

# Unity In Action Multiplatform Game Development In C With Unity 5

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**Unity 2020 Mobile Game Development** - John P. Doran 2020-08-21

A practical guide on how to use Unity for building cross-platform mobile games and Augmented Reality apps using the latest Unity 2020 toolset  
Key Features>Create, deploy, and monetize captivating and immersive games on Android and iOS platformsTake your games into the real world by adding augmented reality features to your mobile projectsKick-start your mobile game development journey with step-by-step instructions and a demo game projectBook Description Unity 2020 brings a lot of new features that can be harnessed for building powerful games for popular mobile platforms. This updated second edition delves into Unity development, covering the new features of Unity, modern development practices, and augmented reality (AR) for creating an immersive mobile experience. The book takes a step-by-step approach to building an endless runner game using Unity to help you learn the concepts of mobile game development. This new edition also covers AR features and explains how to implement them using ARCore and ARKit with Unity. The book explores the new mobile notification package and helps you add notifications for your games. You'll learn how to add touch gestures and design UI elements that can be used in both landscape and portrait modes at different resolutions. The book then covers the best ways to monetize your games using Unity Ads and in-app purchases before you learn how to integrate your game with various social networks. Next, using Unity's analytics tools, you'll enhance your game by gaining insights into how players like and use your game. Finally, you'll take your games into the real world by implementing AR capabilities and publishing them on both Android and iOS app stores. By the end of this book, you will have learned Unity tools and techniques and be able to use them to build robust cross-platform mobile games. What you will learnDesign responsive user interfaces for your mobile gamesDetect collisions, receive user input, and create player movements for your mobile gamesCreate interesting gameplay elements using inputs from your mobile deviceExplore the mobile notification package in Unity game engine to keep players engagedCreate interactive and visually appealing content for Android and iOS devicesMonetize your game projects using Unity Ads and in-app purchasesWho this book is for If you are a game developer or mobile developer who wants to learn Unity and use it to build mobile games for iOS and Android, then this Unity book is for you. Prior knowledge of C# and Unity will be beneficial but is not mandatory.

**Designing Games** - Tynan Sylvester 2013-01-03

Ready to give your design skills a real boost? This eye-opening book helps you explore the design structure behind most of today's hit video games. You'll learn principles and practices for crafting games that generate emotionally charged experiences—a combination of elegant game mechanics, compelling fiction, and pace that fully immerses players. In clear and approachable prose, design pro Tynan Sylvester also looks at the day-to-day process necessary to keep your project on track, including how to work with a team, and how to avoid creative dead ends. Packed with examples, this book will change your perception of game design. Create game mechanics to trigger a range of emotions and provide a variety of play Explore several options for combining narrative with interactivity Build interactions that let multiplayer gamers get into each other's heads Motivate players through rewards that align with the rest of the game Establish a metaphor vocabulary to help players learn which design aspects are game mechanics Plan, test, and analyze your design through iteration rather than deciding everything up front Learn how your game's market positioning will affect your design

**Mastering Unity 2D Game Development** - Simon Jackson 2014-08-26

If you have C# knowledge but now want to become truly confident in creating fully functional 2D RPG games with Unity, then this book will show you everything you need to know.

*Unity Game Development* - Kathleen Peterson 2020-05

If you don't know anything about programming in general, writing code, writing scripts, or have no idea where to even begin, then this book is perfect for you. If you want to make games and need to learn how to write C# scripts or code, then this book is ideal for you.Unity is a cross-platform development platform initially created for developing games but is now used for a wide range of things such as: architecture, art, children's apps, information management, education, entertainment, marketing, medical, military, physical installations, simulations, training, and many more.Unity takes a lot of the complexities of developing games and similar interactive experiences and looks after them behind the scenes so people can get on with designing and developing their games. These complexities include graphics rendering, world physics and compiling. More advanced users can interact and adapt them as needed but for beginners they need not worry about it.Games in Unity are developed in two halves; the first half -within the Unity editor, and the second half -using code, specifically C#. Unity is bundled with MonoDeveloper Visual Studio 2015 Communityfor writing C#.

**2D Game Development with Unity** - Franz Lanzinger 2020-12-08

This book teaches beginners and aspiring game developers how to develop 2D games with Unity. Thousands of commercial games have been built with Unity. The reader will learn the complete process of 2D game development, step by step. The theory behind each step is fully explained. This book contains numerous color illustrations and access to all source code and companion videos. Key Features: Fully detailed game projects from scratch. Beginners can do the steps and create games right away. No coding experience is necessary. Numerous examples take a raw beginner toward professional coding proficiency in C# and Unity. Includes a thorough introduction to Unity 2020, including 2D game development, prefabs, cameras, animation, character controllers, lighting, and sound. Includes a step-by-step introduction to Unity 2019.3. Extensive coverage of GIMP, Audacity, and MuseScore for the creation of 2D graphics, sound effects, and music. All required software is free to use for any purpose including commercial applications and games. Franz Lanzinger is the owner and chief game developer of Lanzinger Studio, an independent game development and music studio in Sunnyvale, California. He started his career in game programming in 1982 at Atari Games, Inc., where he designed and programmed the classic arcade game Crystal Castles. In 1989, he joined Tengen, where he was a programmer and designer for Ms. Pac-Man and Toobin' on the NES. He co-founded Bitmasters, where he designed and coded games including Rampart and Championship Pool for the NES and SNES, and NCAA Final Four Basketball for the SNES and Sega Genesis. In 1996, he founded Actual Entertainment, publisher and developer of the Gubble video game series. He has a B.Sc. in mathematics from the University of Notre Dame and attended graduate school in mathematics at the University of California at Berkeley. He is a former world record holder on Centipede and Burgertime. He is a professional author, game developer, accompanist, and piano teacher. He is currently working on remaking the original Gubble game in Unity and Blender.

