

## Xamarin Official Site

It's true: you can build native apps for iOS, Android, and Windows Phone with C# and the .NET Framework—with help from MonoTouch and Mono for Android. This hands-on guide shows you how to reuse one codebase across all three platforms by combining the business logic layer of your C# app with separate, fully native UIs. It's an ideal marriage of platform-specific development and the "write once, run everywhere" philosophy. By building a series of simple applications, you'll experience the advantages of using .NET in mobile development and learn how to write complete apps that access the unique features of today's three most important mobile platforms. Learn the building blocks for building applications on iOS, Android, and Windows Phone Discover how the Mono tools interact with iOS and Android Use several techniques and patterns for maximizing non-UI code reuse Determine how much functionality can go into the shared business logic layer Connect to external resources with .NET's rich networking stack Read and write data using each platform's filesystem and local database Create apps to explore the platforms' location and mapping capabilities

Develop powerful cross-platform applications with Xamarin About This Book Write native cross-platform applications with Xamarin Design user interfaces that can be shared across Android, iOS, and Windows Phone using Xamarin.Forms Practical cross-platform development strategies Who This Book Is For If you are a developer with experience in C# and are just getting into mobile development, this is the book for you. This book will give you a head start with cross-platform development and will be the most useful to developers who have experience with desktop applications or the web. What You Will Learn Apple's MVC design pattern The Android activity lifecycle Share C# code across platforms and call native Objective-C or Java libraries from C# Create a real web service back end in Windows Azure using SQL Azure as database storage Set up third-party libraries such as NuGet and Objective Sharpie in many different ways, and port a desktop .NET library to Xamarin Use Xamarin.Mobile for camera, contacts, and location In Detail Xamarin is a leading cross-platform application development tool used by top companies such as Coca-Cola, Honeywell, and Alaska Airlines to build apps. Version 4 features significant updates to the platform including the release of Xamarin.Forms 2.0 and improvements have been made to the iOS and Android designers. Xamarin was acquired by Microsoft so it is now a part of the Visual Studio family. This book will show you how to build applications for iOS, Android, and Windows. You will be walked through the process of creating an application that comes complete with a back-end web service and native features such as GPS location, camera, push notifications, and other core features. Additionally, you'll learn how to use external libraries with Xamarin and Xamarin.Forms to create user interfaces. This book also provides instructions for Visual Studio and Windows. This edition has been updated with new screenshots and detailed steps to provide you with a holistic overview of the new features in Xamarin 4. Style and approach This book offers a tutorial style approach to teach you the skills required to develop end-to-end cross-platform solutions with Xamarin.

A comprehensive guide for beginners to learn the key concepts, real-world applications, and latest features of C# 10 and .NET 6 with hands-on exercises using Visual Studio 2022 and Visual Studio Code 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 This latest edition is extensively revised to accommodate all the latest features that come with C# 10 and .NET 6. You will 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, serialization, and

encryption. It provides examples of cross-platform apps you can build and deploy, such as websites and services using ASP.NET Core. The best application for learning the C# language constructs and many of the .NET libraries does not distract with unnecessary application code. Hence, the C# and .NET topics covered in Chapters 1 to 12 feature console applications. In Chapters 13 to 17, having mastered the basics, you will build practical applications and services using ASP.NET Core, the Model-View-Controller (MVC) pattern, and Blazor. There are also two new online chapters on using .NET MAUI to build cross-platform apps and building services using a variety of technologies, including Web API, OData, gRPC, GraphQL, SignalR, and Azure Functions. 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 .NET MAUI and XAML Who this book is for This book is for beginners to C# and .NET 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 benefit from this book.

The ultimate preparation guide for the unique CEH exam. The CEH v9: Certified Ethical Hacker Version 9 Study Guide is your ideal companion for CEH v9 exam preparation. This comprehensive, in-depth review of CEH certification requirements is designed to help you internalize critical information using concise, to-the-point explanations and an easy-to-follow approach to the material. Covering all sections of the exam, the discussion highlights essential topics like intrusion detection, DDoS attacks, buffer overflows, and malware creation in detail, and puts the concepts into the context of real-world scenarios. Each chapter is mapped to the corresponding exam objective for easy reference, and the Exam Essentials feature helps you identify areas in need of further study. You also get access to online study tools including chapter review questions, full-length practice exams, hundreds of electronic flashcards, and a glossary of key terms to help you ensure full mastery of the exam material. The Certified Ethical Hacker is one-of-a-kind in the cybersecurity sphere, allowing you to delve into the mind of a hacker for a unique perspective into penetration testing. This guide is your ideal exam preparation resource, with specific coverage of all CEH objectives and plenty of practice material. Review all CEH v9 topics systematically Reinforce critical skills with hands-on exercises Learn how concepts apply in real-world scenarios Identify key proficiencies prior to the exam The CEH certification puts you in professional demand, and satisfies the Department of Defense's 8570 Directive for all Information Assurance government positions. Not only is it a highly-regarded credential, but it's also an expensive exam—making the stakes even higher on exam day. The CEH v9: Certified Ethical Hacker Version 9 Study Guide gives you the intense preparation you need to pass with flying colors.

