

Unity In Action Second Edition Multiplatform Game Development In C

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Unity AI Programming Essentials - Curtis Bennett 2014-12-22

This book is aimed at developers who know the basics of game development with Unity and want to learn how to add AI to their games. You do not need any previous AI knowledge; this book will explain all the essential AI concepts and show you how to add and use them in your games.

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 design and build all 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.

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.

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.

[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.

Mastering Android Game Development with Unity - Siddharth Shekar
2017-05-25

Create enthralling Android games with Unity Faster Than Ever Before About This Book Develop complex Android games with the help of Unity's advanced features such as artificial intelligence, high-end physics, and GUI transformations. Create amazing Graphical User Interfaces (GUIs) with Unity's new uGUI system Unravel and deploy exciting games across Android devices Who This Book Is For If you are a Unity 5 developer and want to expand your knowledge of Unity 5 to create high-end complex Android games, then this book is for you. Readers are expected to have a basic understanding of Unity 5, working with its environment, and its basic concepts. What You Will Learn Develop your own Jetpack Joyride clone game Explore the advanced features of Unity 5 by building your own Action Fighting game Develop remarkable Graphical User Interfaces (GUIs) with Unity's new uGUI system Enhance your game by adding

stunning particle systems and complex animations Build pleasing virtual worlds with special effects, lights, sky cube maps, and cameras Make your game more realistic by providing music and sound effects Debug and deploy your games on different Android devices In Detail Game engines such as Unity are the power-tools behind the games we know and love. Unity is one of the most widely-used and best loved packages for game development and is used by everyone, from hobbyists to large studios, to create games and interactive experiences for the Web, desktop, mobile, and console. With Unity's intuitive, easy-to-learn toolset and this book, it's never been easier to become a game developer. You will begin with the basic concepts of Android game development, a brief history of Android games, the building blocks of Android games in Unity 5, and the basic flow of games. You will configure an empty project for the Jetpack Joyride Clone Game, add an environment and characters, and control them. Next you will walk through topics such as particle systems, camera management, prefabs, animations, triggers, colliders, and basic GUI systems. You will then cover the basic setup for 3D action fighting games, importing models, textures and controlling them with a virtual on-screen joystick. Later you will set up Scene for 3D Configuration, create basic gameplays, and manage input controls. Next you will learn to create the interface for the main menu, gameplay, game over, achievements, and high score screens. Finally you will polish your game with stats, sounds, and Social Networking, followed by testing the game on Android devices and then publishing it on Google Play, Amazon, and OUYA Stores. Style and approach A step-by-step and detailed guide to developing high-end complex Android games utilizing the advanced concepts of Unity.

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.

Unity Certified Programmer: Exam Guide - Philip Walker 2020-06-30
A practical guide to Unity game scripting using C#, backed with practice tests, exam tips, and easy-to-follow examples to help you better prepare for the exam and become a pro in Unity programming Key

Features Discover the essentials of game scripting with Unity and C# to customize every aspect of your game Overcome challenges in Unity game development using effective techniques and easy solutions Pass the Unity certification exam with the help of mock tests, exam tips, and self-assessment questions Book Description Unity Certified Programmer is a global certification program by Unity for anyone looking to become a professional Unity developer. The official Unity programmer exam will not only validate your Unity knowledge and skills, but also enable you to be part of the Unity community. This study guide will start by building on your understanding of C# programming and take you through the process of downloading and installing Unity. You'll understand how Unity works and get to grips with the core objectives of the Unity exam. As you advance, you'll enhance your skills by creating an enjoyable side-scrolling shooter game that can be played within the Unity Editor or any recent Android mobile device. This Unity book will test your knowledge with self-assessment questions and help you take your skills to an advanced level by working with Unity tools such as the Animator, Particle Effects, Lighting, UI/UX, Scriptable Objects, and debugging. By

the end of this book, you'll have developed a solid understanding of the different tools in Unity and understand how to create impressive Unity applications by making the most of its toolset. What you will learnDiscover techniques for writing modular, readable, and reusable scripts in UnityImplement and configure objects, physics, controls, and movements for your game projectsUnderstand 2D and 3D animation and write scripts that interact with Unity's Rendering APIExplore Unity APIs for adding lighting, materials, and texture to your appsWrite Unity scripts for building interfaces for menu systems, UI navigation, application settings, and much moreDelve into SOLID principles for writing clean and maintainable Unity applicationsWho this book is for The book is for game developers, software developers, mobile app developers, and Unity developers who want to advance in the game or related industry. Basic knowledge of C# programming and Unity engine is required.