**Unity in Action** - Joesph Hocking 2018-02-28

Summary Manning's bestselling and highly recommended Unity book has been fully revised! Unity in Action, Second Edition teaches you to write and deploy games with the Unity game development platform. You'll master the Unity toolset from the ground up, adding the skills you need to go from application coder to game developer. Foreword by Jesse Schell, author of The Art of Game Design Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Build your next game without sweating the low-level details. The Unity game development platform

handles the heavy lifting, so you can focus on game play, graphics, and user experience. With support for C# programming, a huge ecosystem of production-quality prebuilt assets, and a strong dev community, Unity can get your next great game idea off the drawing board and onto the screen! About the Book Unity in Action, Second Edition teaches you to write and deploy games with Unity. As you explore the many interesting examples, you'll get hands-on practice with Unity's intuitive workflow tools and state-of-the-art rendering engine. This practical guide exposes every aspect of the game dev process, from the initial groundwork to creating custom AI scripts and building easy-to-read UIs. And because you asked for it, this totally revised Second Edition includes a new chapter on building 2D platformers with Unity's expanded 2D toolkit. What's Inside Revised for new best practices, updates, and more! 2D and 3D games Characters that run, jump, and bump into things Connect your games to the internet About the Reader You need to know C# or a similar language. No game development knowledge is assumed. About the Author Joe Hocking is a software engineer and Unity expert specializing in interactive media development. Table of Contents PART 1 - First steps Getting to know Unity Building a demo that puts you in 3D space Adding enemies and projectiles to the 3D game Developing graphics for your game PART 2 - Getting comfortable Building a Memory game using Unity's 2D functionality Creating a basic 2D Platformer Putting a GUI onto a game Creating a third-person 3D game: player movement and animation Adding interactive devices and items within the game PART 3 - Strong finish Connecting your game to the internet Playing audio: sound effects and music Putting the parts together into a complete game Deploying your game to players' devices

*Augmented Reality with Unity AR Foundation* - Jonathan Linowes  
2021-08-16

Explore the world of augmented reality development with the latest features of Unity and step-by-step tutorial-style examples with easy-to-understand explanations Key Features Build functional and interactive augmented reality applications using the Unity 3D game engine Learn to use Unity's XR and AR components, including AR Foundation and other standard Unity features Implement common AR application user experiences needed to build engaging applications Book Description Augmented reality applications allow people to interact meaningfully with the real world through digitally enhanced content. The book starts by helping you set up for AR development, installing the Unity 3D game engine, required packages, and other tools to develop for Android (ARCore) and/or iOS (ARKit) mobile devices. Then we jump right into the building and running AR scenes, learning about AR Foundation components, other Unity features, C# coding, troubleshooting, and testing. We create a framework for building AR applications that manages user interaction modes, user interface panels, and AR onboarding graphics that you will save as a template for reuse in other projects in this book. Using this framework, you will build multiple projects, starting with a virtual photo gallery that lets you place your favorite framed photos on your real-world walls, and interactively edit these virtual objects. Other projects include an educational image tracking app for exploring the solar system, and a fun selfie app to put masks and accessories on your face. The book provides practical advice and best practices that will have you up and running quickly. By the end of this AR book, you will be able to build your own AR applications, engaging your users in new and innovative ways. What you will learn Discover Unity engine features for building AR applications and games Get up to speed with Unity AR Foundation components and the Unity API Build a variety of AR projects using best practices and important AR user experiences Understand the core concepts of augmented reality technology and development for real-world projects Set up your system for AR development and learn to improve your development workflow Create an AR user framework with interaction modes and UI, saved as a template for new projects Who this book is for This augmented reality book is for game developers interested in adding AR capabilities to their games and apps. The book assumes beginner-level knowledge of Unity development and C# programming, familiarity with 3D graphics, and experience in using existing AR applications. Beginner-level experience in developing mobile applications will be helpful to get the most out of this AR Unity book.

*Unity 5.x Cookbook* - Matt Smith 2015-10-05

Over 100 recipes exploring the new and exciting features of Unity 5 to spice up your Unity skillset About This Book Built on the solid foundation of the popular Unity 4.x Cookbook, the recipes in this edition have been completely updated for Unity 5 Features recipes for both 2D and 3D games Provides you with techniques for the new features of Unity 5,

including the new UI system, 2D game development, new Standard Shaders, and the new Audio Mixer Who This Book Is For From beginners to advanced users, from artists to coders, this book is for you and everyone in your team! Programmers can explore multimedia features, and multimedia developers can try their hand at scripting. Basic knowledge and understanding of the Unity platform, game design principles, and programming knowledge in C# is essential. What You Will Learn Immerse players with great audio, utilizing Unity 5's audio features including the new Audio Mixer, ambient sound with Reverb Zones, dynamic soundtracks with Snapshots, and balanced audio via Ducking Create better materials with Unity's new, physically-based, Standard Shader Measure and control time, including pausing the game, displaying clocks and countdown timers, and even implementing "bullet time" effects Improve ambiance through the use of lights and effects such as reflection and light probes Create stylish user interfaces with the new UI system, including power-bars, clock displays, and an extensible inventory system Save and load text and media assets from local or remote sources, publish your game via Unity Cloud, and communicate with websites and their databases to create online scoreboards Discover advanced techniques, including the publisher-subscriber and state patterns, performance bottleneck identification, and methods to maximize game performance and frame rates Control 2D and 3D character movement, and use NavMeshAgents to write NPC and enemy behaviors such as seek, flee, flock, and waypoint path following In Detail Unity 5 is a flexible and intuitive multiplatform game engine that is becoming the industry's de facto standard. Learn to craft your own 2D and 3D computer games by working through core concepts such as animation, audio, shaders, GUI, lights, cameras, and scripting to create your own games with Unity 5. Completely re-written to cover the new features of Unity 5, this book is a great resource for all Unity game developers, from those who have recently started using Unity right up to Unity professionals. The first half of the book focuses on core concepts of 2D game design while the second half focuses on developing 3D game development skills. In the first half, you will discover the new GUI system, the new Audio Mixer, external files, and animating 2D characters in 2D game development. As you progress further, you will familiarize yourself with the new Standard Shaders, the Mecanim system, Cameras, and the new Lighting features to hone your skills towards building 3D games to perfection. Finally, you will learn non-player character control and explore Unity 5's extra features to enhance your 3D game development skills. Style and approach Each chapter first introduces the topic area and explains how the techniques covered can enhance your games. Every recipe provides step-by-step instructions, followed by an explanation of how it all works, and useful additional refinements or alternative approaches. Every required resource and C# script (fully commented) is available to download, enabling you to follow each recipe yourself.