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.

This brief examines the interaction and synergy between the philosophical concepts embedded in the ideas of Community Oriented Policing (C.O. P.) and urban security aided by technological innovations. While the philosophy of C.O.P. stresses the importance of collaboration between members of the public and its police forces technology that is becoming rapidly integrated in various police tactics creates new legal challenges and operational hurdles. This approach, coined as “Next Generation Community Policing”, is discussed through the chapters of the brief and illustrated with examples from a number of different countries and their approaches to this topic. This Brief will be of interest to researchers in criminology and criminal justice, particularly in police studies, as well as related fields such as urban security planning and sociology.

This book contains selected papers from the 7th International Conference on Information Science and Applications (ICISA 2016) and provides a snapshot of the latest issues encountered in technical convergence and convergences of security technology. It explores how information science is core to most current research, industrial and commercial activities and consists of contributions covering topics including Ubiquitous Computing, Networks and Information Systems, Multimedia and Visualization, Middleware and Operating Systems, Security and Privacy, Data Mining and Artificial Intelligence, Software Engineering, and Web Technology. The contributions describe the most recent developments in information technology and ideas, applications and problems related to technology convergence, illustrated through case studies, and reviews converging existing security techniques. Through this volume, readers will gain an understanding of the current state-of-the-art information strategies and technologies of convergence security. The intended readers are researchers in academia, industry and other research institutes focusing on information science and technology.

pcDuino is a mini PC platform that runs PC like OS such as Ubuntu and Android ICS. This book helps you to get started with pcDuino3. The following is highlight topics: \* Preparing development \* Basic configuration for Ubuntu NAND Linux \* pcDuino3 Programming Language: C/C++, Python, Java, .NET Mono (C#), Node.js \* Deploying LAMP (Linux, Apache, MySQL and PHP) \* Working with Arduino IDE Software \* pcDuino3 I/O Programming using Python \* Serial Debugging on pcDuino3 \* Working with XBee IEEE 802.15.4 \* Reflashing Ubuntu NAND Several code samples are provided to illustrate how to work with pcDuino3.

Creating Cross-Platform C# Applications with Uno shows you how the Uno Platform helps developers familiar with developing Windows apps build applications for all operating systems and browsers. By learning how to develop apps for various business scenarios, you'll gain the confidence and knowledge needed to create your own cross-platform app.

Use Visual Studio App Center with Xamarin Forms to set up a DevOps CI/CD pipeline, set up your mobile builds on either iOS or Android, set up Android and Apple certificates and provisioning profiles, distribute your app to your developers and testers, capture analytics and crashes from your users, communicate to your

users with push notifications, and run UI tests on the Microsoft cloud. You will see how to automate and manage the life cycle of your apps through Microsoft's Cloud Service, with a focus on integrating App Center into your Xamarin Forms apps with clear, practical examples. As you follow along with the sample app, you will see how easy it is to configure your builds, to test the sample app on various iOS and Android devices on the App Center cloud, and to distribute your app to real devices. Whether you are a developer on a small team or a startup or an architect in a large organization curious about the benefits of Visual Studio App Center, after finishing this book, you will be confident in setting up App Center on your next mobile project. Come join me on this journey through Visual Studio App Center with Xamarin Forms. What You Will Learn Create a DevOps CI/CD pipeline for your mobile app on both iOS and Android devices Save money without buying multiple iOS and Android devices and instead run cloud UI tests Stay informed about build successes and failures by integrating App Center with Slack Set up groups and add team members to your groups on App Center Distribute your app to your team on either iOS or Android devices Capture important user events in your code and report to App Center Give a friendly user experience by handling crashes gracefully and reporting to App Center Keep and analyze your user's data on Azure by setting up automatic data export to Azure Communicate with your users using iOS and Android notification services from App Center Give your users a better experience by sending silent push notifications Include custom data in your push notifications Who This Book Is For Xamarin Forms mobile developers with previous experience using the Xamarin framework.

