

# Learning Unity 2d Game Development By Example By Venita

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*Game Development with Unity and C# - Monster Eats Candy - Raja Biswas 2019*  
Learn Unity game development & C# scripting. Build games with Unity and use Unity 2018 & C# to build 2D games. About This Video This course has been specifically designed for people with a basic understanding and some prior knowledge of coding and the relevant terminology. Some programming experience is preferable as this course focuses solely on Google's real-time database, Firebase. In Detail Want to learn how to build games by building small, simple and fun games? Then this is the perfect course for you. After finishing this course, you will have built fully functional games with Unity and C#. Learn the basic concepts, tools, and functions that you will need to build fully functional games with C# and the Unity game engine. Build a strong foundation in Unity Game Development with this course. Get Started with Unity's 2D Components Create your portfolio of game projects Learning the fundamentals of Unity 2D & 3D game development puts a powerful and very useful tool at your fingertips. Unity is free, easy to learn, has excellent documentation, and is the game engine used for building games. Jobs in Unity game development are plentiful and being able to learn C# scripting along with Unity game development will give you a strong background from which to build awesome

games more easily. Content and Overview - Starting with the installation of Unity and Visual Studio, this course will take you through the process of learning game development with Unity by building 5 awesome 2D & 3D game projects. You will build your first 2D game in 1 hour. For the beginner programmers, there's a separate section about C# scripting, which will teach the fundamentals of C# scripting for game development in Unity. With these basics mastered, the course will take you through building different example games with Unity to learn more about the process of creating mobile android games with Unity. Students completing the course will have the knowledge to create fully-functional games with Unity and C# and will be able to use their C# skills to build any other useful program they want. Downloading the example code for this course: You can download the example code files for this course on GitHub at the following link: <https://github.com/PacktPublishing/Game-Development-with-Unity-and-C-Monster-Eats-Candy> . If you require support please email: [customercare@packt.com](mailto:customercare@packt.com). [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.

**Unity 2D Game Development** - Dave Calabrese 2014-03

A fun, easytofollow experience that takes you from an empty project in Unity 4.3+ all the way to a finished, functional 2D platformer, while giving you challenges and ideas to take what you learn in this book and expand upon it. This book is ideal for anyone who wants to learn how to build 2D video games or who just wants to expand their knowledge of the Unity game engine. It would be helpful to know how to navigate your way around Unity and some basic C# before getting started with this book; however, if you don't, no worries - we will point you in the right direction!

[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.

[Unity Game Development Scripting](#) - Kyle D'Aoust 2014-12-22

If you are new to Unity scripting and want to learn simple and modular code and advance your knowledge to the next level, this is the book for you.

**Game Development with Unity** - Michelle Menard 2012

Provides information on using the Unity game engine to build games for any platform, including the Web, the Wii, and on smartphones.

**Unity 5.x 2D Game Development Blueprints** - Francesco Sapio 2016

Explore the features of Unity 5 for 2D game development by building three amazing game projects About This Book Explore the

2D architecture of Unity 5, and the tools and techniques for developing 2D games  
Discover how to use Unity's 2D tools, including Sprites, physics, and maps, to create different genres of games  
Practical tutorial on the intermediate and advanced development concepts in Unity 5 to create three interesting and fully functional games  
Who This Book Is For If you've got the basics of 2D development down, push your skills with the projects in this hands-on guide.  
Diversify your portfolio and learn the skills needed to build a range of awesome 2D game genres.  
What You Will Learn Explore and understand the vital role of sprites in 2D games  
Move, animate, and integrate sprites into a 2D platform game  
Set up User Interfaces (UIs) to keep track of the progress through the games  
Apply 2D Physics to improve gameplay believability  
Learn the foundation of Level Design and how to quickly create 2D Maps  
Discover NPC design, event triggers, and AI programming  
Create an epic strategy game, challenging all the skills acquired in the book  
In Detail Flexible, powerful, and full of rich features, Unity 5 is the engine of choice for AAA 2D and 3D game development. With comprehensive support for over 20 different platforms, Unity boasts a host of great new functions for making 2D games. Learn how to leverage these new options into awesome 2D games by building three complete game projects with the Unity game tutorials in this hands-on book. Get started with a quick overview of the principle concepts and techniques needed for making 2D games with Unity, then dive straight in to practical development. Build your own version of Super Mario Brothers as you learn how to animate sprites, work with physics, and construct brilliant UIs in order to create a platformer game. Go on a quest to create a RPG game discovering NPC design, event triggers, and AI programming. Finally, put your skills to the test against a real challenge - designing and constructing a complex strategy game that will draw on and develop all your previously learned skills.  
Style and approach This is a practical and easy-to-follow guide that starts with the

basics and gradually delves into the process of creating 2D games. With step-by-step instructions on how to build three games, followed by a detailed explanation of each example, you will understand the concepts not just in theory, bu...