**Mind-Melding Unity and Blender for 3D Game Development** -  
Spencer Grey 2021-12-31

Add Blender to your Unity game development projects to unlock new possibilities and decrease your dependency on third-party creators Key Features Discover how you can enhance your games with Blender Learn how to implement Blender in real-world scenarios Create new or modify existing assets in Blender and import them into your Unity game Book Description Blender is an incredibly powerful, free computer graphics program that provides a world-class, open-source graphics toolset for creating amazing assets in 3D. With Mind-Melding Unity and Blender for 3D Game Development, you'll discover how adding Blender to Unity can help you unlock unlimited new possibilities and reduce your reliance on third parties for creating your game assets. This game development book will broaden your knowledge of Unity and help you to get to grips with Blender's core capabilities for enhancing your games. You'll become familiar with creating new assets and modifying existing assets in Blender as the book shows you how to use the Asset Store and Package Manager to download assets in Unity and then export them to Blender for modification. You'll also learn how to modify existing and create new sci-fi-themed assets for a minigame project. As you advance, the book will guide you through creating 3D model props, scenery, and characters and demonstrate UV mapping and texturing. Additionally, you'll get hands-on with rigging, animation, and C# scripting. By the end of this Unity book, you'll have developed a simple yet exciting mini game with audio and visual effects, and a GUI. More importantly, you'll be ready to apply everything you've learned to your Unity game projects. What you will learn Transform your imagination into 3D scenery, props, and characters using Blender Get to grips with UV unwrapping and texture

models in Blender Understand how to rig and animate models in Blender Animate and script models in Unity for top-down, FPS, and other types of games Find out how you can roundtrip custom assets from Blender to Unity and back Become familiar with the basics of ProBuilder, Timeline, and Cinemachine in Unity Who this book is for This book is for game developers looking to add more skills to their arsenal by learning Blender from the ground up. Beginner-level Unity scene and scripting skills are necessary to get started.

### **Introduction to Game Design, Prototyping, and Development -**

Jeremy Gibson 2015

This hands-on guide covers both game development and design, and both Unity and C#. This guide illuminates the basic tenets of game design and presents a detailed, project-based introduction to game prototyping and development, using both paper and the Unity game engine.

*Oculus Rift in Action* - Alex Benton 2015-08-12

Summary Oculus Rift in Action introduces the powerful Oculus Rift headset and teaches you how to integrate its many features into 3D games and other virtual reality experiences. You'll start by understanding the capabilities of the Rift hardware. Then you'll follow interesting and instantly-relevant examples that walk you through programming real applications using the Oculus SDK. Examples are provided for both using the Oculus C API directly and for using Unity, a popular development and 3D graphics engine, with the Oculus Unity integration package. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Virtual reality has long been the domain of researchers and developers with access to specialized hardware and proprietary tools. With the appearance of the Oculus Rift VR headset, the game has changed. Using standard programming tools and the intuitive Oculus SDKs, you can deliver powerful immersive games, simulations, and other virtual experiences that finally nail the feeling of being in the middle of the action. Oculus Rift in Action teaches you how to create 3D games and other virtual reality experiences for the Oculus Rift. You'll explore the Rift hardware through examples of real applications using the Oculus SDK and both the Oculus C API and the Unity 3D graphics engine. Along the way, you'll get practical guidance on how to use the Rift's sensors to produce fluid VR experiences. Experience with C++, C#, or another OO language is assumed. What's Inside Creating immersive VR Integrating the Rift with the Unity 3D SDK Implementing the mathematics of 3D Avoiding motion-sickness triggers About the Authors Brad Davis is an active VR developer who maintains a great set of example Rift applications on Github. Karen Bryla is a freelance developer and writer. Alex Benton is a lecturer in 3D graphics at the University of Cambridge and a software engineer at Google. Table of Contents PART 1 GETTING STARTED Meet the Oculus Rift PART 2 USING THE OCULUS C API Creating your first Rift interactions Pulling data out of the Rift: working with the head tracker Sending output to the Rift: working with the display Putting it all together: integrating head tracking and 3D rendering Performance and quality PART 3 USING UNITY Unity: creating applications that run on the Rift Unity: tailoring your application for the Rift PART 4 THE VR USER EXPERIENCE UI design for VR Reducing motion sickness and discomfort PART 5 ADVANCED RIFT INTEGRATIONS Using the Rift with Java and Python Case study: a VR shader editor Augmenting virtual reality

*Unity Game Development in 24 Hours, Sams Teach Yourself* - Ben

Tristem 2015-11-16

In just 24 lessons of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 5 game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program, and many other sizzling-hot games! This book's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions.

*Beginning 3D Game Development with Unity* - Sue Blackman 2011-08-18

Beginning 3D Game Development with Unity is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key

game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create casual interactive adventure games in the style of Telltale's Tales of Monkey Island, while also giving you a firm foundation in game logic and design. The first part of the book explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure game—including reusable state management scripts, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games.

*Xamarin in Action* - Jim Bennett 2018-04-27

Summary Xamarin in Action teaches you to build cross-platform mobile apps using Xamarin and C#. You'll explore all the layers of a Xamarin app, from design to deployment. By the end, you'll be able to build a quality, production-ready Xamarin app on iOS and Android from scratch with a high level of code reuse. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Rewriting the same app for iOS and Android is tedious, error-prone, and expensive. Microsoft's Xamarin drastically reduces dev time by reusing most application code—typically 70% or more. The core of your iOS and Android app is shared; you write platform-specific code only for the UI layer. And because Xamarin uses C#, your apps benefit from everything this modern language and the .NET ecosystem have to offer. About the Book Xamarin in Action teaches you to build cross-platform mobile apps using Xamarin and C#. You'll explore all the layers of a Xamarin app, from design to deployment. Xamarin expert Jim Bennett teaches you design practices that maximize code reuse and isolate device-specific code, making it a snap to incorporate the unique features of each OS. What's Inside Understanding MVVM to maximize code reuse and testability Creating cross-platform model and UI logic layers Building device-specific UIs Unit and automated UI testing Preparing apps for publication with user tracking and crash analytics About the Reader Readers should have some experience with C#. Mobile development experience is helpful, but not assumed. About the Author Jim Bennett is a Xamarin MVP, Microsoft MVP, and Senior Cloud Developer Advocate at Microsoft, specializing in Xamarin mobile apps. He's a frequent speaker at events all around the world, including Xamarin user groups and Xamarin and Microsoft conferences. He regularly blogs about Xamarin development at <https://jimbo Bennett.io>. Table of Contents PART 1 - GETTING STARTED WITH XAMARIN Introducing native cross-platform applications with Xamarin Hello MVVM—creating a simple cross-platform app using MVVM MVVM—the model-view-view model design pattern Hello again, MVVM—understanding and enhancing our simple MVVM app What are we (a)waiting for? An introduction to multithreading for Xamarin apps PART 2 - BUILDING APPS Designing MVVM cross-platform apps Building cross-platform models Building cross-platform view models Building simple Android views Building more advanced Android views Building simple iOS views Building more advanced iOS views PART 3 - FROM WORKING CODE TO THE STORE Running mobile apps on physical devices Testing mobile apps using Xamarin UITest Using App Center to build, test, and monitor apps Deploying apps to beta testers and the stores

