Building An Fps Game With Unity

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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.

Unity from Zero to Proficiency (Intermediate) - Patrick Felicia

Newly Edited and Updated Version (Third Edition) for Unity 2019 Learn C# with Unity, and create a full FPS game without the headaches Without this book, most people spend too long trying to 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 twelve chapters that painlessly teach you the necessary skills to create an FPS

game and to learn intermediate C# and Unity techniques. What you will learn After completing this book, you will be able to: - Use Unity's built-in methods. - Use Rigidbody physics to propel airborne objects. - Use a Finite State Machine to create intelligent NPCs. - Manage 3D animations for the NPCs. - Create NPCs who can chase the player. - Create and manage weapons and ammunition for the player. - Create a 2D scrolling shooter. - Create a card-guessing game. - Create a 2D puzzle game. Content and structure of this book The content of the books is as follows: - In Chapter 1, you will learn key C# programming concepts such as variables, variable types, polymorphism, or constructors. - In Chapter 2, you will code and compile your first script in C#. - In Chapter 3, you will create a simple 3D game where the user has to reach the end of the level by avoiding projectiles from intelligent robots. - In Chapter 4, you will create a gun and a grenade launcher that the player can use to defeat enemies. - In Chapter 5, you will start to use Mecanim and NavMesh navigation to control an animated character that detects, follows, or attacks the player. - In Chapter 6, you will combine the skills that you have acquired in the previous chapters to create a fully functional level where the player needs to escape a level full of armed NPCs. You will also learn how to generate a game level dynamically from your code. - In Chapter 7, you will create a simple 2D scrolling shooter. - In Chapter 8, you will improve your game by adding explosions and a scrolling background. - In Chapter 9, you will add intelligent spaceships that attack the player. - In Chapter 10, you will include a shield to the player's spaceship, along with other interesting features (e.g., sound FX, a scoring system, etc). - In Chapter 11, you will create a card-guessing game. - In Chapter 12, you will create a 2D puzzle game. - Chapter 13 summarizes the topics covered in the book. If you want to create FPS games, 2D Shooters, Card Games and Puzzles with Unity using a

tried-and-tested method: download this book now!

Learning 2D Game Development with Unity - Matthew Johnson 2014-12-12

The Unity Engine Tutorial for Any Game Creator ¿ Unity is now the world's #1 game engine, thanks to its affordability, continuous improvements, and amazing global community. With Unity, you can design, code, and author your game once, and then deploy it to multiple platforms, reaching huge audiences and earning maximum returns. Learning 2D Game Development with Unity® will help you master Unity and build powerful skills for success in today's game industry. It also includes a bonus rundown of the new GUI tools introduced in Unity's version 4.6 beta. ¿ With this indispensable guide, you'll gain a solid, practical understanding of the Unity engine as you build a complete, 2D platform-style game, hands-on. The step-by-step project will get you started fast, whether you're moving to Unity from other engines or are new to game development. ¿ This tutorial covers the entire development process, from initial concept, plans, and designs to the final steps of building and deploying your game. It illuminates Unity's newly integrated 2D toolset, covering sprites, 2D physics, game scripts, audio, and animations. Throughout, it focuses on the simplest and lowest-cost approaches to game development, relying on free software and assets. Everything you'll need is provided. ¿ Register your book at informit.com/title/9780321957726 to access assets, code listings, and video tutorials on the companion website. ¿ Learn How To Set up your Unity development environment and navigate its tools Create and import assets and packages you can add to your game Set up game sprites and create atlas sheets using the new Unity 2D tools Animate sprites using keyframes, animation controllers, and scripting Build a 2D game world from beginning to end Establish player control Construct movements that "feel right" Set up

player physics and colliders Create and apply classic gameplay systems Implement hazards and tune difficulty Apply audio and particle effects to the game Create intuitive game menus and interface elements Debug code and provide smooth error handling Organize game resources and optimize game performance Publish your game to the web for others to see and play ¿ *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.

Unreal Engine 4 Scripting with C++ Cookbook - William Sherif 2016-10-24

Get the best out of your games by scripting them using UE4 About This Book A straightforward and easy-to-follow format A selection of the most important tasks and problems Carefully organized instructions to solve problems efficiently Clear explanations of what you did Solutions that can be applied to solve real-world problems Who This Book Is For This book is intended for game developers who understand the fundamentals of game design and C++ and would like to incorporate native code into the games they make with Unreal. They will be

programmers who want to extend the engine, or implement systems and Actors that allow designers control and flexibility when building levels. What You Will Learn Build function libraries (Blueprints) containing reusable code to reduce upkeep Move low-level functions from Blueprint into C++ to improve performance Abstract away complex implementation details to simplify designer workflows Incorporate existing libraries into your game to add extra functionality such as hardware integration Implement AI tasks and behaviors in Blueprints and C++ Generate data to control the appearance and content of UI elements In Detail Unreal Engine 4 (UE4) is a complete suite of game development tools made by game developers, for game developers. With more than 100 practical recipes, this book is a guide showcasing techniques to use the power of C++ scripting while developing games with UE4. It will start with adding and editing C++ classes from within the Unreal Editor. It will delve into one of Unreal's primary strengths, the ability for designers to customize programmer-developed actors and components. It will help you understand the benefits of when and how to use C++ as the scripting tool. With a blend of task-oriented recipes, this book will provide actionable information about scripting games with UE4, and manipulating the game and the development environment using C++. Towards the end of the book, you will be empowered to become a top-notch developer with Unreal Engine 4 using C++ as the scripting language. Style and approach A recipe based practical guide to show you how you can leverage C++ to manipulate and change your game behavior and game design using Unreal Engine 4.