### **Mastering Unity 2D Game Development**

- Ashley Godbold 2016-10-21

Master everything you need to build a 2D game using Unity 5 by developing a complete RPG game framework!  
About This Book Explore the new features of Unity 5 and recognize obsolete code and elements. Develop and build a complete 2D retro RPG with a conversation system, inventory, random map battles, full game menus, and sound. This book demonstrates how to use the new Unity UI system effectively through detailed C# scripts with full explanations.  
Who This Book Is For This book is for anyone looking to get started developing 2D games with Unity 5. If you're already accomplished in Unity 2D and wish to expand or supplement your current Unity knowledge, or are working in 2D in Unity 4 and looking to upgrade Unity 5, this book is for you. A basic understanding of programming logic is needed to begin learning with this book, but intermediate and advanced programming topic are explained thoroughly so that coders of any level can follow along. Previous programming experience in C# is not required.  
What You Will Learn Create a 2D game in Unity 5 by developing a complete retro 2D RPG framework. Effectively manipulate and utilize 2D sprites. Create 2D sprite animations and trigger them effectively with code. Write beginning to advanced-level C# code using MonoDevelop. Implement the new UI system effectively and beautifully. Use state machines to trigger events within your game.  
In Detail The Unity engine has revolutionized the gaming industry, by making it easier than ever for indie game developers to create quality games on a budget. Hobbyists and students can use this powerful engine to build 2D and 3D games, to play, distribute, and even sell for free! This book will help you master the 2D features available in Unity 5, by walking you

through the development of a 2D RPG framework. With fully explained and detailed C# scripts, this book will show you how to create and program animations, a NPC conversation system, an inventory system, random RPG map battles, and full game menus. After your core game is complete, you'll learn how to add finishing touches like sound and music, monetization strategies, and splash screens. You'll then be guided through the process of publishing and sharing your game on multiple platforms. After completing this book, you will have the necessary knowledge to develop, build, and deploy 2D games of any genre! Style and approach This book takes a step-by-step practical tutorial style approach. The steps are accompanied by examples, and all the intermediate steps will be clearly explained. The focus of this book will obviously be on the advanced topics so that the game looks and performs efficiently.

*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.

*Unity 5.x 2D Game Development Blueprints* - Francesco Sapio 2016-09-30

Explore the features of Unity 5 for 2D game development by building three amazing game projects About This Book Explore the 2D architecture of Unity 5, and the tools and techniques for developing 2D games Discover how to use Unity's 2D tools, including Sprites, physics, and maps, to create different genres of games Practical tutorial on the intermediate and advanced development concepts in Unity 5 to create three interesting and fully functional games Who This Book Is For If you've got the basics of 2D development down, push your skills with the projects in this hands-on guide. Diversify your portfolio and learn the skills needed to build a range of awesome 2D game genres. What You Will Learn Explore and understand the vital role of

sprites in 2D games Move, animate, and integrate sprites into a 2D platform game Set up User Interfaces (UIs) to keep track of the progress through the games Apply 2D Physics to improve gameplay believability Learn the foundation of Level Design and how to quickly create 2D Maps Discover NPC design, event triggers, and AI programming Create an epic strategy game, challenging all the skills acquired in the book In Detail Flexible, powerful, and full of rich features, Unity 5 is the engine of choice for AAA 2D and 3D game development. With comprehensive support for over 20 different platforms, Unity boasts a host of great new functions for making 2D games. Learn how to leverage these new options into awesome 2D games by building three complete game projects with the Unity game tutorials in this hands-on book. Get started with a quick overview of the principle concepts and techniques needed for making 2D games with Unity, then dive straight in to practical development. Build your own version of Super Mario Brothers as you learn how to animate sprites, work with physics, and construct brilliant UIs in order to create a platformer game. Go on a quest to create a RPG game discovering NPC design, event triggers, and AI programming. Finally, put your skills to the test against a real challenge - designing and constructing a complex strategy game that will draw on and develop all your previously learned skills. Style and approach This is a practical and easy-to-follow guide that starts with the basics and gradually delves into the process of creating 2D games. With step-by-step instructions on how to build three games, followed by a detailed explanation of each example, you will understand the concepts not just in theory, but also by applying the knowledge you gain in practice.