*Beginning 3D Game Development with Unity 4* - Sue Blackman 2013-08-27

Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create interactive games, ideal in scope for today's casual and mobile markets, while also giving you a firm foundation in game logic and design. The first part of the book

explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure game—including reusable state management scripts, dialogue trees for character interaction, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games. What you'll learn

How to build interactive games that work on a variety of platforms  
Take the tour around Unity user interface fundamentals, scripting and more  
Create a test environment and gain control over functionality, cursor control, action objects, state management, object metadata, message text and more  
What is inventory logic and how to manage it  
How to handle 3D object visibility, effects and other special cases  
How to handle variety of menus and levels in your games development  
How to handle characters, scrollers, and more  
How to create or integrate a story/walkthrough  
How to use the new Mecanim animation  
Who this book is for  
Students or artists familiar with tools such as 3ds Max or Maya who want to create games for mobile platforms, computers, or consoles, but with little or no experience in scripting or the logic behind games development.

Table of Contents  
01. Introduction to Game Development  
02. Unity UI basics  
03. Introduction to Scripting  
04. Terrain Generation and Environment  
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06. Cursor Control and Interaction  
07. Importing Assets  
08. Action Objects  
09. Managing State  
10. Exploring Transitions  
11. Physics and Special Effects  
12. Message Text and HUD  
13. Inventory Logic  
14. Managing Inventory  
15. Dialogue Trees  
16. Mecanim  
17. Game Environment  
18. Setting up the Game  
19. Menus and Levels

#### **Game Engine Architecture** - Jason Gregory 2017-03-27

Hailed as a "must-have textbook" (CHOICE, January 2010), the first edition of Game Engine Architecture provided readers with a complete guide to the theory and practice of game engine software development. Updating the content to match today's landscape of game engine architecture, this second edition continues to thoroughly cover the major components that make up a typical commercial game engine. New to the Second Edition Information on new topics, including the latest variant of the C++ programming language, C++11, and the architecture of the eighth generation of gaming consoles, the Xbox One and PlayStation 4

New chapter on audio technology covering the fundamentals of the physics, mathematics, and technology that go into creating an AAA game audio engine  
Updated sections on multicore programming, pipelined CPU architecture and optimization, localization, pseudovectors and Grassman algebra, dual quaternions, SIMD vector math, memory alignment, and anti-aliasing  
Insight into the making of Naughty Dog's latest hit, The Last of Us  
The book presents the theory underlying various subsystems that comprise a commercial game engine as well as the data structures, algorithms, and software interfaces that are typically used to implement them. It primarily focuses on the engine itself, including a host of low-level foundation systems, the rendering engine, the collision system, the physics simulation, character animation, and audio. An in-depth discussion on the "gameplay foundation layer" delves into the game's object model, world editor, event system, and scripting system. The text also touches on some aspects of gameplay programming, including player mechanics, cameras, and AI. An awareness-building tool and a jumping-off point for further learning, Game Engine Architecture, Second Edition gives readers a solid understanding of both the theory and common practices employed within each of the engineering disciplines covered. The book will help readers on their journey through this fascinating and multifaceted field.

#### **C# Game Programming Cookbook for Unity 3D** - Jeff W. Murray 2021-03-25

This second edition of C# Game Programming Cookbook for Unity 3D expounds upon the first with more details and techniques. With a fresh array of chapters, updated C# code and examples, Jeff W. Murray's book will help the reader understand structured game development in Unity unlike ever before. New to this edition is a step-by-step tutorial for building a 2D infinite runner game from the framework and scripts included in the book. The book contains a flexible and reusable framework in C# suitable for all game types. From game state handling to audio mixers to asynchronous scene loading, the focus of this book is

building a reusable structure to take care of many of the most used systems. Improve your game's sound in a dedicated audio chapter covering topics such as audio mixers, fading, and audio ducking effects, or dissect a fully featured racing game with car physics, lap counting, artificial intelligence steering behaviors, and game management. Use this book to guide your way through all the required code and framework to build a multi-level arena blaster game. Features Focuses on programming, structure, and an industry-level, C#-based framework  
Extensive breakdowns of all the important classes  
Example projects illustrate and break down common and important Unity C# programming concepts, such as coroutines, singletons, static variables, inheritance, and scriptable objects.  
Three fully playable example games with source code: a 2D infinite runner, an arena blaster, and an isometric racing game  
The script library includes a base Game Manager, timed and proximity spawning, save profile manager, weapons control, artificial intelligence controllers (path following, target chasing and line-of-sight patrolling behaviors), user interface Canvas management and fading, car physics controllers, and more. Code and screenshots have been updated with the latest versions of Unity. These updates will help illustrate how to create 2D games and 3D games based on the most up-to-date methods and techniques. Experienced C# programmers will discover ways to structure Unity projects for reusability and scalability. The concepts offered within the book are instrumental to mastering C# and Unity. In his game career spanning more than 20 years, Jeff W. Murray has worked with some of the world's largest brands as a Game Designer, Programmer, and Director. A Unity user for over 14 years, he now works as a consultant and freelancer between developing his own VR games and experiments with Unity.

#### **Learn Unity for Android Game Development** - Adam Sinicki 2017-07-21

Get a thorough and practical introduction to Unity development for Android devices with no previous experience with game development needed. In this book, you'll go through every step from downloading and installing Unity and the Android SDK, to creating fully functional games. The bulk of Learn Unity for Android Game Development is a simple project to create a 2D platform game complete with touchscreen controls, physics, enemies, respawning, collectibles and more. The book closes with a brief introduction to creating 3D games, virtual reality games for the Gear VR, and other more advanced applications. It also provides some guidance on publishing and marketing, as well as thinking about game design and mechanics. Resources including sprites and scripts are provided in the code download. What You Will Learn  
Install Unity with the Android SDK  
Understand and use scripts, prefabs and Android Studio  
Design a great game  
Build a game app  
Add a bit of polish  
Deploy for various Android devices  
Build and deploy for 3D games, virtual reality and more  
Promote your game and make money  
Who This Book Is For  
This book requires no previous experience with programming or game development of any kind. Prior experience with the Android ecosystem recommended.