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

The Unity Engine Tutorial for Any Game Creator ĩ 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. ĩ 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. ĩ 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. ĩ Register your book at informit.com/title/9780321957726 to access assets, code listings, and video tutorials on the companion website. ĩ 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 ĩ

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 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 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 platforms
Take your games into the real world by adding augmented reality features to your mobile projects
Kick-start your mobile game development journey with step-by-step instructions and a demo game project
Book 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 learn

Design responsive user interfaces for your mobile games
Detect collisions, receive user input, and create player movements for your mobile games
Create interesting gameplay elements using inputs from your mobile device
Explore the mobile notification package in Unity game engine to keep players engaged
Create interactive and visually appealing content for Android and iOS devices
Monetize your game projects using Unity Ads and in-app purchases

Who 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.

[Game Audio Development with Unity 5.X](#) - Micheal Lanham 2017-06-30

Create 'AAA' quality game audio with new features and tools built for Unity

About This Book
Explore the basics of audio development in Unity to create spatial sound, mixing, effects, composition, adaptive audio and more. Leverage the Audio Mixer of Unity 5.x to create blockbuster sound and music for your game. Learn about developing professional audio for games with FMOD Studio and composing original music with Reaper. Build amazing audio synchronized graphic visualizations with Unity. Understand how real-time character lip syncing can be implemented.

Who This Book Is For
The ideal target audience for this book will be game developers, both Indie as well as semi pro. No prior knowledge of Unity and audio development is assumed, What You Will Learn
Develop game audio and other audio effects with Unity
Getting familiar with the new Audio Mixer introduced in Unity 5
Implement dynamic and adaptive audio using various tools and strategies
Explore interesting ways to incorporate audio into a game with sound visualization
Use 3rd party professional audio development tools like FMOD
Compose original music and record vocals
Understand and troubleshoot audio performance issues

In Detail
Game Audio is one of the key components in making a game successful and it is quite popular in the gaming industry. So if you are a game developer with an eye on capturing the gamer market then

this book is the right solution for you. In this book, we will take you through a step by step journey which will teach you to implement original and engaging soundtracks and SFX with Unity 5.x. You will be firstly introduced to the basics of game audio and sound development in Unity. After going through the core topics of audio development: audio sources, spatial sound, mixing, effects, and more; you will then have the option of delving deeper into more advanced topics like dynamic and adaptive audio. You will also learn to develop dynamic and adaptive audio using the Unity Audio Mixer. Further, you will learn how professional third party tools like FMOD are used for audio development in Unity. You will then go through the creation of sound visualization techniques and creating your own original music using the simple yet powerful audio workstation Reaper. Lastly, you will go through tips, techniques and strategies to help you optimize game audio performance or troubleshoot issues. At the end of the book, you'll have gained the skills to implement professional sound and music. Along with a good base knowledge audio and music principles you can apply across a range of other game development tools. Style and approach
This book will have a step by step practical approach where downloadable free games will be given with the book and readers will be free to work with them.

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.

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.

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.

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 2018 By Example - Alan Thorn 2018-07-31

Build exciting 2D/3D games and virtual reality applications with the help of hands-on examples Key Features Create five different types of games from scratch with Unity 2018 Import custom content into Unity from third-party tools such as Maya and Blender Learn to build NPCs with artificial intelligent behavior. Book Description Unity is the most exciting and popular engine used for developing games. With its 2018 release, Unity has become the primary source of both game development and virtual reality content. In Unity 2018 By Example, you'll learn how to use Unity in order to make amazing games from popular genres - from action shooters to mind-bending puzzle games to adventure and Virtual Reality (VR) games. Even if you have no previous experience of using Unity, this book will help you understand the toolsets it provides in depth. In addition to this, you'll understand how to create time-critical collection

games, twin-stick space shooters, platformers, and action-fest games with intelligent enemies. Finally, you'll get to grips with creating VR games with the new toolsets introduced by Unity to help you develop amazing VR experiences. To make things easier, you will be provided with step-by-step tutorials for making five great games in Unity 2018, along with a detailed explanation of all the fundamental concepts. By the end of this book, you'll have established a strong foundation in making games with Unity 2018. What you will learn Understand core Unity concepts, such as game objects, components, and scenes Study level-design techniques for building immersive and interesting worlds Make functional games with C# scripting Use the toolset creatively to build games with different themes and styles Handle player controls and input functionality Work with terrains and world-creation tools Get to grips with making both 2D and 3D games Who this book is for You don't need to have any previous experience with Unity to enjoy Unity 2018 By Example, although you need to have basic knowledge of C#.