There is a dearth of good books for reference purpose, for the aspirants of Computer Sc. At degree level examinations. Hence, this book, A work of worth to say the least .This Text book is designed to serve as a guide for all the aspirants ready to appear in B.C.A. examinations .It is strictly in accordance with Jammu University Syllabus.

Use this in-depth guide to correctly design benchmarks, measure key performance metrics of .NET applications, and analyze results. This book presents dozens of case studies to help you understand complicated benchmarking topics. You will avoid common pitfalls, control the accuracy of your measurements, and improve performance of your software. Author Andrey Akinshin has maintained BenchmarkDotNet (the most popular .NET library for benchmarking) for five years and covers common mistakes that developers usually make in their benchmarks. This book includes not only .NET-specific content but also essential knowledge about performance measurements which can be applied to any language or platform (common benchmarking methodology, statistics, and low-level features of modern hardware). What You'll Learn Be aware of the best practices for writing benchmarks and performance tests Avoid the common benchmarking pitfalls Know the hardware and software factors that affect application performance Analyze performance measurements

Who This Book Is For .NET developers concerned with the performance of their applications

Transform your Raspberry Pi into a multi-purpose web server that supports your entire multimedia world with this practical and accessible tutorial! About This Book Host websites, games, and even stream HD videos with the impressive power of Raspberry Pi 2 Get to grips with embedded programming by turning your Pi into the cloud server that can be used to power Internet of Things projects Make the Raspberry Pi 2 the center of your latest tech experiments and discover how it can manage and host resources Who This Book Is For Seeking inspiration for some new tech projects? Want to get more from your Raspberry Pi? This book has been created especially for you! What You Will Learn Host your Raspberry Pi as a web server using the minimum power resources Connect your Pi to the Internet and perform network benchmarking Explore the cross-platform features of the Pi as you run Python, Node.JS, ASP.NET, and PHP all in one place Share files over the Internet using your Pi as a file server Turn your Pi into a game server, host and engage into playing Enjoy live HD video streaming and exclusive real-time text overlays In Detail There's no end to what you can do with a Raspberry Pi – it makes a huge range of tech projects possible. This book shows you how to transform it into a multipurpose web server, able to store and manage resources that lets you build some truly innovative and impressive computing creations. You'll learn how to use your Raspberry Pi 2 to host a website using a range of different languages, host a game server, store files, and run everything from a media center to a cloud network. If you want to take control of your technological world, start building your own server and find out what's possible with the Raspberry Pi microcomputer. Begin by getting your Pi set up – follow each step as the book shows you how to prepare a network and configure the additional features that you'll need to build your projects. Once you've done this you'll dig a little deeper and set up your pi as a file server, making sure it's built for speed using a range of different tools, including Python, Node.js and ASP.NET. Following this the book shows you how to extend your server to allow you to host games, and stream live HD video before customizing it even further to create a fully-fledged media center. It doesn't stop there however – the book then dives into the exciting world of the Internet of Things (IoT). You'll learn how to install Windows IoT onto your Raspberry Pi, the operating system that's driving embedded software projects all around the world. Once you've done this you'll be ready to explore IoT further, as the book shows you how to use your device to host a cloud network that can form the basis of a wider IoT project. Style and approach Packed with plenty of practical examples that walk you through a number of Raspberry Pi projects, this book is an accessible journey into embedded computing and Internet of Things.

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 2.0Who This Book Is ForThis 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# 8In DetailC# 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 approachThis 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.

Understanding Game Application DevelopmentWith Xamarin.Forms and ASP.NETAppress

This phenomenal book makes the process of creating your own Apps a breeze. Christine and Avinash start off with a unique transformational hands-on learning experience with the reader by guiding them step by step using a gamified environment unique to the examples used in this book. All you need is an Android Device (A Phone or Tablet or even a Computer) and the rest is left up to