#### **C++ Game Development Primer** - Bruce Sutherland 2014-11-10

C++ is the language behind most of today's computer games. This 96-page C++ Game Development Primer takes you through the accelerated process of writing games for otherwise experienced C++ programmers. After reading this book, you'll have the fundamental know-how to become a successful and profitable game applications developer in today's increasingly competitive indie game marketplace. For those looking for a quick introduction to C++ game development and who have good skills in C++, this will get you off to a fast start. C++ Game Development Primer is based on Learn C++ for Game Development by the same author, giving you the essentials to get started in game programming without the unnecessary introduction to C++.

#### **Learn Unity3D Programming with UnityScript** - Janine Suvak 2014-08-18

Learn Unity Programming with UnityScript is your step-by-step guide to learning to make your first Unity games using UnityScript. You will move from point-and-click components to fully customized features. You need no prior programming knowledge or any experience with other design tools such as PhotoShop or Illustrator - you can start from scratch making Unity games with what you'll learn in this book. Through hands-on examples of common game patterns, you'll learn and apply the basics of game logic and design. You will gradually become comfortable with UnityScript syntax, at each point having everything explained to you clearly and concisely. Many beginner programming books refer to documentation that is too technically abstract for a beginner to use - Learn Unity Programming with UnityScript will teach you how to read and utilize those resources to hone your skills, and rapidly increase your knowledge in Unity game development. You'll learn about animation,

sound, physics, how to handle user interaction and so much more. Janine Suvak has won awards for her game development and is ready to show you how to start your journey as a game developer. The Unity3D game engine is flexible, cross-platform, and a great place to start your game development adventure, and UnityScript was made for it - so get started game programming with this book today.

*Foundation Game Design with ActionScript 3.0* - Rex van der Spuy  
2012-03-28

In response to the success of the first edition of *Foundation Game Design with Flash*, Rex van der Spuy has revised and updated all the code to meet current programming best practices, and the focus is now on accurate ActionScript 3.0, regardless of the IDE that you use. We've all sneaked the odd five minutes here or there playing the latest Flash game that someone sent around the office, but creating those games is trickier than it looks. The aim of *Foundation Game Design with ActionScript 3.0* is to take you, even if you've minimal multimedia or programming experience, through a series of step-by-step examples and detailed case studies—to the point where you'll have the skills to independently design any conceivable 2D game using Flash and ActionScript. *Foundation Game Design with ActionScript 3.0* is a non-technical one-stop shop for all the most important skills and techniques a beginning game designer needs to build games with Flash from scratch. Whether you're creating quick blasts of viral amusement, or more in-depth action or adventure titles, this is the book for you. Focused and friendly introduction to designing games with Flash and ActionScript Detailed case studies of Flash games Essential techniques for building games, with each chapter gently building on the skills of preceding chapters Modern best practices and new content on ActionScript 3.0 Also covers asset creation in Photoshop and Illustrator

**Game Programming with Unity and C#** - Casey Hardman 2020-06-13  
Designed for beginners with no knowledge or experience in game development or programming, this book teaches the essentials of the Unity game engine, the C# programming language, and the art of object-oriented programming. New concepts are not only explained, but thoroughly demonstrated. Starting with an introduction to Unity, you'll learn about scenes, GameObjects, prefabs, components, and how to use the various windows to interact with the engine. You'll then dive into the fundamentals of programming by reviewing syntax rules, formatting, methods, variables, objects and types, classes, and inheritance, all while getting your hands dirty writing and testing code yourself. Later, the book explains how to expose script data in the Inspector and the basics of Unity's serialization system. This carefully crafted work guides you through the planning and development of bare bones, simple game projects designed to exercise programming concepts while keeping less relevant interruptions out of the way, allowing you to focus on the implementation of game mechanics first and foremost. Through these example projects, the book teaches input handling, rigidbodies, colliders, cameras, prefab instantiation, scene loading, user interface design and coding, and more. By the end, you'll have built a solid foundation in programming that will pave your way forward in understanding core C# syntax and fundamentals of object-oriented programming—not just what to type but why it's typed and what it's really doing. *Game Programming with Unity and C#* will send you on your way to becoming comfortable with the Unity game engine and its documentation and how to independently seek further information on yet-untouched concepts and challenges. What You'll Learn Understand the fundamentals of object-oriented computer programming, including topics specifically relevant for games. Leverage beginner-to-intermediate-level skills of the C# programming language and its syntax. Review all major component types of the Unity game engine: colliders and rigidbodies, lights, cameras, scripts, etc. Use essential knowledge of the Unity game engine and its features to balance gameplay mechanics for making interesting experiences. Who This Book Is For Beginners who have no prior experience in programming or game development who would like to learn with a solid foundation that prepares them to further develop their skills.

**Unity in Action** - Joseph Hocking 2018-03-27

Summary Manning's bestselling and highly recommended Unity book has been fully revised! *Unity in Action, Second Edition* teaches you to write and deploy games with the Unity game development platform. You'll master the Unity toolset from the ground up, adding the skills you need to go from application coder to game developer. Foreword by Jesse Schell, author of *The Art of Game Design* Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Build your next game without

sweating the low-level details. The Unity game development platform handles the heavy lifting, so you can focus on game play, graphics, and user experience. With support for C# programming, a huge ecosystem of production-quality prebuilt assets, and a strong dev community, Unity can get your next great game idea off the drawing board and onto the screen! About the Book *Unity in Action, Second Edition* teaches you to write and deploy games with Unity. As you explore the many interesting examples, you'll get hands-on practice with Unity's intuitive workflow tools and state-of-the-art rendering engine. This practical guide exposes every aspect of the game dev process, from the initial groundwork to creating custom AI scripts and building easy-to-read UIs. And because you asked for it, this totally revised Second Edition includes a new chapter on building 2D platformers with Unity's expanded 2D toolkit. What's Inside Revised for new best practices, updates, and more! 2D and 3D games Characters that run, jump, and bump into things Connect your games to the internet About the Reader You need to know C# or a similar language. No game development knowledge is assumed. About the Author Joe Hocking is a software engineer and Unity expert specializing in interactive media development. Table of Contents PART 1 - First steps Getting to know Unity Building a demo that puts you in 3D space Adding enemies and projectiles to the 3D game Developing graphics for your game PART 2 - Getting comfortable Building a Memory game using Unity's 2D functionality Creating a basic 2D Platformer Putting a GUI onto a game Creating a third-person 3D game: player movement and animation Adding interactive devices and items within the game PART 3 - Strong finish Connecting your game to the internet Playing audio: sound effects and music Putting the parts together into a complete game Deploying your game to players' devices