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.

The Ultimate Guide to 2D games with Unity - Patrick Felicia 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 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

Learn Unity for 2D Game Development - Alan Thorn 2013-10-25 2D games are everywhere, from mobile devices and websites to game consoles and PCs. Timeless and popular, 2D games represent a substantial segment of the games market. In *Learn Unity for 2D Game Development*, targeted at both game development newcomers and established developers, experienced game developer Alan Thorn shows you how to use the powerful Unity engine to create fun and imaginative 2D games. Written in clear and accessible language, *Learn Unity for 2D Game Development* will show you how to set up a step-by-step 2D workflow in Unity, how to build and import textures, how to configure and work with cameras, how to establish pixel-perfect ratios, and all of this so you can put that infrastructure to work in a real, playable game. Then the final chapters show you how to put what you've already made to work in creating a card-matching game, plus you'll learn how to optimize

your game for mobile devices.

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 - 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

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.

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.

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.

SDL Game Development - Shaun Mitchell 2013-01-01

Written as a practical and engaging tutorial, SDL Game Development guides you through developing your own framework and the creation of two engaging games. If you know C++ and you're looking to make great games from the ground up, then this book is perfect for you.

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.

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 Optimization - Dr. Davide Aversa 2019-11-29

Unity is a powerful game engine. However, producing a performant product requires additional knowledge. This book is a comprehensive introduction to optimization techniques and best practices. By the end of the book you will be able to apply all the major optimization techniques and be able to produce faster and high performant games.

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.

2D Graphics Programming for Games - John Pile Jr. 2016-04-19

The success of *Angry Birds*, *Peggle*, and *Fruit Ninja* has proven that fun and immersive game experiences can be created in two dimensions. Furthermore, 2D graphics enable developers to quickly prototype ideas

and mechanics using fewer resources than 3D. *2D Graphics Programming for Games* provides an in-depth single source on creating 2D graphics that c

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.

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.

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.

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.

Godot Engine Game Development Projects - Chris Bradfield 2018-06-29
A project based guides to learn animation, advanced shaders, environments, particle rendering, and networked games with Godot 3.0
Key Features
Learn the art of developing cross-platform games
Leverage Godot's node and scene system to design robust, reusable game objects
Integrate Blender easily and efficiently with Godot to create powerful 3D games
Book Description
Godot Engine Game Development Projects is an introduction to the Godot game engine and its new 3.0 version. Godot 3.0 brings a large number of new features and capabilities that make it a strong alternative to expensive commercial game engines. For beginners, Godot offers a friendly way to learn game development techniques, while for experienced developers it is a powerful, customizable tool that can bring your visions to life. This book consists of five projects that will help developers achieve a sound understanding of the engine when it comes to building games. Game development is complex and involves a wide spectrum of knowledge and skills. This book can help you build on your foundation level skills by showing you how to create a number of small-scale game projects. Along the way, you will learn how Godot works and discover important game development techniques that you can apply to your projects. Using a straightforward, step-by-step approach and practical examples, the book will take you from the absolute basics through to sophisticated game physics, animations, and other techniques. Upon completing the final project, you will have a strong foundation for future success with Godot 3.0. What you will learn
Get started with the Godot game engine and editor
Organize a game project

Import graphical and audio assets
Use Godot's node and scene system to design robust, reusable game objects
Write code in GDScript to capture input and build complex behaviors
Implement user interfaces to display information
Create visual effects to spice up your game
Learn techniques that you can apply to your own game projects
Who this book is for
Godot Engine Game Development Projects is for both new users and experienced developers, who want to learn to make games using a modern game engine. Some prior programming experience in C and C++ is recommended.

Creating Games in C++ - David Conger 2006
CD-ROM contains Dev-C++ version 4.9.9.2, LlamaWorks2D game engine, GNU Image Manipulation Program (GIMP), Audacity Audio Editor and Recorder, FruityLoops Studio Lite, Formati graphics converter and POV-Ray Tracer 3.6.
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.