3D Game Development with Unity - Franz Lanzinger 2022

This book teaches beginners and aspiring game developers how to develop 3D games with Unity. Thousands of commercial games have been built with Unity. Blender, the top open source 3D

modeling and animation package, is also introduced.

Augmented Reality Game Development - Micheal Lanham 2017-01-20

Create your own augmented reality games from scratch with Unity 5 About This Book Create your own augmented reality game from scratch and join the virtual reality gaming revolution Use the latest Unity 5 VR SDK to create pro-level AR games like Pokemon Go Innovate and explore the latest and most promising trend of AR gaming in the mobile gaming industry Who This Book Is For This book is for those who have a basic knowledge of game development techniques, but no previous knowledge of Unity is required. Some basic programming knowledge would be desirable, but the book is an introduction to the topic. The book is also suitable for experienced developers new to GIS or GPS development. What You Will Learn Build a location-based augmented reality game called Foodie Go Animate a player's avatar on a map Use the mobile device's camera as a game background Implement database persistence with SQLLite4Unity3D to carry inventory items across game sessions Create basic UI elements for the game, inventory, menu, and settings Perform location and content searches against the Google Places API Enhance the game's mood by adding visual shader effects Extend the game by adding multiplayer networking and other enhancements In Detail The heyday of location-based augmented reality games is upon us. They have been around for a few years, but the release of Pokemon Go was a gamechanger that catalyzed the market and led to a massive surge in demand. Now is the time for novice and experienced developers alike to turn their good ideas into augmented reality (AR) mobile games and meet this demand! If you are keen to develop virtual reality games with the latest Unity 5 toolkit, then this is the book for you. The genre of location-based AR games introduces a new platform and technical challenges, but this

book will help simplify those challenges and show how to maximize your game audience. This book will take you on a journey through building a location-based AR game that addresses the core technical concepts: GIS fundamentals, mobile device GPS, mapping, map textures in Unity, mobile device camera, camera textures in Unity, accessing location-based services, and other useful Unity tips. The technical material also discusses what is necessary for further development to create a multiplayer version of the game. At the end, you will be presented with troubleshooting techniques in case you get into trouble and need a little help. Style and approach This book shows you how to create every step of the game and gives practical examples.

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

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.

Game Programming Patterns - Robert

Nystrom 2014-11-03
The biggest challenge facing many game programmers is completing their game. Most game projects fizzle out, overwhelmed by the complexity of their own code. Game Programming Patterns tackles that exact problem. Based on years of experience in shipped AAA titles, this book collects proven patterns to untangle and optimize your game, organized as independent recipes so you can pick just the patterns you need. You will learn how to write a robust game loop, how to organize your entities using components, and take advantage of the CPUs cache to improve your performance. You'll dive deep into how scripting engines encode behavior, how quadtrees and other spatial partitions optimize your engine, and how other classic design patterns can be used in games.

Unity 5. X Game Development Blueprints - John P. Doran 2016-05-25
A project-based guide to help you create amazing games with Unity 5.xAbout This Book- Unleash the power of C# coding in Unity and the state of the art Unity rendering engine.- Through this unique project-based approach, you will create 7-8 action-packed games from scratch.- This assortment of games will take you on a fun-filled journey of becoming a full-fledged Unity game developer.Who This Book Is ForThis book is best suited for C# developers who have some basic knowledge of the Unity Game development platform. If you are looking to create exciting and interactive games with Unity and get a practical understanding of how to leverage key Unity features and then optimize the Unity rendering engine, then this book is your one-stop solution.What You Will Learn- Find out how to create exciting and interactive games using GUIs- Prepare animations to be imported and exported- Personalize your animation game with Unity's advanced animation system- Work with different animation assets and components- Customize the game by modifying the player

properties and creating exterior environments- Create, visualize, and edit animated creatures- Familiarize yourself with best practices for Unity 5.x animation using iTween- Design character actions and expressions- Customize your game and prepare it for playinIn DetailThis book will help you to create exciting and interactive games from scratch with the Unity game development platform. We will build 7-8 action-packed games of different difficulty levels, and we'll show you how to leverage the intuitive workflow tools and state of the art Unity rendering engine to build and deploy mobile desktop as well as console games.Through this book, you'll develop a complete skillset with the Unity toolset. Using the powerful C# language, we'll create game-specific characters and game environments. Each project will focus on key Unity features as well as game strategy development. This book is the ideal guide to help your transition from an application developer to a full-fledged Unity game developerStyle and approach A step by step approach to develop a strong Unity skillset by creating a few action-packed games from scratch.