[The Ultimate Guide to 2D games with Unity](#) - Patrick Feliia 2020-10-05  
Get started with 2D Games and Unity without the headaches Without my book, most people spend too long trying to create 2D games and learn C# with Unity the hard way. This book is the only one that will get you to learn Unity fast without wasting so much time. It includes 15 chapters that painlessly teach you the necessary skills to master C# with Unity and to create 2D interactive games. What you will learn After completing this book, you will be able to: - Code in C#. - Understand and apply C# concepts. - Create 2D games. - Create a wide range of 2D games including a 2D platformer, a shooter, a word-guessing game, a memory game, a card game, and a puzzle. - Create and use C# variables and methods for your game. - Include intelligent NPCs that chase the player. - Manage collisions, key inputs, and colliders. - Create an update a user interface. - Load new scenes from the code, based on events in your games. Content and structure of this book The content of each chapter is as follows: - Chapters 1, 2, 3, 4, and 5 will show you how to create a platformer game with most of the features that you usually find in this genre. - Chapters 6, 7, 8, 9, and 10 will show you how to create a shooter game with a moving space ship controlled by the player, a scrolling background, missiles, moving asteroids, and much more. - Chapter 11 will show you how to create a word guessing game where the player needs to guess a word, picked at random. - Chapter 12 will show you how to create a memory game based on the famous "Simon Game". - Chapter 13 will show you how to create a card-guessing game where the player needs to memorize the location of cards on a board and to also match identical cards in order to win. - Chapter 14 will show you how to create a puzzle where the player has to move and combine puzzle pieces to complete the puzzle. If you want to start coding in C# and create your own 2D games with Unity using a tried-and-tested method: download this book now

**Unity Game Development Cookbook** - Paris Buttfield-Addison  
2019-03-13

Find out how to use the Unity Game Engine to its fullest for both 3D and 2D game development—from the basics to the hottest new tricks in virtual reality. With this unique cookbook, you'll get started in two ways: First, you'll learn about the Unity game engine by following very brief exercises that teach specific features of the software Second, this tutorial-oriented guide provides a collection of snippets that solve common gameplay problems, like determining if a player has completed a lap in a race Using our cookbook format, we pinpoint the problem, set out the solution, and discuss how to solve your problem in the best and most straightforward way possible so you can move onto the next step in the project. *Unity Game Development Cookbook* is ideal for beginning to intermediate Unity developers. Beginners will get a broad immersion into the Unity development environment, while intermediate developers will learn how to apply the foundational Unity skills they have to solve real game development problems.

*Unity in Action* - Joe Hocking 2015-05-01

A lot goes into publishing a successful game: amazing artwork, advanced programming techniques, creative story and gameplay, and highly-collaborative teamwork—not to mention flawless rendering and smooth performance on platforms ranging from game consoles to mobile phones. The Unity game development platform combines a powerful rendering engine with the professional code and art workflow tools needed to bring games to life. *Unity in Action* focuses on the programming part of game development (as opposed to art or design) and teaches readers to create projects in multiple game genres. Building on existing programming experience, readers will work through examples using the Unity toolset, adding the skills needed to go from application coder to game developer. They will leave the book with a well-rounded understanding of how to create graphically driven 2D and 3D applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

**Unity in Action, Third Edition** - Joe Hocking 2022-02-08

*Unity in Action, Third Edition* teaches you to create games with the Unity game platform. It's many 2D, 3D, and AR/VR game examples give you hands-on experience with Unity's workflow tools and state-of-the-art rendering engine. This fully updated third edition presents new coverage of Unity's XR toolkit and shows you how you can start building with virtual and augmented reality.

**Developing 2D Games with Unity** - Jared Halpern 2018-11-28

Follow a walkthrough of the Unity Engine and learn important 2D-centric lessons in scripting, working with image assets, animations, cameras, collision detection, and state management. In addition to the fundamentals, you'll learn best practices, helpful game-architectural patterns, and how to customize Unity to suit your needs, all in the context of building a working 2D game. While many books focus on 3D game creation with Unity, the easiest market for an independent developer to thrive in is 2D games. 2D games are generally cheaper to produce, more feasible for small teams, and more likely to be completed. If you live and breathe games and want to create them then 2D games are a great place to start. By focusing exclusively on 2D games and Unity's ever-expanding 2D workflow, this book gives aspiring independent game developers the tools they need to thrive. Various real-world examples of independent games are used to teach fundamental concepts of developing 2D games in Unity, using the very latest tools in Unity's updated 2D workflow. New all-digital channels for distribution, such as Nintendo eShop, Xbox Live Marketplace, the Playstation Store, the App Store, Google Play, itch.io, Steam, and GOG.com have made it easier than ever to discover, buy, and sell games. The golden age of independent gaming is upon us, and there has never been a better time to get creative, roll up your sleeves, and build that game you've always dreamed about. *Developing 2D Games with Unity* can show you the way. What You'll Learn Delve deeply into useful 2D topics, such as sprites, tile slicing, and the brand new Tilemap feature. Build a working 2D RPG-style game as you learn. Construct a flexible and extensible game architecture using Unity-specific tools like Scriptable Objects, Cinemachine, and Prefabs. Take advantage of the streamlined 2D workflow provided by the Unity environment. Deploy games to desktop Who This Book Is For Hobbyists with some knowledge of programming, as well as seasoned programmers interested in learning to make games independent of a major studio.