your imagination. This extraordinary book introduces you to App Inventor, a powerful Cloud-Based Visual Block Coding Environment that lets anyone build Mobile Apps instantaneously. Learn App Inventor basics using a Micro Learning approach with this step-by-step guide to building hours of fun filled projects for kids and adults alike. Build a Puppy App and see a Sheltie Puppy 'Barking' every time you touch the screen or shake your phone; Build a game of TIC-TAC-TOE and other 3D titles including 3D Pong; Create a Calculator App to show off to your friends; and Build an amazing Selfie App and sell it Online to Monetize on Google Play to start Building Your Zillion \$\$\$ App Empire! The second half of this book features a primer on: HTML 5; CSS 3; jQuery; and JavaScript for the Mobile Apps platform. It helps the reader to understand the fundamentals of the App building process along with digesting small but unique computing concepts. Building your Zillion \$\$\$ App Empire makes an excellent text for beginners and experienced Appreneurs of the App Ecosystem: - Make a Selfie App to take your pictures to the next level; - Create a TODO App and store your routine information on your phone; - Design Gaming Apps with 2D/3D Graphics and Animation using the Canvas Component; - Build a Tic-Tac-Toe App using Bluetooth and other Network Components; - Create Apps that help people during the Covid-19 Pandemic; - Create Event Driven Apps using Custom Animations and Multiple Screens; and - Build Location-Aware and Internet of Things (IoT) enabled Apps with your phone sensors; and store information on Google Drive to develop IoT and Internet Rich Apps. "This is an amazing text for sophomore, high school and university students alike for building Mobile Apps for all age groups. My students loved the examples especially building the Hello Alex App (featuring a Puppy Barking when the phone is shaken) which was extended into building their own creative apps like a Talking Parrot and using a Mirror for Selfie Apps. Overall, this is a great introductory text on Mobile Apps development for Professionals and Novices!" - Dr Marystella Amaldas, Senior Educator, Singapore International. "It is incredible to see how my students were able to build apps from scratch using this book. Personally, I have worked with the authors and they are truly remarkable at bringing such content to the Japanese and Taiwanese students. A void honestly filled by one's research in one's academic endeavors. Congratulations (Omedetou gozaimasu - ??????????) on a job well done!" - Miki Yuasa, Consultant, Aries Group, India.

If you are a .NET developer who wants to eliminate the problems related to defective third-party web service integration or batch job failures, then this is the book for you. It is also perfect for those of you who are new to NServiceBus and service-oriented architecture and would like to learn how you can streamline all of your development efforts.

Build web applications in Microsoft .NET that run in any modern browser, helping you to transfer your .NET experience and skills to a new environment and build browser-based applications using a robust and type-safe language and runtime. Developing a web site with rich client-side behavior means most developers need

to learn a transpiled language like JavaScript or TypeScript. But today you can also develop rich browser applications using the .NET runtime and C# using Blazor. With Blazor you can use all that experience you have amassed over the years, and can use thousands of already existing libraries, right in the browser. Blazor Revealed will allow you to create a rich web site experience in no time. You will learn how to build user interfaces, and present data to a user for display and modification, capturing the user's changes via data binding. The book shows you how to access a rich library of .NET functionality such as a component model for building a composable user interface, including how to develop reusable components that can be used across many pages and web sites. Also covered is data exchange with a server, giving you access to microservices and database services. Blazor provides a fresh take on web development by eliminating the need for you to learn different languages and frameworks for client- and server-side development. Blazor allows C# and .NET to be used on all sides, providing a robust feature set that is well suited toward scalable, enterprise-level applications. Blazor Revealed gets you started in using this important new toolkit for web application development.

**What You'll Learn**

- Build user interfaces and display data for users to edit
- Capture the user's changes via data binding
- Transfer data back and forth between server and client
- Communicate with microservices and database services
- Develop reusable components and assemble them into bigger components
- Use routing to build single page applications (SPAs)
- Build Blazor libraries that are reusable across applications

**Who This Book Is For**

Experienced .NET developers who want to apply their existing skills to building professional quality, client-side web applications that run in any browser. The book is for web developers who want to step away from JavaScript and its complexities, and instead use a proven technology (.NET) that is robust toward creating enterprise-quality applications that scale and are reliable and that provide good user experience. The book is for intermediate to advanced .NET web developers with no experience using Blazor.

Comprehensive, interactive exam preparation and so much more

**The AWS Certified SysOps Administrator Official Study Guide: Associate Exam** is a comprehensive exam preparation resource. This book bridges the gap between exam preparation and real-world readiness, covering exam objectives while guiding you through hands-on exercises based on situations you'll likely encounter as an AWS Certified SysOps Administrator. From deployment, management, and operations to migration, data flow, cost control, and beyond, this guide will help you internalize the processes and best practices associated with AWS. The Sybex interactive online study environment gives you access to invaluable preparation aids, including an assessment test that helps you focus your study on areas most in need of review, and chapter tests to help you gauge your mastery of the material. Electronic flashcards make it easy to study anytime, anywhere, and a bonus practice exam gives you a sneak preview so you know what to expect on exam day. Cloud computing offers businesses a cost-effective,

instantly scalable IT infrastructure. The AWS Certified SysOps Administrator - Associate credential shows that you have technical expertise in deployment, management, and operations on AWS. Study exam objectives Gain practical experience with hands-on exercises Apply your skills to real-world scenarios Test your understanding with challenging review questions Earning your AWS Certification is much more than just passing an exam—you must be able to perform the duties expected of an AWS Certified SysOps Administrator in a real-world setting. This book does more than coach you through the test: it trains you in the tools, procedures, and thought processes to get the job done well. If you're serious about validating your expertise and working at a higher level, the AWS Certified SysOps Administrator Official Study Guide: Associate Exam is the resource you've been seeking.

