Unity 5 X 2d Game Development Blueprints

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.

If you are a game developer interested in learning Unity 3D from scratch and becoming familiar with its core features, then this book is for you. No prior knowledge of Unity 3D is required.

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.

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.

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.

The Unity game engine has revolutionized the gaming industry with its complete set of intuitive tools and rapid workflows which can be used to create interactive 3D content. With Unity you can scaffold your way from the basics and make a game without coding. This book will guide you through the entire process of creating a 3D VR game, from downloading the Unity game engine to publishing your game. It not only gives you a strong foundation, but puts you on the path to game development. Beginning with an overview of the Unity engine and its interface, you will walk through the process of creating a game environment and learn how to use built-in assets as well as assets created with third-party 3D modeling tools such as Blender. Moving on, you will create your very own animation clips from within Unity and learn scripting in Unity. You will master exciting concepts including mini-mapping, the game navigation system, sound effects, shadows, and light effects. Next, you'll learn how to create your first VR experience, right from setting up the project to image effects. You'll be familiarized with all the tools that Unity has to offer to create your own immersive VR experiences. Each section is a stepping-stone toward the completion of the final game. By the end of the book, you'll have learned advanced topics such as cross-platform considerations that enable your games to run on every platform.

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.

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.

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

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 UnityWho This Book Is ForThe 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 usersIn DetailUnity 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 approachThis is a step-by-step guide to developing a game from scratch by applying the fundamentals of C# and Unity scripting.

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.

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.

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.

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

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. 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!

"Create your very own 2D games with Unity while exploring the multiple facets of Unity 5 components and their applications ... With the beginning of our first project, a 2D game where you'll understand how to build your initial code structure, and from there, create controllers for your player and the camera. You'll then add in weapons and learn how to keep track of enemy kills, after

which, you'll create game-play by scripting in C#. Finally, you'll create the visuals and publish the game to multiple platforms. By developing this framework you will take a look at using Inheritance, Polymorphism, Interfaces, namespacing, static utilities and build out a basic editor shelf to give quick access to tools."--Resource description page.

Over 100 recipes exploring the new and exciting features of Unity 5 to spice up your Unity skillset About This Book Built on the solid foundation of the popular Unity 4.x Cookbook, the recipes in this edition have been completely updated for Unity 5 Features recipes for both 2D and 3D games Provides you with techniques for the new features of Unity 5, including the new UI system, 2D game development, new Standard Shaders, and the new Audio Mixer Who This Book Is For From beginners to advanced users, from artists to coders, this book is for you and everyone in your team! Programmers can explore multimedia features, and multimedia developers can try their hand at scripting. Basic knowledge and understanding of the Unity platform, game design principles, and programming knowledge in C# is essential. What You Will Learn Immerse players with great audio, utilizing Unity 5's audio features including the new Audio Mixer, ambient sound with Reverb Zones, dynamic soundtracks with Snapshots, and balanced audio via Ducking Create better materials with Unity's new, physically-based, Standard Shader Measure and control time, including pausing the game, displaying clocks and countdown timers, and even implementing “bullet time” effects Improve ambiance through the use of lights and effects such as reflection and light probes Create stylish user interfaces with the new UI system, including power-bars, clock displays, and an extensible inventory system Save and load text and media assets from local or remote sources, publish your game via Unity Cloud, and communicate with websites and their databases to create online scoreboards Discover advanced techniques, including the publisher-subscriber and state patterns, performance bottleneck identification, and methods to maximize game performance and frame rates Control 2D and 3D character movement, and use NavMeshAgents to write NPC and enemy behaviors such as seek, flee, flock, and waypoint path following In Detail Unity 5 is a flexible and intuitive multiplatform game engine that is becoming the industry's de facto standard. Learn to craft your own 2D and 3D computer games by working through core concepts such as animation, audio, shaders, GUI, lights, cameras, and scripting to create your own games with Unity 5. Completely re-written to cover the new features of Unity 5, this book is a great resource for all Unity game developers, from those who have recently started using Unity right up to Unity professionals. The first half of the book focuses on core concepts of 2D game design while the second half focuses on developing 3D game development skills. In the first half, you will discover the new GUI system, the new Audio Mixer, external files, and animating 2D characters in 2D game development. As you progress further, you will familiarize yourself with the new Standard Shaders, the Mecanim system, Cameras, and the new Lighting features to hone your skills towards building 3D games to perfection. Finally, you will learn non-player character control and explore Unity 5's extra features to enhance your 3D game development skills. Style and approach Each chapter first introduces the topic area and explains how the techniques covered can enhance your games. Every recipe provides step-by-step instructions, followed by an explanation of how it all works, and useful additional refinements or alternative approaches. Every required resource and C# script (fully commented) is available to download, enabling you to follow each recipe yourself.

