

# Read Book Read Unity 5 From Zero To Proficiency Beginner A Step Pdf For Free

Unity 5 from Zero to Proficiency Foundations Unity From Zero to Proficiency (Foundations) Getting Started with Unity 5 Learning C# by Developing Games with Unity 5. X Second Edition Game Audio Development with Unity 5.X Unity 5 Game Optimization Unity 5.x By Example Unity 5 Unity in Action Unity from Zero to Proficiency (Intermediate) Game Audio Development with Unity 5.X Unity 5 from Zero to Proficiency (Advanced) Getting Started with Unity 5.x 2D Game Development Beginning 3D Game Development with Unity Unity Game Optimization Unity Game Development Essentials Unity from Zero to Proficiency (Foundations) C# Game Programming Cookbook for Unity 3D Mastering Unity 2D Game Development Game Development with Unity Mastering Android Game Development with Unity Beginning 3D Game Development with Unity 4 Learning C# by Developing Games with Unity 5.x Unity 5.X Learn Unity for Android Game Development Unity AI Game Programming - Second Edition Pro Unity Game Development with C# Game Programming with Unity and C# Unity 5.x Cookbook Unity 5.x Game AI Programming Cookbook Unity 5 for Android Essentials How to Cheat in Unity 5 Unity 5.x Animation Cookbook Learning C# Programming with Unity 3D, second edition Unity 3D and PlayMaker Essentials 3D Game Development with Unity Unity 5.x 2D Game Development Blueprints Mastering Unity 5.x Unity 4 Fundamentals Unity 5. X Game Development Blueprints

Explore every nook and cranny of Unity 5 to turn your imaginations into reality About This Book\* Demystify the C# programming language in Unity 5.x.\* Unleash the power of Unity to create a wide variety of projects in numerous genres and formats.\* Master the art of optimization for Unity 5.x applications with tips and techniques that will further enhance your game. Who This Book Is For Beginner level Unity developers who do not have much programming experience. What You Will Learn\* Master the art of applying C# in Unity. 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.\* Create and code a good-looking functional UI system for your game.\* Find out how to create exciting and interactive games using GUIs.\* Work with different animation assets and components to enhance your game further.\* Personalize your game by learning how to use Unity's advanced animation system.\* Create, visualize, and edit animated creatures to add to your already amazing game.\* Familiarize yourself with the tools and practices of game development Discover how to create the Game Manager class to, generate game levels, and develop UI for the game.\* Use the Unity Profiler to find bottlenecks anywhere in your application, and discover how to resolve them.\* Implement best practices for C# scripting to avoid common mistakes 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, and adds a real-time global illumination to the games; and its powerful new features help to improve a game's efficiency. If you love games and want to learn how to make them but have no idea where to begin, then this course is built just for you. This learning path is divided into three modules which will take you in this incredible journey of creating games. The course begins with getting you started with programming behaviors in C# so that you can create 2D games in Unity. You will begin by installing Unity and learning about its features. You will learn how to perform object-oriented programming and discover how to manage the game play loop, generate game levels, and develop a simple UI for the game. By the time this module comes to a close, you will have mastered the art of applying C# in Unity. It is now time we put into use what we learned in the previous module into reality as we move onto the second module. Here, we will be building 7-8 action-packed games of different difficulty levels. Each project will focus on key Unity features as well as game strategy development. This module will mark your transformation from an application developer to a full-fledged Unity game developer. Who wouldn't love a game that is fully perfect, functional, and without any glitches? The third module deals with just that by teaching how to enhance your game by learning game optimization skills. Here, you'll gain an understanding of possible solutions to any problem and how to implement them. You will then learn everything you need to know about where performance bottlenecks can be found, why they happen, and how to work around them. With this massive wealth of knowledge, at the end of this learning path, you will be able to leverage an array of game development techniques to create your own basic games while resolving any issues that you encounter. Style and approach This learning path should be treated as the complete package necessary for building games. It is a step-by-step guide to develop a game from scratch by applying the fundamentals of C# and Unity scripting, with a reference guide in the end to solve all your gaming problems. 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. A project-based guide to help you create amazing games with Unity 5.x About This Book- Unleash the power of C# coding in Unity and the state of the art Unity rendering engine.- Through this unique project-based approach, you will create 7-8 action-packed games from scratch.- This assortment of games will take you on a fun-filled journey of becoming a full-fledged Unity game developer. Who This Book Is For This book is best suited for C# developers who have some basic knowledge of the Unity Game development platform. If you are looking to create exciting and interactive games with Unity and get a practical understanding of how to leverage key Unity features and then optimize the Unity rendering engine, then this book is your one-stop solution. What You Will Learn- Find out how to create exciting and interactive games using GUIs- Prepare animations to be imported and exported- Personalize your animation game with Unity's advanced animation system- Work with different animation assets and components- Customize the game by modifying the player properties and creating exterior environments- Create, visualize, and edit animated creatures- Familiarize yourself with best practices for Unity 5.x animation using iTween- Design character actions and expressions- Customize your game and prepare it for play In Detail This book will help you to create exciting and interactive games from scratch with the Unity game development platform. We will build 7-8 action-packed games of different difficulty levels, and we'll show you how to leverage the intuitive workflow tools and state of the art Unity rendering engine to build and deploy mobile desktop as