A comprehensive guide for beginners to learn the key concepts, real-world applications, and latest features of C# 9 and .NET 5 with hands-on exercises using VS Code 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 description In 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. 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.

Learn everything you need to set up a full-featured, automated pipeline for Xamarin development and deployment. Automate everything from the build step through to deployment and delivery to your customer. If you thought this level of automation could be achieved only by large companies with generous funding, think again! You as a single developer, or working in a small team or company, can automate your processes to punch heavier than your weight. What's more, you can achieve this level of automation completely for free! This hands-on guide takes you step-by-step from setting up your first automated build all the way to integrated unit testing, and finally through to delivering a high-quality app to your testers and end users. The automation presented in this book saves a lot of frustration and recurring work, providing you more time to focus on building the robust and compelling apps that delight your customers and keep you steps ahead of the competition. Not only does this book teach how to get a grip on consistent quality, but it covers the use of HockeyApp to track events and usage, and to report errors and anomalies back to home base for developers to investigate. Many times it's possible to detect and fix errors before a user even notices they are there. This book: Teaches the necessity of an automated development pipeline Helps you set up an automated pipeline for Xamarin development Integrates testing (on physical devices!) to ensure high-quality apps What You'll Learn Why you want an automated development pipeline Obtain and configure the automated tooling Continuously integrate your apps Run automated unit tests Push updates to your customers Monitor and detect errors without user intervention Who This Book Is For App developers looking for ways to ensure consistent quality of work and wanting to know how their apps are doing in actual use by customers

This book covers a wide range of important topics including but not limited to Technology Trends, Computing, Artificial Intelligence, Machine Vision, Communication, Security, e-Learning, and Ambient Intelligence and their applications to the real world. The sixth Future Technologies Conference 2021 was organized virtually and received a total of 531 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world. After a double-blind peer review process, 191 submissions have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. We hope that readers find the book interesting, exciting, and inspiring; it provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

Learn how to use the popular MVVM Light development framework with a focus

on reliable, maintainable code that can be deployed across any of the .NET-supported mobile platforms. Clear examples are provided of the advantages of the MVVM platform along with step-by-step demonstrations of how to create applications at different levels of complexity. Application development is covered for iOS, Android, and Windows phone (UWP) using MVVM Light as the central framework. The model-view-view-model (MVVM) pattern is valued by many developers as an excellent way to create sophisticated modern applications. Its clear separation of presentation and business logic produces a clean implementation that promotes speed, scalability, and code reuse in applications with a complex UI. These characteristics have long been highly valued by WPF developers, and now that benefit is available to Xamarin developers, too.

**What You'll Learn**

- Set up and install MVVM Light
- Understand the advantages and disadvantages of MVVM
- Discover why inversion of control is important in MVVM
- Conduct unit testing of MVVM apps
- Convert your existing apps to use MVVM
- Use MVVM Light within a Xamarin Forms app
- Use webservices
- Be introduced to the new .NET 2.0 Standard Class Library and how to use MVVM Light with it
- Build web applications in C# and Microsoft .NET that run in any modern browser.

This second edition is updated to work with the release version of Blazor and covers Blazor's use in creating both server-side and WebAssembly Blazor applications. Developers are able to use all their experience in .NET along with thousands of existing libraries, right in the browser. There is important new coverage in this edition on the new and improved Razor syntax, how to easily validate user input with Blazor validation, and how to build complex interacting components with Cascading Properties and Templated Components. You will learn how to build user interfaces and present data to a user for display and modification, capturing the user's changes via data binding. The book shows you how to access a rich library of .NET functionality such as a component model for building a composable user interface, including how to develop reusable components that can be used across many pages and websites. Also covered is data exchange with a server, giving you access to microservices and database services. Blazor provides a fresh take on web development by eliminating the need for you to learn different languages and frameworks for client- and server-side development. Blazor allows C# and .NET to be used on all sides, providing a robust feature set that is well suited toward scalable, enterprise-level applications. This book gets you started using this important new toolkit for web application development.