A recipe-based guide to give you practical information on Unity 5.x animation techniques and tools About This Book A straightforward and easy-to-follow format. A selection of the most important tasks and problems. Carefully organized instructions to solve problems efficiently. Clear explanations of what you did. Solutions that can be applied to solve real-world problems. Who This Book Is For This book is for Unity developers who have some exposure to Unity game development who want to learn the nuances of animation in Unity. Previous knowledge of animation techniques and mecanim is not necessary. What You Will Learn Importing animations to Unity Work with different animation assets and components Create, visualize, and edit animated creatures Animating game cut scenes Design character actions and expressions Create gameplay by animating characters and environments Use animations to drive in-game logic In Detail This recipe-based practical guide will show you how to unleash the power of animation in Unity 5.x and make your games visually impeccable. Our primary focus is on showing you tools and techniques to animate not only humanoid biped characters, but also other elements. This includes non-humanoid character animation, game world creation, UI element animation, and other key features such as opening doors, changing lights, transitioning to different scenes, using physics, setting up ragdolls, creating destructible objects and more. While discussing these topics, the book will focus on mecanim, the Unity 3D animation tool, and how you can use it to perform all these tasks efficiently and quickly. It contains a downloadable Unity project with interactive examples for all the recipes. By the end of this book, you will be confident and self-sufficient in animating your Unity 3D games efficiently. Style and approach This practical no-nonsense guide is recipe-based with real-world examples of almost all the techniques mentioned.

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 Contents1. 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 7. UVs and Animation 8. Cameras and Pixel Perfection 9. Input for 2D Games 10. Getting Started with a 2D Game 11. Completing the 2D Card Game 12. Optimization 13. Wrapping Things Up

Learn to create, publish and monetize your mobile games with the latest Unity 2017 tool-set easily for Android and iOS About This Book One-stop solution to becoming proficient in mobile game development using Unity 2017 Port your Unity games to popular platforms such as iOS and Android Unleash the power of C# scripting to create realistic gameplay and animations in Unity 2017. Who This Book Is For If you are a game developer and want to build mobile games for iOS and Android, then this is the book for you. Previous knowledge of C# and Unity is helpful, but not required. What You Will Learn Use Unity to build an endless runner

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

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

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

Do you want to build mobile games, but lack game development experience? No problem. This practical guide shows you how to create beautiful, interactive content for iOS and Android devices with the Unity game engine. Authors Jon Manning and Paris Buttfield-Addison (iOS Swift Game Development Cookbook) provide a top-to-bottom overview of Unity’s features with specific, project-oriented guidance on how to use them in real game situations. Over the course of this book, you’ll learn hands-on how to build 2D and 3D games from scratch that will hook and delight players. If you have basic programming skills, you’re ready to get started. Explore the basics of Unity, and learn how to structure games, graphics, scripting, sounds, physics, and particle systems Use 2D graphics and physics features to build a side-scrolling action game Create a 3D space combat simulator with projectile shooting and respawning objects, and learn how to manage the appearance of 3D models Dive into Unity’s advanced features, such as precomputed lighting, shading, customizing the editor, and deployment

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!

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.

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 and the web using WebGL. 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.

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.

The book provides an up-to-date introduction to the latest version of Unity and its workflow by guiding readers through various prototypes. These range from 2D to 3D game concepts for PC and mobile, will allow readers to get acquainted with several important concepts and allow them to become competent Unity developers able to learn at their own pace. The book starts by introducing Unity and proceeds in building a basic understanding of its main components by developing a first, simple 2D game before proceeding in developing a full casual game to development of a simple but immersive 3D game concept to be tested first on PC before exploring how to port it for mobile VR.using Google Cardboard.