**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 2D Game Development by Example*

*Beginner's Guide* - Venita Pereira  
2014-08-14

If you are interested in creating your very own 2D games from scratch, then this book will give you all the tools you need to succeed. Whether you are completely new to Unity or have used Unity before and would like to learn about the new 2D features of Unity, this book is for you.

**Basic Math for Game Development with Unity 3D** - Kelvin Sung 2019-12-05

Use Unity-based examples to understand fundamental mathematical concepts and see how they are applied when building modern video game functionality. You will gain the theoretical foundation you need, and you will know how to examine and modify an implementation. This book covers points in a 3D Cartesian coordinate system, and then discusses vectors and the details of dot and cross products. Basic mathematical foundations are illustrated through Unity-based example implementations. Also provided are examples showing how the concepts are applied when implementing video game functionality, such as collision support, motion simulations, autonomous behaviors, shadow approximations, and reflection off arbitrary walls. Throughout this book, you learn and examine the concepts and their applications in a game engine. What You Will Learn Understand the basic concepts of points and vectors and their applications in game development Apply mathematical concepts to modern video game functionality, such as spherical and box colliders Implement autonomous behaviors, including following way points, facing a target, chasing an object, etc. Who This Book is For Beginners, and those interested in the implementation of interactive games, who need a basic mathematical background or a refresher with modern examples

**Complete Unity 2018 Game Development** - Alan Thorn 2019-01-31

Leverage the power of the Unity 2018 game engine to create games with brilliant gameplay and high replayability. Key Features Develop different types of games from scratch with Unity 2018 Discover the

secrets of creating AAA quality shaders without writing long algorithms Script intelligent game characters and agents using Artificial Intelligence techniques and algorithms Book Description Through this Learning Path, you'll learn how to leverage the features of Unity and create amazing games, ranging from action shooters and mind-bending puzzle games to adventure and Virtual Reality(VR) games. If you have no prior experience of using Unity, you can still benefit from this Learning Path, which easily explains the complete working of the Unity toolset. You'll start by learning how to create compelling shaders using Unity and understanding everything you need to know about vectors. This includes useful inputs on how lighting is constructed with vectors and how textures are used to create complex effects without the need for advanced math. In the succeeding chapters, you'll also be able to use popular AI techniques, such as A\* and A\*mbush to develop intelligent pathfinding agents for your games. The book will also guide you through different algorithms for creating decision-making agents that go beyond simple behaviors and movement. By the end of this Learning Path, you will have developed all the basic skills to create highly engaging and replayable games. This Learning Path includes content from the following Packt products: Unity 2018 By Example - Second Edition by Alan Thorn Unity 2018 Shaders and Effects Cookbook - Third Edition by John P. Doran, Alan Zucconi Unity 2018 Artificial Intelligence Cookbook - Second Edition by Jorge Palacios What you will learn Understand concepts such as game objects, components, and scenes Create functional games with C# scripting Write shaders from scratch in ShaderLab and HLSL/Cg Develop intelligent pathfinding agents with A and Ambush Work with terrains and world-creation tools Simulate senses for agents to make decisions based on the environment Implement waypoints by creating a manual selector Enhance games with volumetric explosions, special effects, and visuals Who this book is for If you are a game developer who wants to learn tools that can transform

your gameplay, this beginner-level Learning Path is ideal for you. Having basic knowledge of C# will help you grasp the concepts explained in the book easily.

### **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.

### **Learning Android Game Development -**

Nikhil Malankar 2017-05-26

Learn the art of making Android games and turn your game development dreams into reality About This Book Leverage the latest features of Android N to create real-world 2D games Architect a 2D game from scratch and level up your Android game development skill Transition from developing simple 2D games to 3D games using basic Java code Who This Book Is For If you are a mobile developer who has basic Java programming knowledge, then this book is ideal for you. Previous Android development experience is not needed; however, basic mobile development knowledge is essential. What You Will Learn Understand the nuts and bolts of developing highly interactive and interesting games for Android N Link the interface to the code used in games through simple methods Interact with the images on the screen and also learn to animate them Set and save the game state and save high scores, hit points, and so on for your games Get a grasp of various collision techniques and implement the bounding box technique Convert your 2D games to 3D games using Android N Get an understanding of the process of UI creation using Android Studio In Detail In this book, we'll start with installing Android studio and its components, and setting it up ready for Android N. We teach you how to take inputs from users, create images and interact with them, and work with sprites to create animations. You'll then explore the various collision detection methods and use sprites to create an explosion. Moving on, you'll go through the process of UI creation and see how to create buttons as well as display the score and other parameters on screen. By the end of the book, you will have a working example and an

understanding of a 2D platform game like Super Mario and know how to convert your 2D games to 3D games. Style and approach This easy-to-understand guide follows a step-by-step approach to building games, and contains plenty of graphical examples for you to follow and grasp quickly, giving you the chance to implement the concepts practically.