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Experienced .NET developers who want to apply their existing skills toward building professional-quality, client-side web applications that run in any browser. The

book is for web developers who want to step away from JavaScript and its complexities, and instead use a proven technology (.NET) that is robust toward creating enterprise-quality applications that scale and are reliable, that provide good user experience.

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.

ASP.NET Core 5 for Beginners is a practical guide for developers for building dynamic and powerful web applications with the ASP.NET Core framework and C#. From basic ASP terminologies to creating a single-page application, and from testing and maintaining the app to deploying it on the cloud, this book covers everything you need to get started.

Develop, test, and deliver fully-featured Android applications using Xamarin

About This Book Build and test multi-view Android applications using Xamarin.Android Work with device capabilities such as location sensors and the camera A progressive, hands-on guide to develop stunning Android applications using Xamarin Who This Book Is For If you are a C# developer who wants to develop Android apps and enhance your existing skill set, then this book is ideal for you. Good working knowledge of C#, .NET, and object-oriented software development is assumed. What You Will Learn Build a multi-view, orientation-aware Android application with navigation Lay out content using the LinearLayout, RelativeLayout, and TableLayout layout managers Use a ListView (AdapterView) and Adapter to build a view that is populated from server data Consume REST web service to perform GET, UPDATE, DELETE operation Use Android SQLite for data persistence and caching Capture the current location of a device, determine the street address, and integrate with the map app Test, debug, and deploy an Android app In Detail Technology trends come and go, but few have generated the excitement, momentum, or long-term impact that mobile computing has. Mobile computing impacts people's lives at work and at home on a daily basis. Many companies and individual developers are looking to become a part of the movement but are unsure how to best utilize their existing skills and assets. The Xamarin suite of products provides new opportunities to those who already have a significant investment in C# development skills and .NET code bases, and would like to enter into this new, exciting world. This example-oriented guide provides a practical approach to quickly learn the fundamentals of Android app development using C# and Xamarin.Android. It will lead you through building an Android app step-by-step with steadily increasing complexity. Beginning with an overview of the Android and Xamarin platforms to provide you with a solid understanding of the underlying platform, we gradually walk through building and testing a Points of Interest Android app using C# and the Xamarin.Android product. You will learn to create ListView and add detail view to your Android application. You will handle application behaviors on orientation changes, before learning the different techniques to manage resources and layouts to support multiple screen sizes. You will then access a SQLite database in a cross-platform way and add location features to your application. Finally, you will add camera integration to your application and deploy your app to the various Android app stores. Style and approach An example-oriented, comprehensive guide to gain an understanding of both the Android and Xamarin platforms. If you are a developer with experience in C# and are just getting into mobile development, this is the book for you. If you have experience with desktop



support, and more. You'll find brand-new coverage of the new Unity desktop, new NoSQL database support and Android mobile development tools, and many other Ubuntu 11.10/12.04 innovations. Whether you're new to Ubuntu or already a power user, you'll turn to this book constantly: for new techniques, new solutions, and new ways to do even more with Ubuntu! Matthew Helmke served from 2006 to 2011 on the Ubuntu Forum Council, providing leadership and oversight of the Ubuntu Forums, and spent two years on the Ubuntu regional membership approval board for Europe, the Middle East, and Africa. He has written about Ubuntu for several magazines and websites, is a lead author of *The Official Ubuntu Book*. He works for The iPlant Collaborative, which is funded by the National Science Foundation and is building cyberinfrastructure for the biological sciences to support the growing use of massive amounts of data and computationally intensive forms of research. Quickly install Ubuntu, configure it, and get your hardware running right Configure and customize the new Unity desktop (or alternatives such as GNOME) Get started with multimedia and productivity applications, including LibreOffice Manage Linux services, users, and software packages Administer and use Ubuntu from the command line Automate tasks and use shell scripting Provide secure remote access Manage kernels and modules Administer file, print, email, proxy, LDAP, and database services (both SQL and NoSQL) Use both Apache and alternative HTTP servers Support and use virtualization Use Ubuntu in cloud environments Learn the basics about popular programming languages including Python, PHP, and Perl, and how to use Ubuntu to develop in them Learn how to get started developing Android mobile devices Ubuntu 11.10 on DVD DVD includes the full Ubuntu 11.10 distribution for Intel x86 computers as well as the complete LibreOffice office suite and hundreds of additional programs and utilities. Free Upgrade! Purchase this book anytime in 2012 and receive a free Ubuntu 12.04 Upgrade Kit by mail (U.S. or Canada only) after Ubuntu 12.04 is released. See inside back cover for details.