An example-based practical guide to get you up and running with Unity 5.x About This Book The most updated resource on Unity 5.x with comprehensive discussion on all the new features of Unity 5.x Understand the core concepts surrounding Unity5 game development with this power-packed hands-on guide Brush up your existing game development skills and create games that have a brilliant gameplay using the excellent examples from this book Who This Book Is For The ideal target audience for this book would be game developers. They need not have previous experience with Unity since this book will cover all the basics about game development with unity. This would also be a very good resource for Unity developers who want to brush up their basic Unity skills and also get up and running with creating interesting games with Unity 5.x. What You Will Learn Understand core Unity concepts, such as game objects, components, and scenes Learn level design techniques for building immersive and interesting worlds Learn to make functional games with C# scripting Use the toolset creatively to build games of different themes and styles Learn to handle player controls and input functionality Dive into the process of working with terrains and world-creation tools Import custom content into Unity from third-party tools, such as Maya and Blender Get to grips with making both 2D and 3D games In Detail Unity is an exciting and popular engine in the game industry. Throughout this book, you'll learn how to use Unity by making four fun game projects, from shooters and platformers to exploration and adventure games. Unity 5 By Example is an easy-to-follow guide for quickly learning how to use Unity in practical context, step by step, by making real-world game projects. Even if you have no previous experience of Unity, this book will help you understand the toolset in depth. You'll learn how to create a time-critical collection game, a twin-stick space shooter, a platformer, and an action-fest game with intelligent enemies. In clear and accessible prose, this book will present you with step-by-step tutorials for making four interesting games in Unity 5 and explain all the fundamental concepts along the way. Starting from the ground up and moving toward an intermediate level, this book will help you establish a strong foundation in making games with Unity 5. Style and approach This book would be a very unique resource for any game developer who wants to get up and running with Unity. The unique example based approach will take you through the most basic games towards the more complex ones and will gradually build your skill level.

If you don't know anything about programming in general, writing code, writing scripts, or have no idea where to even begin, then this book is perfect for you. If you want to make games and need to learn how to write C# scripts or code, then this book is ideal for youUnity has become one of the most popular game engines for developers, from the amateur hobbyist to the professional working in a large studio. Unity used to be considered a 3D tool, but with the release of Unity 4.3, it now has dedicated 2D tools. This will expand Unity's use even more.Developers love its object-oriented drag-and-drop user interface which makes creating a game or interactive product so easy. Despite the visual ease of working in Unity, there is a need to understand some basic programming to be able to write scripts for GameObjects. For game developers that have any programming knowledge, learning how to write scripts is quite easy. For the the artist coming to Unity, creating the visual aspects of a game is a breeze, but writing scripts may appear to be a giant roadblock.This book is for those with no concept of programming. I introduce the building blocks, that is, basic concepts of programming using everyday examples you are familiar with. Also, my approach to teaching is not what you will find in the typical programming book. In the end, you will learn the basics of C#, but I will spoon-feed you the details as they are needed.I will take you through the steps needed to create a simple game, with the focus not being the game itself but on how the many separate sections of code come together to make a working game. I will also introduce the concept of a State Machine to organize code into simple, game controlling blocks. At the end, you will be saying "Wow! I can't believe how easy that was!"

This book is intended for both professionals game developers and hobbist who are interested in making games with Unity. Users are expected to have knowledge of basics / fundamentals of unity 2D game development and should have a working knowledge of C#.

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.

Build a tower defense game and earn delectable C# treats by baking cupcakes and fighting fearsome sweet-toothed pandasAbout 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 levelWho This Book Is ForIf 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 lifeIn DetailWant 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 approachThis 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!

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.

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.

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.

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

Unity is the most exciting and popular game engine. After the latest release, Unity has become the primary source of game and Virtual Reality development throughout the world. In this book, you’ll learn how to use Unity by making amazing games from popular genres; from an action shooter to a mindbending puzzle game, from an adventure to a VR game.