[Learning C# by Developing Games with Unity 2021](#) - Harrison Ferrone 2021-10-29

Learn C# programming from scratch using Unity as a fun and accessible entry point with this updated edition of the bestselling series. Includes invitation to join the online Unity Game Development community to read the book alongside peers, Unity developers/C# programmers and Harrison Ferrone. Purchase of the print or Kindle book includes a free eBook in the PDF format. Key Features Learn C# programming basics, terminology, and coding best practices Become confident with Unity fundamentals and features in line with Unity 2021 Apply your C# knowledge in practice and build a working first-person shooter game prototype in Unity Book Description The *Learning C# by Developing Games with Unity* series has established itself as a popular choice for getting up to speed with C#, a powerful and versatile programming language with a wide array of applications in various domains. This bestselling franchise presents a clear path for learning C# programming from the ground up through the world of Unity game development. This sixth edition has been updated to introduce modern C# features with Unity 2021. A new chapter has also been added that covers reading and writing binary data from files, which will help you become proficient in

handling errors and asynchronous operations. The book acquaints you with the core concepts of programming in C#, including variables, classes, and object-oriented programming. You will explore the fundamentals of Unity game development, including game design, lighting basics, player movement, camera controls, and collisions. You will write C# scripts for simple game mechanics, perform procedural programming, and add complexity to your games by introducing smart enemies and damage-causing projectiles. By the end of the book, you will have developed the skills to become proficient in C# programming and built a playable game prototype with the Unity game engine. What you will learn Follow simple steps and examples to create and implement C# scripts in Unity Develop a 3D mindset to build games that come to life Create basic game mechanics such as player controllers and shooting projectiles using C# Divide your code into pluggable building blocks using interfaces, abstract classes, and class extensions Become familiar with stacks, queues, exceptions, error handling, and other core C# concepts Learn how to handle text, XML, and JSON data to save and load your game data Explore the basics of AI for games and implement them to control enemy behavior Who this book is for If you're a developer, programmer, hobbyist, or anyone who wants to get started with Unity and C# programming in a fun and engaging manner, this book is for you. You'll still be able to follow along if you don't have programming experience, but knowing the basics will help you get the most out of this book.

**Hands-On Unity 2020 Game Development** - Nicolas Alejandro Borromeo 2020-07-29

Build immersive game experiences using the new Unity 2020 features with this practical guide Key Features Unleash the capabilities of C# scripting for creating immersive UI, graphics, Game AI agents and much more Explore Unity's latest tools, including Universal Render Pipeline, Shader Graph, and VFX graph, to enhance graphics and animation Get started with building augmented reality experience using Unity's AR Foundation Book Description Over the years, the Unity game engine has extended its scope from just being about creating video games to building AR/VR experiences, complex simulations, real-time realistic rendering, films, and serious games for training and education. Its features for implementing gameplay, graphics, and customization using C# programming make Unity a comprehensive platform for developing professional-level, rich experiences. With this book, you'll be able to build impressive Unity projects in a step-by-step manner and apply your knowledge of Unity concepts to create a real-world game. Complete with hands-on tutorials and projects, this easy-to-follow guide will show you how to develop your first complete game using a variety of Unity tools. As you make progress, you'll learn how to make the most of the Unity Editor and create scripts using the C# programming language. This Unity game development book will then take you through integrating graphics, sound, and animations and manipulating physics to create impressive mechanics for your games. You'll also learn how to code a simple AI agent to challenge the user and use profiling tools to ensure that the code runs in a performant way. Finally, you'll get to grips with Unity's AR Foundation for creating AR experiences for 3D apps and games. By the end of this book, you'll have developed a complete game and will have built a solid foundation using Unity's tooling ecosystem to develop game projects of any scale. What you will learn Write scripts for customizing various aspects of a game, such as physics, gameplay, and UI Program rich shaders and effects using Unity's new Shader Graph and Universal Render Pipeline Implement postprocessing to increase graphics quality with full-screen effects Create rich particle systems for your Unity games from scratch using VFX Graph and Shuriken Add animations to your game using the Animator, Cinemachine, and Timeline Implement game artificial intelligence (AI) to control character behavior Detect and fix optimization issues using profilers and batching Who this book is for This book is for game developers looking to migrate to the Unity game engine. If you are a developer with some exposure to Unity, this book will help you explore its latest features. Prior experience with C# programming is required to get the most out of the book.

**Game Development Patterns with Unity 2021** - David Baron 2021-07-30

Solve your programming woes in Unity with practical design propositions Key Features Gain a comprehensive overview of Unity engine architecture and coding model Build a complete racing game using software design patterns and understand how to implement them in Unity Download the source code of the complete prototype demonstrating each of the software patterns used Book Description This book is written for every game developer ready to tackle the bigger picture and start

working with advanced programming techniques and design patterns in Unity. Game Development Patterns with Unity 2021 is an introduction to the core principles of reusable software patterns and how to employ them to build components efficiently. In this second edition, you'll tackle design patterns with the help of a practical example; a playable racing game prototype where you'll get to apply all your newfound knowledge. Notable updates also include a game design document (GDD), a Unity programming primer, and the downloadable source code of a complete prototype. Your journey will start by learning about overall design of the core game mechanics and systems. You'll discover tried-and-tested software patterns to code essential components of a game in a structured manner, and start using classic design patterns to utilize Unity's unique API features. As you progress, you'll also identify the negative impacts of bad architectural decisions and understand how to overcome them with simple but effective practices. By the end of this Unity book, the way you develop Unity games will change - you'll adapt a more structured, scalable, and optimized process that will help you take the next step in your career. What you will learn

Structure professional Unity code using industry-standard development patterns  
Identify the right patterns for implementing specific game mechanics or features  
Develop configurable core game mechanics and ingredients that can be modified without writing a single line of code  
Review practical object-oriented programming (OOP) techniques and learn how they're used in the context of a Unity project  
Build unique game development systems such as a level editor  
Explore ways to adapt traditional design patterns for use with the Unity API  
Who this book is for This book is for Unity game developers who want to learn industry standards for building Unity games. Knowledge of the Unity game engine and programming in the C# language is a must, so if you're a beginner, try our Learning C# by Developing Games with Unity 2021 handbook instead.

*Mastering Unity Scripting* - Alan Thorn 2015-01-29

Mastering Unity Scripting is an advanced book intended for students, educators, and professionals familiar with the Unity basics as well as the basics of scripting. Whether you've been using Unity for a short time or are an experienced user, this book has something important and valuable to offer to help you improve your game development workflow.

**Learning C# by Developing Games with Unity 2020** - Harrison Ferrone 2020-08-21

This fifth edition of the popular C# guide helps you learn the building blocks of C# language, right from variables to classes and exception handling. After getting to grips with the basics of C# programming, it takes you through the world of Unity game development and how you can apply C# knowledge using game development examples.