Building a Game with Unity and Blender - Lee Zhi Eng 2015-11-27

Learn how to build a complete 3D game using the industry-leading Unity game development engine and Blender, the graphics software that gives life to your ideas About This Book Learn the fundamentals of two powerful tools and put the concepts into practice Find out how to designand buildall the core elements required for a great game - from characters to environments, to props— Learn how to integrate Artificial Intelligence (AI) into your game for sophisticated and engaging gameplay Who This Book Is For This book has been created for anyone who wants to learn how to develop their own game using Blender and Unity, both of which are freely available, yet very popular and powerful, tools. Not only will you be able to master the tools, but you will also learn the

entire process of creating a game from the ground up. What You Will Learn Design and create a game concept that will determine how your game will look and how it will be played Construct 3D models of your game characters and create animations for them before importing them into the game Build the game environment from scratch by constructing the terrain and props, and eventually put it all together to form a scene Import and integrate game assets created in Blender into Unity—for example, setting up textures, materials, animation states, and prefabs Develop game structures including a game flow, user interface diagram, game logic, and a state machine Make the game characters move around and perform certain actions either through player inputs or fully controlled by artificial intelligence Create particles and visual effects to enhance the overall visual aesthetic Deploy the game for various types of platforms In Detail In the wake of the indie game development scene, game development tools are no longer luxury items costing up to millions of dollars but are now affordable by smaller teams or even individual developers. Among these cutting-edge applications, Blender and Unity stand out from the crowd as a powerful combination that allows small-to-no budget indie developers or hobbyists alike to develop games that they have always dreamt of creating. Starting from the beginning, this book will cover designing the game concept, constructing the gameplay, creating the characters and environment, implementing game logic and basic artificial intelligence, and finally deploying the game for others to play. By sequentially working through the steps in each chapter, you will quickly master the skills required to develop your dream game from scratch. Style and approach A step-by-step approach with tons of screenshots and sample code for readers to follow and learn from. Each topic is explained sequentially and placed in context so that readers can get a better understanding of every

step in the process of creating a fully functional game.

Unity Game Development Essentials - Will Goldstone 2009-10-01

Build fully functional, professional 3D games with realistic environments, sound, dynamic effects, and more!

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 05. Exploring Navigation 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

Unity 3D Game Development - Anthony Davis 2022-08-29

Create ready-to-play 3D games with reactive environments, sound, dynamic effects, and more! Key Features Build a solid foundation for game design and game development Understand the fundamentals of 3D such as coordinates, spaces, vectors, and cameras Get to grips with essential Unity concepts including characters, scenes, terrains, objects and more Book Description This book, written by a team of experts at Unity Technologies, follows an

informal, demystifying approach to the world of game development. You'll learn the 3D and C# fundamentals before starting to build one short segment of the full game — a vertical slice. With every progressing chapter, you'll learn to improve this game (alongside building your own) to make it ready to pitch to studios. Within Unity 3D Game Development, you will learn to: Design and build 3D characters, and the game environment Think about the users' interactions with your game Develop the interface and apply visual effects to add an emotional connection to your world Grasp a solid foundation of sound design, animations, and lightning to your creations Build, test, and add final touches The book is split between expert insights that you'll read before you look into the project on GitHub to understand all the underpinnings. This way, you get to see the end result, and you're allowed to be creative and give your own thoughts to design, as well as work through the process with the new tools we introduce. Join the book community on Discord: Read this book with Unity game developers, and the team of authors. Ask questions, build teams, chat with the authors, participate in events and much more. The link to join is included in the book. What you will learn Learn fundamentals of designing a 3D game and C# scripting Design your game character and work through their mechanics and movements Create an environment with Unity Terrain and ProBuilder Explore instantiation and rigid bodies through physics theory and code Implement sound, lighting effects, trail rendering, and other dynamic effects Create a short, fully functional segment of your game in a vertical slice Polish your game with performance tweaks JOIN the 'book-club' to read alongside other users, Unity experts, and ask the authors when stuck Who this book is for Our goal with this book is to enable every reader to build the right mindset to think about 3D games, and then show them all the steps we took to create ours. The main target audience for this book is those

with some prior knowledge in game development, though regardless of your experience, we hope to create an enjoyable learning journey for you.

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.

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.