well as console games. Through this book, you'll develop a complete skillset with the Unity toolset. Using the powerful C# language, we'll create game-specific characters and game environments. Each project will focus on key Unity features as well as game strategy development. This book is the ideal guide to help your transition from an application developer to a full-fledged Unity game developer. Style and approach A step by step approach to develop a strong Unity skillset by creating a few action-packed games from scratch. 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! This book teaches beginners and aspiring game developers how to develop 3D games with Unity. Thousands of commercial games have been built with Unity. Blender, the top open source 3D modeling and animation package, is also introduced. Looking to become more efficient using Unity? How to Cheat in Unity 5 takes a no-nonsense approach to help you achieve fast and effective results with Unity 5. Geared towards the intermediate user, HTC in Unity 5 provides content beyond what an introductory book offers, and allows you to work more quickly and powerfully in Unity. Packed full with easy-to-follow methods to get the most from Unity, this book explores time-saving features for interface customization and scene management, along with productivity-enhancing ways to work with rendering and optimization. In addition, this book features a companion website at [www.alanthorn.net](http://www.alanthorn.net), where you can download the book's companion files and also watch bonus tutorial video content. Learn bite-sized tips and tricks for effective Unity workflows Become a more powerful Unity user through interface customization Enhance your productivity with rendering tricks, better scene organization and more Better understand Unity asset and import workflows Learn techniques to save you time and money during development In Pro Unity Game Development with C#, Alan Thorn, author of Learn Unity for 2D Game Development and experienced game developer, takes you through the complete C# workflow for developing a cross-platform first person shooter in Unity. C# is the most popular programming language for experienced Unity developers, helping them get the most out of what Unity offers. If you're already using C# with Unity and you want to take the next step in becoming an experienced, professional-level game developer, this is the book you need. Whether you are a student, an indie developer, or a season game dev professional, you'll find helpful C# examples of how to build intelligent enemies, create event systems and GUIs, develop save-game states, and lots more. You'll understand and apply powerful programming concepts such as singleton classes, component based design, resolution independence, delegates, and event driven programming. By the end of the book, you will have a complete first person shooter game up and running with Unity. Plus you'll be equipped with the know-how and techniques needed to deploy your own professional-grade C# games. If you already know a bit of C# and you want to improve your Unity skills, this is just the right book for you. Newly Edited and Updated Version (Fourth Edition) for Unity 2019. Get started with Unity and game programming fast without the headaches Unity is a great software to create video games; however, it includes so many options and features that getting started can feel overwhelming. Without my book, most people spend too long trying to learn how to use Unity the hard way. This book is the only one that will get you to learn Unity fast without wasting so much time. This book is the first book in the series "Unity from Zero to Proficiency" where you will learn to code fast and be able to create your own video games with Unity in no time. What you will learn - After completing this book, you will be able to: - Know and master the features that you need to create 2D and 3D environments for your games. - Quickly create (and navigate through) realistic 3D indoors and outdoors environments. - Create a 3D Maze with lights, walls, and textures. - Use ProBuilder to create a house. - Create an island with trees, sandy beaches, mountains, and water. - Include and control a car and a plane. - Create a 2D platform game (with no scripting needed). - Export your games to the web. Who this book is for This book is for: - Hobbyists who need a book that gets them started with Unity and game development easily. - Parents looking for a book that introduces their children to game programming painlessly. - Teachers looking for a complete and clear resource on programming through the creation of games. - Aspiring indie game developers. How this book is different This is the only book that you need to get started with Unity fast and to enjoy the journey without the frustration. This book includes six chapters that painlessly guide you through the necessary skills to master Unity's interface, use its core features, and create and navigate through realistic 2D and 3D environments. It assumes no prior knowledge on your part and ensures that you have all the information and explanations that you need every step of the way. What this book offers This book includes all the features that you need to get started with Unity and game development: Learn without the headaches: This book assumes that you can't be expected to learn everything at once; this is why you will build all your skills incrementally. In addition, if you are more of a visual learner, you will gain access to a FREE video training that covers all the topics and features introduced in the book so that you can see how it is done. Make your dream of creating your own games come true: This book ensures that you stay motivated by giving you the right amount of information and challenge in each chapter; we all know that it's hard to keep motivated when learning a new skill, so this book always contextualizes the knowledge with an example (so that