Automate the processing of scanned and digital documents by improving accuracy using web-based open and modern intelligent document capture software About This Book Learn how to implement the benefits of intelligent document capture using Ephesoft Enterprise 4 Leverage the power of the open platform to run it as a classic intake capture system to make your current portals or applications more intelligent A practical guide providing examples for optimizing document capture for your business Who This Book Is For This book is intended for information technology professionals interested in installing and configuring Ephesoft Enterprise for their organization, but it is a valuable resource for anyone interested in learning about intelligent document capture. What You Will Learn Discover the benefits of using intelligent document capture in your work place Learn to capture, classify, and separate any type of document Extract important information from your documents Transfer the documents and data into your content management system Customize Ephesoft to meet your

unique business requirements Understand the integration techniques using the Ephesoft web services API Convert your paper archive to electronic records efficiently Automate business processes that depend on documents in paper, fax, or email attachment format Implement distributed capture for mailroom automation In Detail Every organization, public or private, processes documents in various formats, especially paper and fax formats. Processing documents manually is an expensive and time-consuming endeavor. Ephesoft Enterprise is a modern document capture solution that allows an organization to automate the business process. It uses powerful technology to classify and capture the vital information from the document's content. This helps to minimize the time your company spends on reviewing and processing any physical and electronic documents. This book teaches you about document capture in general and implementation of document capture using Ephesoft. Start by learning about document capture and how Ephesoft revolutionized the industry. Progress to a tour of key features, including operator and administrator interfaces and then learn to configure Ephesoft to process your business's specific document types and extract content from those documents. You will also get to know the advanced customization techniques that make Ephesoft accommodate your unique business needs. Finally, the book concludes by teaching you how to embed the classification and extraction functionality using Ephesoft's web services. By the end, you will learn to optimize the processing of your documents, saving your company time and money. Style and approach This is a step-by-step guide on how to configure and use Ephesoft using an accounts payable use case. The book will start with basic techniques and progress to more advanced features that allow you to leverage the power for a modern powerful capture system.

Explore C# and the .NET Core framework to create applications and optimize them with ASP.NET Core 2 Key Features Get to grips with multi-threaded, concurrent, and asynchronous programming in C# and .NET Core Develop modern, cross-platform applications with .NET Core 2.0 and C# 7.0 Create efficient web applications with ASP.NET Core 2. Book Description C# is a widely used programming language, thanks to its easy learning curve, versatility, and support for modern paradigms. The language is used to create desktop apps, background services, web apps, and mobile apps. .NET Core is open source and compatible with Mac OS and Linux. There is no limit to what you can achieve with C# and .NET Core. This Learning Path begins with the basics of C# and object-oriented programming (OOP) and explores features of C#, such as tuples, pattern matching, and out variables. You will understand .NET Standard 2.0 class libraries and ASP.NET Core 2.0, and create professional websites, services, and applications. You will become familiar with mobile app development using Xamarin.Forms and learn to develop high-performing applications by writing optimized code with various profiling techniques. By the end of C# 7 and .NET: Designing Modern Cross-platform Applications, you will have all the knowledge required to build modern, cross-platform apps using C# and .NET. This Learning Path includes content from the following Packt products: C# 7.1 and .NET Core 2.0 - Modern Cross-Platform

Development - Third Edition by Mark J. Price C# 7 and .NET Core 2.0 High Performance by Ovais Mehboob Ahmed Khan What you will learn Explore ASP.NET Core to create professional web applications Master OOP with C# to increase code reusability and efficiency Protect your data using encryption and hashing Measure application performance using BenchmarkDotNet Use design techniques to increase your application's performance Learn memory management techniques in .NET Core Understand tools and techniques to monitor application performance Who this book is for This Learning Path is designed for developers who want to gain a solid foundation in C# and .NET Core, and want to build cross-platform applications. To gain maximum benefit from this Learning Path, you must have basic knowledge of C#.