Learning C# by Developing Games with Unity - Harrison Ferrone 2022-11-29

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. Key Features Develop a strong foundation of programming concepts and the C# language Become confident with Unity fundamentals and features in line with Unity 2022 Build a playable game prototype in Unity—a working first-person shooter game prototype Book Description It's the ability to write custom C# scripts for behaviors and game mechanics that really takes Unity the extra mile. That's where this book can help you as a new programmer! Harrison Ferrone, in this seventh edition of the bestselling series, will take you through the building blocks

of programming and the C# language from scratch while building a fun and playable game prototype in Unity. This book will teach you the fundamentals of OOPs, basic concepts of C#, and Unity engine with lots of code samples, exercises and tips to go beyond the book with your work. You will write C# scripts for simple game mechanics, perform procedural programming, and add complexity to your games by introducing intelligent enemies and damage-dealing projectiles. You will explore the fundamentals of Unity game development, including game design, lighting basics, player movement, camera controls, collisions, and more with every passing chapter. What you will learn Understanding programming fundamentals by breaking them down into their basic parts Comprehensive explanations with sample codes of object-oriented programming and how it applies to C# Follow simple steps and examples to create and implement C# scripts in Unity Divide your code into pluggable building blocks using interfaces, abstract classes, and class extensions Grasp the basics of a game design document and then move on to blocking out your level geometry, adding lighting and a simple object animation Create basic game mechanics such as player controllers and shooting projectiles using C# 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 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.

Game Character Creation with Blender and Unity - Chris Totten 2012-06-01

A complete guide to creating usable, realistic game characterswith two powerful tools

Creating viable game characters requires a combination ofskills. This book teaches game creators how to create usable,realistic game assets using the power of an open-source 3Dapplication and a free game engine. It presents a step-by-stepapproach to modeling, texturing, and animating a character usingthe popular Blender software, with emphasis on low polygon modelingand an eye for using sculpting and textures, and demonstrates howto bring the character into the Unity game engine. Game creation is a popular and productive pursuit for bothhobbyists and serious developers; this guide brings together twoeffective tools to simplify and enhance the process Artists who are familiar with Blender or other 3D software butwho lack experience with game development workflow will find thisbook fills important gaps in their knowledge Provides a complete tutorial on developing a game character,including modeling, UV unwrapping, sculpting, baking displacements,texturing, rigging, animation, and export Emphasizes low polygon modeling for game engines and shows howto bring the finished character into the Unity game engine Whether you're interested in a new hobby or eager to enter thefield of professional game development, this book offers valuableguidance to increase your skills.

Game Development Patterns and Best Practices - John P. Doran 2017-04-27

Utilize proven solutions to solve common problems in game development About This Book Untangle your game development workflow, make cleaner code, and create structurally solid games Implement key programming patterns that will enable you to make efficient AI and remove duplication Optimize your game using memory management techniques Who This Book Is For If you are a game developer who wants to solve commonly-encountered issues or have some way to communicate to other developers in a standardized format, then this book is for you. Knowledge of basic game programming

principles and C++ programming is assumed. What You Will Learn Learn what design patterns are and why you would want to use them Reduce the maintenance burden with well-tested, cleaner code Employ the singleton pattern effectively to reduce your compiler workload Use the factory pattern to help you create different objects with the same creation logic and reduce coding time Improve game performance with Object Pools Allow game play to interact with physics or graphics in an abstract way Refractor your code to remove common code smells In Detail You've learned how to program, and you've probably created some simple games at some point, but now you want to build larger projects and find out how to resolve your problems. So instead of a coder, you might now want to think like a game developer or software engineer. To organize your code well, you need certain tools to do so, and that's what this book is all about. You will learn techniques to code quickly and correctly, while ensuring your code is modular and easily understandable. To begin, we will start with the core game programming patterns, but not the usual way. We will take the use case strategy with this book. We will take an AAA standard game and show you the hurdles at multiple stages of development. Similarly, various use cases are used to showcase other patterns such as the adapter pattern, prototype pattern, flyweight pattern, and observer pattern. Lastly, we'll go over some tips and tricks on how to refactor your code to remove common code smells and make it easier for others to work with you. By the end of the book you will be proficient in using the most popular and frequently used patterns with the best practices. Style and approach This book takes a step-by-step real-life case studies approach. Every pattern is first explained using a bottleneck. We will show you a problem in your everyday workflow, and then introduce you to the pattern, and show you how the pattern will resolve the situation.

The Art of Game Design - Jesse Schell

2008-08-04

Anyone can master the fundamentals of game design - no technological expertise is necessary. The Art of Game Design: A Book of Lenses shows that the same basic principles of psychology that work for board games, card games and athletic games also are the keys to making top-quality videogames. Good game design happens when you view your game from many different perspectives, or lenses. While touring through the unusual territory that is game design, this book gives the reader one hundred of these lenses - one hundred sets of insightful questions to ask yourself that will help make your game better. These lenses are gathered from fields as diverse as psychology, architecture, music, visual design, film, software engineering, theme park design, mathematics, writing, puzzle design, and anthropology. Anyone who reads this book will be inspired to become a better game designer - and will understand how to do it.

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 FeaturesDiscover how you can enhance your games with BlenderLearn how to implement Blender in real-world scenariosCreate new or modify existing assets in Blender and import them into your Unity gameBook 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 learnTransform your imagination into 3D scenery, props, and characters using BlenderGet to grips with UV unwrapping and texture models in BlenderUnderstand how to rig and animate models in BlenderAnimate and script models in Unity for top-down, FPS, and other types of gamesFind out how you can roundtrip custom assets from Blender to Unity and backBecome familiar with the basics of ProBuilder, Timeline, and Cinemachine in UnityWho 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.