you feel it's relevant), and also makes sure that you get to challenge yourself, if you need to, with optional challenges present at the end of each chapter. Progress and feel confident in your skills: You will have the opportunity to learn and to use Unity at your own pace and to become comfortable with its interface. This is because every single new concept introduced will be explained in great detail so that you never feel lost. All the concepts are introduced progressively so that you don't feel overwhelmed. Create your own games and feel awesome: With this book, you will build your own 2D and 3D environments and you will spend more time creating than reading, to ensure that you can apply the concepts covered in each section. All chapters include step-by-step instructions with examples that you can use straight-away. If you want to get started with Unity today, then buy this book now. Unity is a powerful game engine. However, producing a performant product requires additional knowledge. This book is a comprehensive introduction to optimization techniques and best practices. By the end of the book you will be able to apply all the major optimization techniques and be able to produce faster and high performant games. 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. 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. 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. Create amazing games with solid gameplay features, using a professional-grade workflow inside the Unity engine! About This Book Become a Unity master by creating a practical, in-depth game-development project with Unity Use advanced C# scripting to unlock the complete potential of Unity 5 Use Version Control to Effectively Manage and Scale your workflow Who This Book Is For If you are a Unity developer who now wants to develop and deploy interesting games by leveraging the new features of Unity 5.x, then this is the book for you. Basic knowledge of C# programming is assumed. What You Will Learn Explore hands-on tasks and real-world scenarios to make a Unity horror adventure game Create enemy characters that act intelligently and make reasoned decisions Use data files to save and restore game data in a way that is platform-agnostic Get started with VR development Use Navigation Meshes, Occlusion Culling, and the Profiler tools Work confidently with GameObjects, Rotations, and Transformations Understand specific gameplay features such as AI enemies, inventory systems, and level design In Detail Do you want to take the leap from being an everyday Unity developer to being a pro game developer? Then look no further! This book is your one stop solution to creating mesmerizing games with lifelike features and amazing gameplay. This book takes an in-depth focus on a practical project with Unity, building a first-person game with many features. You'll dive deep into the architecture of a Unity game, creating expansive worlds, interesting render effects, and other features to make your games special. You will create individual game components, use efficient animation techniques, and implement collision and physics effectively. Specifically, we'll explore optimal techniques for importing game assets, such as meshes and textures; tips and tricks for effective level design; how to animate and script NPCs; how to configure and deploy to mobile devices; how to prepare for VR development; and how to work with version control, and more. By the end of this book, you'll have developed sufficient competency in Unity development to produce fun games with confidence. Style and approach This book takes a step-by-step, practical tutorial approach. You will create an advanced level Unity game with an emphasis on leveraging the advanced Unity 5 features. You will make the most of the Unity 5 advanced features while you develop the game in its entirety. Learning C# Programming with Unity 3D, Second Edition 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 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. Newly Edited and Updated Version (Third Edition) for Unity 2020 Learn C# with Unity, and create a full FPS game without the headaches Without this book, most people spend too long trying to learn C# with Unity the hard way. This book is the only one that will get you to learn Unity fast without wasting so much time. It includes twelve chapters that painlessly teach you the necessary skills to create an FPS game and to learn intermediate C# and Unity techniques. What you will learn After completing this book, you will be able to: - Use Unity's built-in methods. - Use Rigidbody physics to propel airborne objects. - Use a Finite State Machine to create intelligent Non-Payer Characters(NPCs). - Manage 3D animations for the NPCs. - Create NPCs who can chase the player. - Create and manage weapons and ammunition for the player. - Include advanced Artificial Intelligence for NPCs including: vision, hearing, random paths, fleeing from or ambushing the player. - Create a 2D scrolling shooter. Content and structure of this book The content of the books is as follows: - In Chapter 1, you will create a simple 3D game where the user has to reach the end of the level by avoiding projectiles from intelligent robots. - In Chapter 2, you will create a gun and a grenade launcher that the player can use to defeat enemies. - In Chapter 3, you will start to use Mecanim and NavMesh navigation to control an animated character that detects, follows, or attacks the player. - In Chapter 4, you will combine the skills that you have acquired in the previous chapters to create a fully functional level where the player needs to escape a level full of armed NPCs. You will also learn how to generate a game level dynamically from your code. - In Chapter 5, you will add off mesh links and manage costs and areas so that NPCs can avoid sections. - In Chapter 6, you will make it possible for NPCs to follow fixed or random paths. - In Chapter 7, you