganywhere.com

# **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 ServicesBring Artificial Intelligence capabilities into your mobile applications with Azure AlBook 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 learnImplement native applications for multiple mobile and desktop platformsUnderstand and use various Azure Services with .NET CoreMake 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 serviceExplore 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.

# 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. TABLE OF CONTENTS 1. New Features in C# 11 2. ASP.NET Core Web App 3. ASP.NET Core Web API 4. gRPC Service 5. Blazor WebAssembly 6. SPA with Angular 7. WPF Application 8. WinUI 3 9. .NET MAUI 10. ML.NET

# 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 DescriptionWeb 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.

### **Programming for the Internet of Things**

Rapidly implement Internet of Things solutions Creating programs for the Internet of Things offers you an opportunity to build and program custom devices whose functionality is limited only by your imagination. This book teaches you to do exactly that, with solutions presented in a step-by-step format. When you read this book, you not only learn the fundamentals of device programming, you will also be ready to write code for revolutionizing devices and robots. You don't need to be an expert in low-level programming to benefit from this book. It explains basic concepts and programming techniques before diving into the more complicated topics. Each of the book's chapters and appendices contains a suitable level of detail to help you quickly master device programming. MCP Dawid Borycki shows you how to: Build Universal Windows Platform (UWP) applications that target interconnected embedded devices Design and implement

background apps for seamless integration with hardware components Use intrinsic UWP functionality to detect and track human faces Build artificial auditory, visual, and learning systems Process audio signals to blink LEDs to the rhythm of music Use OpenCV to develop custom image-processing algorithms Communicate with external devices by using serial, USB, Wi-Fi, and AllJoyn connectivity Design and implement applications to control DC, stepper, and servo motors for robotics Use Microsoft Cognitive Services to detect human emotions Build predictive analysis and preventive maintenance systems by using the Azure IoT Suite

#### 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

### 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 Ardunio.

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