Holistic Game Development with Unity - Penny de Byl 2012-11-12

The independent developer has ascended, and the new business model demands agility. You have to be able to work on all aspects of game creation, and your team's game will publish directly to platforms like Android, iPhone, and Facebook. You'll use Unity, the hottest game engine out there, to do it. In order to earn your place on the elite development team, you must master both sides of the development coin: art and programming. Holistic Game Development

with Unity is an authoritative guide to creating games in Unity. Taking you through game design, programming, and art, Penny de Byl uses a holistic approach to equip you with the multidisciplinary skills you need for the independent games industry. With this book, you will master essential digital art and design principles while learning the programming skills necessary to build interactivity into your games. The tutorials will put these skills into action. The companion website offers: source code for completed projects from the book, art assets, instructional videos, a forum, author blog and lesson plans and challenge questions for professors. Examines art and programming in unison-the only one-stop shop for individual developers and small teams looking to tackle both tasks.

Unity From Zero to Proficiency (Foundations) - Patrick Felicia 2017-11-01

Newly Edited and Updated Version (Fourth Edition) for Unity 2019. Get started with Unity and game programming fast without the headaches Unity is a great software to create video games; however, it includes so many options and features that getting started can feel overwhelming. Without my book, most people spend too long trying to learn how to use Unity the hard way. This book is the only one that will get you to learn Unity fast without wasting so much time. This book is the first book in the series "Unity from Zero to Proficiency" where you will learn to code fast and be able to create your own video games with Unity in no time. What you will learn - After completing this book, you will be able to: - Know and master the features that you need to create 2D and 3D environments for your games. - Quickly create (and navigate through) realistic 3D indoors and outdoors environments. - Create a 3D Maze with lights, walls, and textures. - Use ProBuilder to create a house. - Create an island with trees, sandy beaches, mountains, and water. - Include and control a car and a plane. - Create a 2D

platform game (with no scripting needed). - Export your games to the web. Who this book is for This book is for: - Hobbyists who need a book that gets them started with Unity and game development easily. - Parents looking for a book that introduces their children to game programming painlessly. - Teachers looking for a complete and clear resource on programming through the creation of games. - Aspiring indie game developers. How this book is different This is the only book that you need to get started with Unity fast and to enjoy the journey without the frustration. This book includes six chapters that painlessly guide you through the necessary skills to master Unity's interface, use its core features, and create and navigate through realistic 2D and 3D environments. It assumes no prior knowledge on your part and ensures that you have all the information and explanations that you need every step of the way. What this book offers This book includes all the features that you need to get started with Unity and game development: Learn without the headaches: This book assumes that you can't be expected to learn everything at once; this is why you will build all your skills incrementally. In addition, if you are more of a visual learner, you will gain access to a FREE video training that covers all the topics and features introduced in the book so that you can see how it is done. Make your dream of creating your own games come true: This book ensures that you stay motivated by giving you the right amount of information and challenge in each chapter; we all know that it's hard to keep motivated when learning a new skill, so this book always contextualizes the knowledge with an example (so that you feel it's relevant), and also makes sure that you get to challenge yourself, if you need to, with optional challenges present at the end of each chapter. Progress and feel confident in your skills: You will have the opportunity to learn and to use Unity at your own pace and to become comfortable with its interface. This is because every single new

concept introduced will be explained in great detail so that you never feel lost. All the concepts are introduced progressively so that you don't feel overwhelmed. Create your own games and feel awesome: With this book, you will build your own 2D and 3D environments and you will spend more time creating than reading, to ensure that you can apply the concepts covered in each section. All chapters include step-by-step instructions with examples that you can use straight-away. If you want to get started with Unity today, then buy this book now.

Game Audio with FMOD and Unity - Ciarán Robinson 2019-03-04

Game Audio with FMOD and Unity introduces readers to the principles and practice of game audio through the process of creating their own First Person Shooter (FPS) game. All the basics are covered, as well as a simple introduction to coding. Using the free software Unity and FMOD Audio Middleware, the reader will be able to create a game of their own and develop a portfolio that demonstrates their capacities in interactive sound design. Perfect for classroom use or independent study, Game Audio with FMOD and Unity also comes with a full suite of audio assets provided on a companion website.