Master the skills required to steer cross-platform applications from drawing board to app store(s) using Xamarin About This Book Develop your Xamarin development skills with this comprehensive guide on various patterns and features so you can create elegant and high-quality applications Create adaptive user interfaces on separate platforms without compromising the user experience and platform identity Implement application lifecycle management concepts to manage and finalize cross-platform projects and efficiently collaborate with others Who This Book Is For This book is ideal for those who want to take their entry-level Xamarin mobile development skills to the next level to become the go-to person within their organization. To fully understand the patterns and concepts described, you should possess a reasonable level of knowledge about the core elements of Xamarin and cross-platform application development with it. What You Will Learn Configure your environment for cross-platform projects with Xamarin Gain memory management skills to avoid memory leaks and premature code cycles while decreasing the memory print of your applications Employ asynchronous and parallel patterns to execute non-interactive and non-blocking processes Create and use SQLite databases for offline scenarios Integrate network resources with cross-platform applications Design and implement eye-catching and reusable UI components without compromising nativity in mobile applications Manage the application lifecycle of cross-platform development projects Distribute Xamarin applications through public or private channels In Detail The main goal of this book is to equip you with the required know-how to successfully analyze, develop, and manage Xamarin cross-platform projects using the most efficient, robust, and scalable implementation patterns. This book starts with general topics such as memory management, asynchronous programming, local storage, and networking, and later moves onto platform-specific features. During this transition, you will learn about key tools to leverage the patterns described, as well as advanced implementation strategies and features. The book also presents User Interface design and implementation concepts on Android and iOS platforms from a Xamarin and cross-platform perspective, with the goal to create a consistent but native UI experience. Finally, we show you the toolset for application lifecycle management to help you prepare the development pipeline to manage and see cross-platform projects through to public or private release. Style and approach This is a comprehensive guide on various Xamarin features and patterns. Each topic is explained and demonstrated with code samples, which are revised in each section in an iterative manner and analyzed with available diagnostic tools to demonstrate the benefits of different patterns.

Overwhelmed with the options for building mobile apps with SAP UI5? This guide offers

a comprehensive introduction to SAP UI5 mobile apps in Eclipse, SAP Cloud Platform, and Microsoft Visual Studio. Explore how to build business and data-driven applications using different platforms to deploy hybrid applications to multiple devices. Walk through the different environments that can be used with SAP UI5. Review best practices for leveraging the Model View Controller (MVC). Examine the advantages of development in an Eclipse environment, along with how to leverage SAP Mobile SDK and the SAP Gateway. By using detailed examples, tips, and screenshots, the author brings readers quickly up to speed on the fundamentals of building mobile apps: - Introduction to mobile and SAP UI5 development - Steps for building mobile apps in Eclipse, SAP Cloud Platform, and Microsoft Visual Studio - How to deploy apps to multiple devices - Advantages and disadvantages of using different environments

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. This book provides insights into the state of the art of digital cultural heritage using computer graphics, image processing, computer vision, visualization and reconstruction, virtual and augmented reality and serious games. It aims at covering the emergent approaches for digitization and preservation of Cultural Heritage, both in its tangible and intangible facets. Advancements in Digital Cultural Heritage research have

been abundant in recent years covering a wide assortment of topics, ranging from visual data acquisition, pre-processing, classification, analysis and synthesis, 3D modelling and reconstruction, semantics and symbolic representation, metadata description, repository and archiving, to new forms of interactive and personalized presentation, visualization and immersive experience provision via advanced computer graphics, interactive virtual and augmented environments, serious games and digital storytelling. Different aspects pertaining to visual computing with regard to tangible (books, images, paintings, manuscripts, uniforms, maps, artefacts, archaeological sites, monuments) and intangible (e.g. dance and performing arts, folklore, theatrical performances) cultural heritage preservation, documentation, protection and promotion are covered, including rendering and procedural modelling of cultural heritage assets, keyword spotting in old documents, drone mapping and airborne photogrammetry, underwater recording and reconstruction, gamification, visitor engagement, animated storytelling, analysis of choreographic patterns, and many more. The book brings together and targets researchers from the domains of computing, engineering, archaeology and the arts, and aims at underscoring the potential for cross-fertilization and collaboration among these communities.

Quickly learn how to get the most out of the Visual Studio for Mac integrated development environment (IDE). Microsoft has invested heavily to deliver their very best development tools and platforms to other operating systems. Visual Studio for Mac is a powerful developer tool that reinforces Microsoft's "mobile-first", "cloud-first", and "any developer, any platform, any device" strategy. With the author's guided expertise and extensive code samples, you will understand how to leverage the most useful tools in Visual Studio for Mac, the code editor, and the powerful debugger. You also will appreciate the author's guidance on collaborating with other team members using integrated tooling for the Git source control engine. Whether you are a Mac developer interested in cross-platform development or a Windows developer using a Mac, Beginning Visual Studio for Mac will quickly get you up to speed! What You'll Learn Prepare, configure, and debug in the Mac development environment Create cross-platform mobile apps for Android, iOS, and Windows with Xamarin and C# in Visual Studio for Mac Build cross-platform Web applications with .NET Core using Visual Studio for Mac Customize your productive and collaborative development environment Who This Book Is For Software developers using a Mac computer who want to build mobile or web applications that run on multiple operating systems

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