### **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](http://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 &

### Mastering Unity 2D Game Development - Moaml Mohmmed 2019-07-28

Mastering Unity 2D Game Development, is for the novice game programmer without any prior programming experience. Readers will learn how C# is used to make a game in Unity 3D. Many example projects provide working code to learn from and experiment with. As C# evolves, Unity 3D evolves along with it. Many new features and aspects of C# are included and explained. Common programming tasks are taught by way of making working game mechanics. The reader will understand how to read and apply C# in Unity 3D and apply that knowledge to other development environments that use C#. New to this edition: includes latest C# language features and useful tools included with the .NET library like LINQ, Local Functions Tuples, and more!Key Features- Provides a starting point for the first-time programmer- C# Code examples are simple short and clear- Learn the very basics on up to interesting tricks which C# offers

### *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.

### **Pro Unity Game Development with C#** - Alan Thorn 2014-05-29

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.

C++ Game Development By Example - Siddharth Shekar 2019-05-03

Explore modern game programming and rendering techniques to build games using C++ programming language and its popular libraries  
Key Features  
Learn how you can build basic 2D and complex 3D games with C++  
Understand shadows, texturing, lighting, and rendering in 3D game development using OpenGL  
Uncover modern graphics programming techniques and GPU compute methods using the Vulkan API  
Book Description  
Although numerous languages are currently being used to develop games, C++ remains the standard for fabricating expert libraries and tool chains for game development. This book introduces you to the world of game development with C++. C++ Game Development By Example starts by touching upon the basic concepts of math, programming, and computer graphics and

creating a simple side-scrolling action 2D game. You'll build a solid foundation by studying basic game concepts such as creating game loops, rendering 2D game scenes using SFML, 2D sprite creation and animation, and collision detection. The book will help you advance to creating a 3D physics puzzle game using modern OpenGL and the Bullet physics engine. You'll understand the graphics pipeline, which entails creating 3D objects using vertex and index buffers and rendering them to the scene using vertex and fragment shaders. Finally, you'll create a basic project using the Vulkan library that'll help you get to grips with creating swap chains, image views, render passes, and frame buffers for building high-performance graphics in your games. By the end of this book, you'll be ready with 3 compelling projects created with SFML, the Vulkan API, and OpenGL, and you'll be able take your game and graphics programming skills to the next level. What you will learn  
Understand shaders and how to write a basic vertex and fragment shader  
Build a Visual Studio project and add SFML to it  
Discover how to create sprite animations and a game character class  
Add sound effects and background music to your game  
Grasp how to integrate Vulkan into Visual Studio  
Create shaders and convert them to the SPIR-V binary format  
Who this book is for  
If you're a developer keen to learn game development with C++ or get up to date with game development, this book is for you. Some knowledge of C++ programming is assumed.

*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.

*Unity 2017 2D Game Development Projects* - Lauren S. Ferro 2018-01-19

Build classic arcade, shooter and platform games with Unity 2D toolset Key Features Leverage the amazing new functionalities of the latest Unity 2017 2D toolkit. Learn to create 2D characters, animations, fast and efficient game play experiences while keeping your games very lightweight Create engaging games that enable you to perform intergalactic warfare and also fun games similar to temple run and so on. Book Description 2D games are everywhere! Timeless and popular, 2D games represent a substantial segment of the games market. The Unity engine has revolutionized the gaming industry, by making it easier for game developers to create quality games on a budget. If you are looking for a guide to create 2D games using Unity 2017, look no further. With this book, you will learn all the essentials of 2D game development by creating three epic games in a step-by-step manner throughout the course of this book. The first game will have you collecting as many cakes as possible. The second will transport you to outer space to traverse as far as possible while avoiding enemy spaceships. The last game will have you running and jumping across platforms to collect coins and other exotic items. Throughout all these three games, you will create characters, make them move, and create some enemies. And then, of course, write code to destroy them!. After showing you the necessities of creating a game, this book will then help you to porting the game to a mobile platform, and provide a path to publish it on the stores. By the end of this book, you will not only have created three complete great games, but be able to apply your knowledge to create and deploy your own games. What you will learn Work with

Unity 2017's new 2D workflow and create a 2D scene Set the scene with different types of backgrounds, either static or dynamically using a tileset Bring your character to life through simple animations Understand the core concepts of programming by creating basic code that controls a character and destroys an enemy Create buttons and game controls by using code snippets for input detection Develop three 2D games from genres such as classic arcade, space shooter, and platformer games Add audio and feedback and deploy your games Who this book is for If you are interested in creating your very own 2D games from scratch, then this book will give you all the tools you need to succeed. No C# knowledge is required, all you need is basic coding and scripting knowledge. Whether you are completely new to Unity or have used Unity before and would like to learn about the new 2D features of Unity, this book is for you.