*ActiveMQ in Action* - Dejan Bosanac 2011-03-30

Applications in enterprises need to communicate, most commonly done by messaging. Apache ActiveMQ is an open-source implementation of the Java Message Service (JMS), which provides messaging in Java applications. ActiveMQ in Action is a thorough, practical guide to implementing message-oriented systems using ActiveMQ and Java. Co-authored by one of the leading ActiveMQ developers, Bruce Snyder, the book starts with the anatomy of a core Java message, then moves quickly through fundamentals including data persistence, authentication and authorization. Later chapters cover advanced features such as configuration and performance tuning, illustrating each concept with a running real-world stock portfolio application. Readers will learn to integrate ActiveMQ with Apache Geronimo and JBoss, and tie into both Java and non-Java technologies including AJAX, .NET, C++, Ruby, and the Spring framework. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

*Unity Android Game Development by Example Beginner's Guide* - Thomas Finnegan 2013-12-20

Unity Android Game Development by Example Beginner's Guide consists of different game application examples. No prior experience with programming, Android, or Unity is required. You will learn everything from scratch and will have an organized flow of information specifically designed for complete beginners to Unity. Great for developers new to Unity, Android, or both, this book will walk you through everything you need to know about game development for the Android mobile platform. No experience with programming, Android, or Unity is required. Most of the assets used in each chapter project are provided with the book, but it is assumed that you have some access to basic image and model creation software. You will also need access to an Android powered device.

*Learning C# by Developing Games with Unity 5.x* - Greg Lukosek 2016-03-31

Develop your first interactive 2D platformer game by learning the fundamentals of C#

About This Book Get to grips with the fundamentals of scripting in C# with Unity Create an awesome, 2D platformer game from scratch using the principles of object-oriented programming and coding in C# This is a step-by-step guide to learn the fundamentals of C# scripting to develop GameObjects and master the basics of the new UI system in Unity Who This Book Is For The book is targeted at beginner level Unity developers with no programming experience. If you are a Unity developer and you wish to learn how to write C# scripts and code by creating games, then this book is for you. What You Will Learn Understand the fundamentals of variables, methods, and code syntax in C# Get to know about techniques to turn your game idea into working project Use loops and collections efficiently in Unity to reduce the amount of code Develop a game using the object-oriented programming principles Generate infinite levels for your game Create and code a good-looking functional UI system for your game Publish and share your game with users In Detail Unity is a cross-platform game engine that is used to develop 2D and 3D video games. Unity 5 is the latest version, released in March 2015, and adds a real-time global illumination to the games, and its powerful new features help to improve a game's efficiency. This book will get you started with programming behaviors in C# so you can create 2D games in Unity. You will begin by installing Unity and learning about its features, followed by creating a C# script. We will then deal with topics such as unity scripting for you to understand how codes work so you can create and use C# variables and methods. Moving forward, you will find out how to create, store, and retrieve data from collection of objects. You will also develop an understanding of loops and their use, and you'll perform object-oriented programming. This will help you to turn your idea into a ready-to-code project and set up a Unity project for production. Finally, you will discover how to create the GameManager class to manage the game play loop, generate game levels, and develop a simple UI for the game. By the end of this book, you will have mastered the art of applying C# in Unity. Style and approach This is a step-by-step guide to developing a game from scratch by applying the fundamentals of C# and Unity scripting.

[Sams Teach Yourself Unity Game Development in 24 Hours](#) - Mike Geig 2014

A complete beginner's guide to game development with the powerful Unity game engine. CS Instructor and game designer, Mike Geig, offers a do-it-yourself approach to game development - with all of the main essentials covered. In just 24 hours, learn how to get started developing games with Unity with a hands-on and modular approach. Each chapter covers an essential component of the game development process, illustrated with sample projects, and including full source code, all 3rd party art assets (textures, fonts, models), and all 3rd party sound assets.

**Holistic Game Development with Unity** - Penny De Byl 2012

The art of programming mechanics -- Real world mechanics -- Animation mechanics -- Game rules and mechanics -- Character mechanics -- Player mechanics -- Environmental mechanics -- Mechanics for external forces.

**Learn 2D Game Development with C#** - Kelvin Sung 2014-01-25

2D games are hugely popular across a wide range of platforms and the ideal place to start if you're new to game development. With Learn 2D Game Development with C#, you'll learn your way around the universal building blocks of game development, and how to put them together to create a real working game. C# is increasingly becoming the language of choice for new game developers. Productive and easier to learn than C++, C# lets you get your games working quickly and safely without worrying about tricky low-level details like memory management. This book uses MonoGame, an open source framework that's powerful, free to use and easy to handle, to further reduce low-level details, meaning you can concentrate on the most interesting and universal aspects of a game development: frame, camera, objects and particles, sprites, and the logic and simple physics that determines how they interact. In each chapter, you'll explore one of these key elements of game development in the context of a working game, learn how to implement the example for yourself, and integrate it into your own game library. At the end of the book, you'll put everything you've learned together to build your first full working game! And what's more, MonoGame is designed for maximum cross-platform support, so once you've mastered the fundamentals in this book, you'll be ready to explore and publish games on a wide range of platforms including Windows 8, MAC OSX, Windows Phone, iOS, Android, and Playstation Mobile. Whether you're starting a new hobby or considering a career in game development, Learn 2D Game Development with C# is the ideal place to start.

[Pro Unity Game Development with C#](#) - Alan Thorn 2014-05-21

In *Pro Unity Game Development with C#*, Alan Thorn, author of *Learn Unity for 2D Game Development* and experienced game developer, takes you through the complete C# workflow for developing a cross-platform first person shooter in Unity. C# is the most popular programming language for experienced Unity developers, helping them get the most out of what Unity offers. If you're already using C# with Unity and you want to take the next step in becoming an experienced, professional-level game developer, this is the book you need. Whether you are a student, an indie developer, or a seasoned game dev professional, you'll find helpful C#

examples of how to build intelligent enemies, create event systems and GUIs, develop save-game states, and lots more. You'll understand and apply powerful programming concepts such as singleton classes, component based design, resolution independence, delegates, and event driven programming. By the end of the book, you will have a complete first person shooter game up and running with Unity. Plus you'll be equipped with the know-how and techniques needed to deploy your own professional-grade C# games. If you already know a bit of C# and you want to improve your Unity skills, this is just the right book for you.