will add vision and hearing to the NPCs. - In Chapter 8, you will create smarter NPCs that can flee from or ambush the player. - In Chapter 9, you will control an army of NPCs and create an AI-driven opposite team. - In Chapter 10, you will create a simple 2D scrolling shooter. - In Chapter 11, you will improve your game by adding explosions and a scrolling background. - In Chapter 12, you will add intelligent spaceships that attack the player. - In Chapter 13, you will include a shield to the player's spaceship, along with other interesting features (e.g., sound FX, a scoring system, etc). If you want to create FPS games, Intelligent NPCs, and 2D Shooters with Unity using a tried-and-tested method: download this book now! Get Started with Game Programming Fast Getting started with Unity can be tedious if the resource that you are using doesn't have an approach tailored to your needs. In the past, I have seen how a simple yet detailed approach to teaching Unity can make a real difference to a student's ability to create games confidently and successfully and I have made sure that everything has been included in this book to make your journey enjoyable and to guarantee your success in the creation of video games with Unity. How this book is different With this book, you will not only learn about Unity but you will also enjoy the journey without the frustration. This book includes six chapters that painlessly guide you through the necessary skills to master Unity's interface, use its core features, and create and navigate through realistic 2D and 3D environments. It assumes no prior knowledge on your part and ensures that you have all the information and explanations that you need every step of the way. All the information is introduced progressively. This book is for parents or teachers who would like to introduce their children or students to game development; it is also for hobbyist just getting started with Unity, or aspiring indie game developers. What this book offers This book includes all the features that will guarantee your success as an aspiring game developer: > A book truly designed for beginners This book also assumes that you can't be expected to learn everything at once; this is why you will build all your skills incrementally. In addition, if you are more of a visual learner, you will gain access to a FREE video training that covers all the topics and features introduced in the book so that you can see how it is done. > You will be kept motivated throughout the book This book ensures that you stay motivated by giving you the right amount of information and challenge in each chapter; we all know that it's hard to keep motivated when learning a new skill, so this book always contextualizes the knowledge with an example (so that you feel it's relevant), and also makes sure that you get to challenge yourself, if you need to, with optional challenges present at the end of each chapter. > You will never feel lost or overwhelmed You will have the opportunity to learn and use Unity at your own pace and to become comfortable with its interface. This is because every single new concept introduced will be explained. Every step is explained in great details so that you never feel lost. All the concepts are introduced progressively so that you don't feel overwhelmed. > You will learn by doing With this book, you will build your own 2D and 3D environments and you will spend more time creating than reading, to ensure that you can apply the concepts covered in each section. All chapters include step-by-step instructions with examples that you can use straight-away. What you will learn After completing this book, you will be able to: Feel comfortable with Unity's core features. Apply transformations (e.g., rotate, or scale). Create a 3D Maze with lights, walls, and textures. Create an island with trees, sandy beaches, mountains, and water. Use cameras and vehicles. Create a 2D platform game (with no scripting). Export your games to the web. Still not sure? Scroll to the top of this page and click on the book's cover to "look inside" this book to see the topics covered, learn more about Patrick's background and determine if reading "Unity from Zero to Proficiency (Foundations)" will be a worthwhile investment. If you want to get started with Unity today, then buy this book now In introducing new students to video game development, there are two crucial components to consider: design and implementation. Unity 3D and PlayMaker Essentials: Game Development from Concept to Publishing provides theoretical background on topics such as characters, stories, level design, interface design, audio, game mechanics, and tools and skills needed. Each chapter focuses on a specific topic, with topics building upon each other so that by the end of the book you will have looked into all the subjects relevant to creating your own game. The book transitions from discussion to demonstrations of how to implement techniques and concepts into practice by using Unity3D and PlayMaker. Download boxes are included throughout the book where you can get the version of the game project under discussion or other content to add to the project, as well as any supplementary video tutorials that have been developed. Addressing both theoretical and practical aspects, Unity 3D and PlayMaker Essentials enables you to understand how to create a game by having you make a game. By gradually completing your own design document through the course of the book, you will become familiar with core design principles while learning the practical skills needed to bring your unique game to life. Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create interactive games, ideal in scope for today's casual and mobile markets, while also giving you a firm foundation in game logic and design. The first part of the book explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure game—including reusable state management scripts,