Creating Games with Unity, Substance Painter, & Maya - Jingtian Li 2020-12-29

This tutorial-based book allows readers to create a first-person game from start to finish using industry-standard (and free to student) tools of Unity, Substance Painter, and Maya. The first half of the book lays out the basics of using Maya and Substance Painter to create game-ready assets. This includes polygonal modeling, UV layout, and custom texture painting. The book then covers rigging and animation solutions to create assets to be placed in the game, including animated first-person assets and motion-captured NPC animations. Finally, readers can put it all together and build interactivity that allows the player to create a finished game using the assets built and

animated earlier in the book. • Written by industry professionals with real-world experience in building assets and games • Build a complete game from start to finish • Learn what the pros use: construct all assets using the tools used at game studios across the world • All software used are free to students • When complete, students will have a playable version of an FPS game Jingtian Li is a graduate of China's Central Academy of Fine Arts and New York's School of Visual Arts, where he earned an MFA in Computer Art. He currently is an Assistant Professor of 3D Animation & Game Design at the University of the Incarnate Word in San Antonio, Texas. Adam Watkins is a 20-year veteran of 3D education. He holds an MFA in 3D Animation and a BFA in Theatre Arts from Utah State University. He currently is the Coordinator and Professor of the 3D Animation & Game Department at the University of the Incarnate Word in San Antonio, Texas. Kassandra Arevalo is an instructor of 3D Animation & Game Design at the University of the Incarnate Word in San Antonio, Texas. She previously worked as an animator at Immersed Games. Matt Tovar is an industry veteran animator. He has worked at Naughty Dog, Infinity Ward, and Sony Interactive on such games as The Last of Us, Call of Duty: Modern Warfare, and most recently Marvel's Avengers with Crystal Dynamics. He is an Assistant Professor of 3D Animation at the University of the Incarnate Word in San Antonio, Texas.

Mastering Unity 5.x - Alan Thorn 2017-01-27 Create amazing games with solid gameplay features, using a professional-grade workflow inside the Unity engine! About This Book Become a Unity master by creating a practical, in-depth game-development project with Unity Use advanced C# scripting to unlock the complete potential of Unity 5 Use Version Control to Effectively Manage and Scale your workflow Who This Book Is For If you are a Unity developer who now wants to develop and

deploy interesting games by leveraging the new features of Unity 5.x, then this is the book for you. Basic knowledge of C# programming is assumed. What You Will Learn Explore hands-on tasks and real-world scenarios to make a Unity horror adventure game Create enemy characters that act intelligently and make reasoned decisions Use data files to save and restore game data in a way that is platform-agnostic Get started with VR development Use Navigation Meshes, Occlusion Culling, and the Profiler tools Work confidently with GameObjects, Rotations, and Transformations Understand specific gameplay features such as AI enemies, inventory systems, and level design In Detail Do you want to take the leap from being an everyday Unity developer to being a pro game developer? Then look no further! This book is your one stop solution to creating mesmerizing games with lifelike features and amazing gameplay. This book takes an in-depth focus on a practical project with Unity, building a first-person game with many features. You'll dive deep into the architecture of a Unity game, creating expansive worlds, interesting render effects, and other features to make your games special. You will create individual game components, use efficient animation techniques, and implement collision and physics effectively. Specifically, we'll explore optimal techniques for importing game assets, such as meshes and textures; tips and tricks for effective level design; how to animate and script NPCs; how to configure and deploy to mobile devices; how to prepare for VR development; and how to work with version control, and more. By the end of this book, you'll have developed sufficient competency in Unity development to produce fun games with confidence. Style and approach This book takes a step-by-step, practical tutorial approach. You will create an advanced level Unity game with an emphasis on leveraging the advanced Unity 5 features. You will make the most of the Unity 5 advanced features while you develop the game

in its entirety.

Learning C# by Developing Games with Unity 3D - Terry Norton 2013-09-25

This book uses the learning-by-example approach. It takes simple examples from games to introduce all the main concepts of programming in an easy-to-digest and immediately recognizable way.This book is for the total beginner to any type of programming, focusing on the writing of C# code and scripts only. There are many parts that make up the Unity game engine. It is assumed that the reader already knows their way around Unity's user interface. The code editor used in this book is the MonoDevelop editor supplied by Unity.

Unity Multiplayer Games - Alan R. Stagner 2013-12-20

An easy-to-follow, tutorial manner that uses the learning-by-example approach. If you are a developer who wants to start making multiplayer games with the Unity game engine, this book is for you. This book assumes you have some basic experience with programming. No prior knowledge of the Unity IDE is required.

Unreal Engine Game Development Cookbook - John P. Doran 2015-10-30

Over 40 recipes to accelerate the process of learning game design and solving development problems using Unreal Engine About This Book Explore the quickest way to tackle common challenges faced in Unreal Engine Create your own content, levels, light scenes, and materials, and work with Blueprints and C++ scripting An intermediate, fast-paced Unreal Engine guide with targeted recipes to design games within its framework Who This Book Is For This book is for those who are relatively experienced with Unreal Engine 4 and have knowledge of its fundamentals. Working knowledge of C++ is required. What You Will Learn Discover editor functionalities for an in-depth insight into game design Develop environments using terrain for outdoor areas and a workflow for interiors as well using brushes Design various kinds of