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

Follow a walkthrough of the Unity Engine and learn important 2D-centric lessons in scripting, working with image assets, animations, cameras, collision detection, and state management. In addition to the fundamentals, you'll learn best practices, helpful game-architectural patterns, and how to customize Unity to suit your needs, all in the context of building a working 2D game. While many books focus on 3D game creation with Unity, the easiest market for an independent developer to thrive in is 2D games. 2D games are generally cheaper to produce, more feasible for small teams, and more likely to be completed. If you live and breathe games and want to create them then 2D games are a great place to start. By focusing exclusively on 2D games and Unity's ever-expanding 2D workflow, this book gives aspiring independent game developers the tools they need to thrive. Various real-world examples of independent games are used to teach fundamental concepts of developing 2D games in Unity, using the very latest tools in Unity's updated 2D workflow. New all-digital channels for

distribution, such as Nintendo eShop, Xbox Live Marketplace, the Playstation Store, the App Store, Google Play, itch.io, Steam, and GOG.com have made it easier than ever to discover, buy, and sell games. The golden age of independent gaming is upon us, and there has never been a better time to get creative, roll up your sleeves, and build that game you've always dreamed about.

Developing 2D Games with Unity can show you the way. What You'll Learn Delve deeply into useful 2D topics, such as sprites, tile slicing, and the brand new Tilemap feature. Build a working 2D RPG-style game as you learn. Construct a flexible and extensible game architecture using Unity-specific tools like Scriptable Objects, Cinemachine, and Prefabs. Take advantage of the streamlined 2D workflow provided by the Unity environment. Deploy games to desktop Who This Book Is For Hobbyists with some knowledge of programming, as well as seasoned programmers interested in learning to make games independent of a major studio.

Learning Unity iOS Game Development - Kyle Langley 2015-09-29

Build exciting games with Unity on iOS and publish them on the App Store About This Book Take advantage of Unity 5's new tools to create a fully interactive mobile game Learn how to connect your iTunes developer account and use Unity 5 to communicate with it Use your Macintosh computer to publish your game to the App Store Who This Book Is For This book is for iOS developers who want to learn how to build games with Unity for the iOS platform. Some prior experience in game development would be useful. What You Will Learn Create your own iTunes Connect Developer account and create an app within it Set up iTunes Game Center features in iTunes Connect so you can use them within Unity 5 Construct a game using C# that allows users to interactively control the game character Use Unity 5's editor window to create a custom editor tool specific for the game made in the book Store and keep track of data so the player is able to collect in-game pick-ups that can be used to purchase in-game goods

Use all game features so the player is able to fully navigate menus between the front menu and in the game state Make, test, and finally release builds so you can play on your device and then submit the game to Apple for review In Detail Over recent years, the market for mobile game development using Unity has grown multi-fold with an overwhelming 600 million gamers playing games developed using Unity engine. The newly launched Unity 5 offers a wide range of dedicated and powerful tools for iOS developers who intend to follow the basics and gradually elevate their skills to revolutionize the way they design and publish games for the App Store. From beginners, to those who are experienced making video games, this book goes through the steps of using Unity 5 to make a game from the ground up and setting the game up with iTunes Game Center features. The book begins with an introduction to setting up an iTunes Connect developer account, this will allow you to use Unity to its full potential with iOS. You will create a new app in iTunes Connect with the settings for Apple approval. You will learn, in detail, how to use Unity 5 and the programming language C# to make a fully interactive game that keeps track of player progress, Game Center Leaderboards, and Achievements, as well as displaying iAds and offering In-App purchases. Moving on, you'll discover how to create development and release builds, enabling you to test the game on your device before finally submitting the game for Apple's approval. By the end of the book, you will have a complete understanding of how iTunes and Unity can be used in combination to build and publish a fully interactive and reliable game to the App Store. Style and approach This is a step-by-step guide that covers the fundamentals of gaming and reveals the secrets of building and monetizing games for the iOS platform.