materials with unique features, such as mirrors and glows Explore the various ways that lighting can be used in the engine Build various level effects using Blueprints, Unreal's visual scripting system Set up a development environment and develop custom functionality with C++ for your games Create healthbars and main menus with animations using Slate, Unreal's UI solution, through the UMG Editor Package and create an installer to get your project out into the world In Detail Unreal Engine is powerful tool with rich functionalities to create games. It equips you with the skills to easily build mobile and desktop games from scratch without worrying about which platform they will run on. You can focus on the individual complexities of game development such as animation and rendering. This book takes you on a journey to jumpstart your game design efforts. You will learn various aspects of the Unreal engine commonly encountered with practical examples of how it can be used, with numerous references for further study. You will start by getting acquainted with Unreal Engine 4 and building out levels for your game. This will be followed by recipes to help you create environments, place meshes, and implement your characters. You will then learn to work with lights, camera, and shadows to include special effects in your game. Moving on, you'll learn Blueprint scripting and C++ programming to enable you to achieve trigger effects and add simple functionalities. By the end of the book, you will see how to create a healthbar and main menu, and then get your game ready to be deployed and published. Style and approach This book offers detailed, easy-to-follow recipes that will help you master a wide range of Unreal Engine 4's features. Every recipe provides step-by-step instructions, with explanations of how these features work, and alternative approaches and research materials so you can learn even more.

Building an Fps Game with Unity - John P. Doran

2015-10-30

Create a high-quality first person shooter game using the Unity game engine and the popular UFPS and Probuilder frameworksAbout This Book• Learn how to use Unity in conjunction with UFPS and ProBuilder to create a high-quality game quickly• Create both interior and exterior environments• A step-by step guide to building a project with clear examples and instructions to create a number of interesting scenariosWho This Book Is ForThis book is for those who want to create an FPS game in Unity and gain knowledge on how to customize it to be their very own. If you are familiar with the basics of Unity, you will have an easier time, but it should make it possible for someone with no prior experience to learn Unity at an accelerated pace.What You Will Learn• Use UFPS to build custom weapons with custom meshes and behaviors• Explore level design as you prototype levels, making use of Prototype to build levels out quickly• Build environments that are realistic as possible while keeping peak performance and repetitiveness down• Review tips and tricks on how to create environments using both terrain for outdoor areas and a modular workflow for interiors• Develop a number of different encounters that your players can fight against, from a simple turret enemy to complex AI characters from Shooter AI• Discover how to create unique objects such as exploding barrels and objects you can interact with• Create a custom GUI to help your game stand out from the crowd• Package your game for release, create an installer, and get your game out into the world In DetailUnity, available in free and pro versions, is one of the most popular third-party game engines available. It is a cross-platform game engine, making it easy to write your game once and then port it to PC, consoles, and even the web, making it a great choice for both indie and AAA developers.Building an FPS Game in Unity takes readers on an exploration of how to use Unity to

create a 3D first person shooter (FPS) title, leveraging the powerful UFPS framework by VisionPunk and Prototype/ProBuilder 2.0 by ProCore3D.After some setting up, you will start by learning how to create custom weapons, prototype levels, create exterior and interior environments, and breathe life into our levels. We will then add polish to the levels. Finally, we will create a custom GUI and menus for our title to create a complete package.Style and approachAn easy-to-follow guide with each project containing step-by-step explanations, diagrams, screenshots, and downloadable material. Concepts in Unity and C# are explained as they are used and for the more inquisitive, there are more details on the concepts used with additional external resources to learn from.

Unity Games by Tutorials Second Edition - Raywenderlich Com Team 2017-11-16

Learn How to Make Games with the Unity game engine! Unity is a popular game engine used by both by AAA studios and indie game developers alike. This book will introduce you how to create games with Unity whether you have some game development experience or you are a complete beginner. By the time you're finished reading this book, you will have made 4 complete mini-games, modeled your own game assets, and even played with virtual reality! These games include a twin stick shooter, a first person shooter, a 2D platformer, and tower defense game. Topics Covered in Unity Games by Tutorials: GameObjects: Learn about basic building blocks used to create your game. Components: Customize your GameObjects by the way of components. Physics: Unleash the power of the built-in physics engine. Animation: Learn how to bring your models to life through Unity's animation system. Sound: Add depth to your games through Unity's powerful audio tools. Pathfinding: Learn about the pathfinding system to give direction to your monsters. User Interface: Provide custom user interfaces for

players to use in your game. Virtual Reality: Convert one of your games to be played in Virtual Reality. Modeling: Learn the basics of Blender and how to create and animate your creations. Publishing: Learn how to export your game to your computer, web, and mobile devices. Unity 2D: A deep walkthrough on Unity's 2D system. And much more including a C# quick start guide, a Unity API overview, and saving game dat

Unity Game Development Blueprints - John P. Doran 2014-11-11

If you want to build enticing projects with Unity, this book is for you. Readers who are familiar with the basics of how to create simple projects in Unity will have an easier time.