Getting Started with Unity 5. X 2D Game Development - Francesco Sapio 2017-02-10 Build a tower defense game and earn delectable C# treats by baking cupcakes and fighting fearsome sweet-toothed

pandas About This Book- Build a complete and exciting 2D Tower Defense game from scratch.- Understand and learn to perform each phase of the game development pipeline- Homework and exercises to improve your skills and take them to the next level Who This Book Is For If you are looking forward to get started with 2D game development, either if you are a newcomer to this world, or you came from 3D games or other game engines, this book is for you. Although there are many references to other resources throughout the book, it is assumed that you have a general understanding of C# and its syntax and structure. What You Will Learn- Import and set up assets for 2D game development- Design and implement dynamic and responsive User Interfaces- Create and handle complex animation systems- Unlock all the potentiality of the physics engine- Implement Artificial Intelligence algorithms to give intelligence to your NPCs- Script gameplay and overall bring your ideas to life In Detail Want to get started in the world of 2D game development with Unity? This book will take your hand and guide you through this amazing journey to let you know exactly what you need to build the games you want to build, without sacrificing quality. You will build a solid understanding of Unity 5.x, by focusing with the embedded tools to develop 2D games. In learning about these, along with accurate explanations and practical examples, you will design, develop, learn how to market and publish a delectable Tower Defense game about cupcakes versus pandas. Each chapter in this book is structured to give you a full understanding on a specific aspect of the workflow pipeline. Each of these aspects are essential for developing games in Unity. In a step-by-step approach, you will learn about each of the following phases: Game Design, Asset Importing, Scripting, User Interfaces, Animations, Physics, Artificial Intelligence, Gameplay Programming, Polishing and Improving, Marketing, Publishing and much more. This book provides you with exercises and homework at the end of each chapter so that you can

level up your skills as a Unity game developer. In addition, each of these parts are centered on a common point of discussion with other learners just like you. Therefore, by sharing your ideas with other people you will not only develop your skills but you will also build a network. Style and approach This is a fun step-by-step approach in the whole pipeline of 2D game development in Unity, which is explained in a conversational and easy-to-follow style. Each topic is explained sequentially, allowing you to experience both basics and advanced features of Unity. By doing this, the book is able to provide you with a solid grasp on each of the topics. In this way, by engaging with the book's content, exploring the additional references to further readings and completing the homework sections, you are able to challenge yourself and apply what you know in a variety of ways. Once you have finished reading this book, you will be well on your way to developing games from start to finish!

**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.

### **Unity 2D Game Development Blueprints**

- Abdelrahman Saher 2016-08-31

Explore the full features of Unity 5 for 2D game development by building three amazing complete game projects

**About This Book\*** Explore the 2D architecture of Unity 5, and the tools and techniques for developing 2D games\* Discover how to use Unity's 2D tools, including Sprites, physics, and maps, to create different genres of games\* Practical tutorial on the intermediate and advanced development concepts in Unity 5 to create three interesting and fully functional games

**Who This Book Is For** If you've got the basics of 2D development down, push your skills with the projects in this hands-on guide. Diversify your portfolio and learn the skills to build a range of awesome 2D game genres.

**What You Will Learn\*** Explore sprites and their vital role in 2D games\* Move and animate your sprites, and apply them to a 2D platformer game\* Set up a user interface that allows navigation through the 2D games\* Apply 2D physics to game objects and finish off the platformer game\* Set up game events to trigger and NPCs, and create a role playing game\* Add artificial intelligence to game characters to add some life to game NPCs\* Create 2D maps and add them to the strategy game

**In Detail** Flexible, powerful, and full of rich features-Unity 5 is the engine of choice for AAA 2D and 3D game development. With comprehensive support for over 20 different platforms,

Unity boasts a host of great new functions for making 2D games. Learn how to leverage these new options into awesome 2D games by building three complete game projects with the Unity game tutorials in this hands-on book. Get started with a quick overview of the principle concepts and techniques needed for making 2D games with Unity, then dive straight in to practical development. Build your own version of Super Mario Brothers as you learn how to animate sprites, work with physics, and construct brilliant UIs in order to create a platformer game. Go on a quest to create a complete RPG game discovering NPC design, event triggers, and AI programming. Finally, put your skills to the test against a real challenge - designing and constructing a complex strategy game that will draw on and develop all your previously learned skills.