Unity 2017 Mobile Game Development - John P. Doran 2017-11-30

Learn to create, publish and monetize your mobile games with the latest Unity 2017 tool-set easily for Android and iOSAbout This Book* One-stop solution to becoming proficient in mobile game development using Unity 2017* Port your Unity games to popular platforms such as iOS and Android* Unleash the power of C# scripting to create realistic gameplay and animations in Unity 2017. Who This Book Is ForIf you are a game developer and want to build mobile games for iOS and Android, then this is the book for you. Previous knowledge of C# and Unity is helpful, but not required.What You Will Learn* Use Unity to build an endless runner game* Set up and deploy a project to a mobile device* Create interesting gameplay elements using inputs from your mobile device* Monetize your game projects with Unity ads and in-app purchases* Design UI elements that can be used well in Landscape and Portrait mode at different resolutions, supporting phones, tablets, and PCs.* How to submit your game to the iOS and Android app storesIn DetailUnity has established itself as an overpowering force for developing mobile games. If you love mobile games and want to learn how to make them but have no

idea where to begin, then this book is just what you need. This book takes a clear, step-by-step approach to building an endless runner game using Unity with plenty of examples on how to create a game that is uniquely your own.Starting from scratch, you will build, set up, and deploy a simple game to a mobile device. You will learn to add touch gestures and design UI elements that can be used in both landscape and portrait mode at different resolutions. You will explore the best ways to monetize your game projects using Unity Ads and in-app purchases before you share your game information on social networks. Next, using Unity's analytics tools you will be able to make your game better by gaining insights into how players like and use your game. Finally, you'll learn how to publish your game on the iOS and Android App Stores for the world to see and play along.Style and approachThis book takes a clear, step-by-step approach for Unity game developers to explore everything needed to develop mobile games with Unity.

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Create a high-quality first person shooter game using the Unity game engine and the popular UFPS and Probuilder frameworks About This Book Learn how to use Unity in conjunction with UFPS and ProBuilder to create a high-quality game quickly Create both interior and exterior environments A step-by step guide to building a project with clear examples and instructions to create a number of interesting scenarios Who This Book Is For This book is for those who want to create an FPS game in Unity and gain knowledge on how to customize it to be their very own. If you are familiar with the basics of Unity, you will have an easier time, but it should make it possible for someone with no prior experience to learn Unity at an accelerated pace. What You Will Learn Use UFPS to build custom weapons with custom meshes and behaviors Explore level design as you prototype levels, making use of Prototype to build levels

out quickly Build environments that are realistic as possible while keeping peak performance and repetitiveness down Review tips and tricks on how to create environments using both terrain for outdoor areas and a modular workflow for interiors Develop a number of different encounters that your players can fight against, from a simple turret enemy to complex AI characters from Shooter AI Discover how to create unique objects such as exploding barrels and objects you can interact with Create a custom GUI to help your game stand out from the crowd Package your game for release, create an installer, and get your game out into the world In Detail Unity, available in free and pro versions, is one of the most popular third-party game engines available. It is a cross-platform game engine, making it easy to write your game once and then port it to PC, consoles, and even the web, making it a great choice for both indie and AAA developers. Building an FPS Game in Unity takes readers on an exploration of how to use Unity to create a 3D first person shooter (FPS) title, leveraging the powerful UFPS framework by VisionPunk and Prototype/ProBuilder 2.0 by ProCore3D. After some setting up, you will start by learning how to create custom weapons, prototype levels, create exterior and interior environments, and breathe life into our levels. We will then add polish to the levels. Finally, we will create a custom GUI and menus for our title to create a complete package. Style and approach An easy-to-follow guide with each project containing step-by-step explanations, diagrams, screenshots, and downloadable material. Concepts in Unity and C# are explained as they are used and for the more inquisitive, there are more details on the concepts used with additional external resources to learn from.

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 season 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.

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inputs from your mobile device Monetize your game projects with Unity ads and in-app purchases Design UI elements that can be used well in Landscape and Portrait mode at different resolutions, supporting phones, tablets, and PCs. How to submit your game to the iOS and Android app stores In Detail Unity has established itself as an overpowering force for developing mobile games. If you love mobile games and want to learn how to make them but have no idea where to begin, then this book is just what you need. This book takes a clear, step-by-step approach to building an endless runner game using Unity with plenty of examples on how to create a game that is uniquely your own. Starting from scratch, you will build, set up, and deploy a simple game to a mobile device. You will learn to add touch gestures and design UI elements that can be used in both landscape and portrait mode at different resolutions. You will explore the best ways to monetize your game projects using Unity Ads and in-app purchases before you share your game information on social networks. Next, using Unity's analytics tools you will be able to make your game better by gaining insights into how players like and use your game. Finally, you'll learn how to publish your game on the iOS and Android App Stores for the world to see and play along. Style and approach This book takes a clear, step-by-step approach for Unity game developers to explore everything needed to develop mobile games with Unity.

Learning C# by Developing Games with Unity 2019 - Harrison Ferrone 2019-03-30

Unity, the world's leading real-time engine, is used to create half of the world's games. This book will teach programming newcomers the C# language in a fun and accessible way through game development. No prior programming or game development experience is required, only a curious mind.

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.

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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 season 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.