### **Unity 3.x Game Development Essentials**

- Will Goldstone 2011-12-20

This book follows an informal, demystifying approach to the world of game development with the Unity game engine. With no prior knowledge of game development or 3D required, you will learn from scratch, taking each concept at a time working up to a full 3D mini-game. You'll learn scripting with C# or JavaScript and master the Unity development environment with easy-to-follow stepwise tasks. If you're a designer or animator who wishes to take their first steps into game development or prototyping, or if you've simply spent many hours sitting in front of video games, with ideas bubbling away in the back of your mind, Unity and this book should be your starting point. No prior knowledge of game production is required, inviting you to simply bring with you a passion for making great games.

**Unity 2020 By Example** - Robert Wells  
2020-09-30

Learn Unity game development with C# through a series of practical projects ranging from building a simple 2D game to adding AR/VR experiences and machine learning capabilities in a simple yet effective way

**Key Features** Gain a high-level overview of the Unity game engine while building

your own games portfolio Discover best practices for implementing game animation, game physics, shaders, and effects Create fully featured apps, including Space shooter and a 2D adventure game, and develop AR/VR experiences and Game AI agents Book Description The Unity game engine, used by millions of developers around the world, is popular thanks to its features that enable you to create games and 3D apps for desktop and mobile platforms in no time. With Unity 2020, this state-of-the-art game engine introduces enhancements in Unity tooling, editor, and workflow, among many other additions. The third edition of this Unity book is updated to the new features in Unity 2020 and modern game development practices. Once you've quickly got to grips with the fundamentals of Unity game development, you'll create a collection, a twin-stick shooter, and a 2D adventure game. You'll then explore advanced topics such as machine learning, virtual reality, and augmented reality by building complete projects using the latest game tool kit. As you implement concepts in practice, this book will ensure that you come away with a clear understanding of Unity game development. By the end of the book, you'll have a firm foundation in Unity development using C#, which can be applied to other engines and programming languages. You'll also be able to create several real-world projects to add to your professional game development portfolio. What you will learn Learn the fundamentals of game development, including GameObjects, components, and scenes Develop a variety of games in C# and explore the brand new sprite shaping tool for Unity 3D and 2D games Handle player controls and input functionality for your Unity games Implement AI techniques such as pathfinding, finite state machines, and machine learning using Unity ML-Agents Create virtual and augmented reality games using Unity VR and AR Foundation Explore the cutting-edge features of Unity 2020 and how they can be used to improve your games Who this book is for If you are a game developer or programmer new to Unity and want to get

up and running with the game engine in a hands-on way, this book is for you. Unity developers looking to work on practical projects to explore new features in Unity 2020 will find this book useful. A basic understanding of C# programming is required.

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 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 4.x Game Development by Example Beginner's Guide** - Ryan Henson Creighton 2013-12-26

This is a practical and light-hearted guide to get to grips with creating your first games, with easy-to-follow, step-by-step tutorials

using the award winning Unity engine. If you've ever wanted to enter the world of independent game development but have no prior knowledge of programming or game development, then this is the book for you. Game developers transitioning from other tools like GameMaker and Flash will find this a useful tool to get them up to speed on the Unity engine, as will anyone who has never handled the Unity engine before.

### **Learn Unity for Android Game**

**Development** - Adam Sinicki 2017-07-21

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

*Game Development with Unity and C# - Build a 2D Target Shooting Game in One Hour* - Raja Biswas 2019

Learn Unity game development & C# scripting. Build games with Unity and use Unity 2018 & C# to build 2D games About This Video This course has been specifically

designed for people with a basic understanding and some prior knowledge of coding and the relevant terminology. Some programming experience is preferable as this course focuses solely on Google's real-time database, Firebase. In Detail Want to learn how to build games by building small, simple and fun games? Then this is the perfect course for you. After finishing this course, you will have built fully functional games with Unity and C#. Learn the basic concepts, tools, and functions that you will need to build fully functional games with C# and the Unity game engine. Build a strong foundation in Unity Game Development with this course. Get Started with Unity's 2D Components Create your portfolio of game projects Learning the fundamentals of Unity 2D & 3D game development puts a powerful and very useful tool at your fingertips. Unity is free, easy to learn, has excellent documentation, and is the game engine used for building games. Jobs in Unity game development are plentiful and being able to learn C# scripting along with Unity game development will give you a strong background from which to build awesome games more easily. Content and Overview - Starting with the installation of Unity and Visual Studio, this course will take you through the process of learning game development with Unity by building 5 awesome 2D & 3D game projects. You will build your first 2D game in 1 hour. For the beginner programmers there's a separate section about C# scripting, which will teach the fundamentals of C# scripting for game development in Unity. With these basics mastered, the course will take you through building different example games with Unity to learn more about the process of creating mobile android games with Unity. Students completing the course will have the knowledge to create fully-functional games with Unity and C# and will be able to use their C# skills to build any other useful program they want. Downloading the example code for this course: You can download the example code files for this course on GitHub at the following link: <https://github.com/PacktPublishing/Game-De>

velopment-with-Unity-and-C-Build-a-2D-Target-Shooting-Game-in-One-Hour . If you require support please email: [customercare@packt.com](mailto:customercare@packt.com).

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

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

Hands-on Rust - Herbert Wolverson 2021-06-30

Rust is an exciting new programming language combining the power of C with memory safety, fearless concurrency, and productivity boosters - and what better way to learn than by making games. Each chapter in this book presents hands-on, practical projects ranging from "Hello, World" to building a full dungeon crawler game. With this book, you'll learn game development skills applicable to other engines, including Unity and Unreal. Rust is an exciting programming language combining the power of C with memory safety, fearless concurrency, and productivity boosters. With Rust, you have a shiny new playground where your game ideas can flourish. Each chapter in this book presents hands-on, practical projects that take you on a journey from "Hello, World" to building a full dungeon crawler game. Start by setting up Rust and getting comfortable with your development environment. Learn the language basics with practical examples as you make your own version of Flappy Bird. Discover what it takes to randomly generate dungeons and populate them with monsters as you build a complete dungeon crawl game. Run game systems concurrently for high-performance and fast game-play, while retaining the ability to debug your program. Unleash your creativity with magical items, tougher monsters, and intricate dungeon design. Add layered graphics and polish your game with style. What You Need: A computer running Windows 10, Linux, or Mac OS X.A text editor, such as Visual Studio Code.A video card and drivers capable of running OpenGL 3.2.

*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.

**Game Development with Unity and C# - Build a Santa Run Game** - Raja Biswas 2019

Learn Unity game development & C# scripting. Build games with Unity and use Unity 2018 & C# to build 2D games About This Video This course has been specifically designed for people with a basic understanding and some prior knowledge of coding and the relevant terminology. Some programming experience is preferable as this course focuses solely on Google's real-time database, Firebase. In Detail Want to learn how to build games by building small, simple and fun games? Then this is the perfect course for you. After finishing this course, you will have built fully functional games with Unity and C#. Learn the basic concepts, tools, and functions that you will need to build fully functional games with C# and the Unity game engine. Build a strong foundation in Unity Game Development with this course. Get Started with Unity's 2D Components Create your portfolio of game projects Learning the fundamentals of Unity 2D & 3D game development puts a powerful and very useful tool at your fingertips. Unity

is free, easy to learn, has excellent documentation, and is the game engine used for building games. Jobs in Unity game development are plentiful and being able to learn C# scripting along with Unity game development will give you a strong background from which to build awesome games more easily. Content and Overview - Starting with the installation of Unity and Visual Studio, this course will take you through the process of learning game development with Unity by building 5 awesome 2D & 3D game projects. You will build your first 2D game in 1 hour. For the beginner programmers, there's a separate section about C# scripting, which will teach the fundamentals of C# scripting for game development in Unity. With these basics mastered, the course will take you through building different example games with Unity to learn more about the process of creating mobile android games with Unity. Students completing the course will have the knowledge to create fully-functional games with Unity and C# and will be able to use their C# skills to build any other useful program they want. Downloading the example code for this course: You can download the example code files for this course on GitHub at the following link: <https://github.com/PacktPublishing/Game-Development-with-Unity-and-C-Build-a-Santa-Run-Game> . If you require support please email: [customercare@packt.com](mailto:customercare@packt.com).

*Learn Unity for 2D Game Development* - Alan Thorn 2013-10-08

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.

What you'll learn

- How to create a 2D workflow in Unity
- Customizing the Unity Editor
- How to generate atlas textures and textured quads
- Animation effects and camera configuration
- Handling user input
- Creating a game from start to finish

Optimizing for mobile devices

Who this book is for

Game development students and professionals, indie developers, game artists and designers, and Unity developers looking to improve their workflow and effectiveness.

Table of Contents

1. Unity Basics for 2D Games
2. Materials and Textures
3. Quick 2D Workflow
4. Customizing the Editor with Editor Classes
5. Procedural Geometry and Textured Quads
6. Generating Atlas Textures
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8. Cameras and Pixel Perfection
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11. Completing the 2D Card Game
12. Optimization
13. Wrapping Things Up