dialogue trees for character interaction, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games. What you'll learn

How to build interactive games that work on a variety of platforms

Take the tour around Unity user interface fundamentals, scripting and more

Create a test environment and gain control over functionality, cursor control, action objects, state management, object metadata, message text and more

What is inventory logic and how to manage it

How to handle 3D object visibility, effects and other special cases

How to handle variety of menus and levels in your games development

How to handle characters, scrollers, and more

How to create or integrate a story/walkthrough

How to use the new Mecanim animation

Who this book is for

Students or artists familiar with tools such as 3ds Max or Maya who want to create games for mobile platforms, computers, or consoles, but with little or no experience in scripting or the logic behind games development.

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01. Introduction to Game Development

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Designed for beginners with no knowledge or experience in game development or programming, this book teaches the essentials of the Unity game engine, the C# programming language, and the art of object-oriented programming. New concepts are not only explained, but thoroughly demonstrated. Starting with an introduction to Unity, you'll learn about scenes, GameObjects, prefabs, components, and how to use the various windows to interact with the engine. You'll then dive into the fundamentals of programming by reviewing syntax rules, formatting, methods, variables, objects and types, classes, and inheritance, all while getting your hands dirty writing and testing code yourself. Later, the book explains how to expose script data in the Inspector and the basics of Unity's serialization system. This carefully crafted work guides you through the planning and development of bare bones, simple game projects designed to exercise programming concepts while keeping less relevant interruptions out of the way, allowing you to focus on the implementation of game mechanics first and foremost. Through these example projects, the book teaches input handling, rigidbodies, colliders, cameras, prefab instantiation, scene loading, user interface design and coding, and more. By the end, you'll have built a solid foundation in programming that will pave your way forward in understanding core C# syntax and fundamentals of object-oriented programming—not just what to type but why it's typed and what it's really doing. Game Programming with Unity and C# will send you on your way to becoming comfortable with the Unity game engine and its documentation and how to independently seek further information on yet-untouched concepts and challenges. What You'll Learn

Understand the fundamentals of object-oriented computer programming, including topics specifically relevant for games.

Leverage beginner-to-intermediate-level skills of the C# programming language and its syntax. Review all major component types of the Unity game engine: colliders and rigidbodies, lights, cameras, scripts, etc.

Use essential knowledge of the Unity game engine and its features to balance gameplay mechanics for making interesting experiences.

Who This Book Is For

Beginners who have no prior experience in programming or game development who would like to learn with a solid foundation that prepares them to further develop their skills. 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.

Unity 5.0

Unity 5

Unity Cloud Build

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. Build fully functional, professional 3D games with realistic environments, sound, dynamic effects, and more! 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. Build and customize a wide range of powerful Unity AI systems with over 70 hands-on recipes and techniques About This Book Empower your agent with decision making capabilities using advanced minimaxing and Negamaxing techniques Discover how AI can be applied to a wide range of games to make them more interactive. Instigate vision and hearing abilities in your agent through collider based and graph based systems Who This Book Is For This book is intended for those who already have a basic knowledge of Unity and are eager to get more tools under their belt to solve AI and gameplay-related problems. What You Will Learn Use techniques such as A\* and A\*mbush to empower your agents with path finding capabilities. Create a representation of the world and make agents navigate it Construct decision-making systems to make the agents take different actions Make different agents coordinate actions and create the illusion of technical behavior Simulate senses and apply them in an awareness system Design and implement AI in board games such as Tic-Tac-Toe and Checkers Implement efficient prediction mechanism in your agents with algorithms such as N-Gram predictor and naive Bayes classifier Understand and analyze how the influence maps work. In Detail Unity 5 comes fully packaged with a toolbox of powerful features to help game and app developers create and implement powerful game AI. Leveraging these tools via Unity's API or built-in features allows limitless possibilities when it comes to creating your game's worlds and characters. This practical Cookbook covers both essential and niche techniques to help you be able to do that and more. This Cookbook is engineered as your one-stop reference to take your game AI programming to the next level. Get to grips with the essential building blocks of working with an agent, programming movement and navigation in a game environment, and improving your agent's decision making and coordination mechanisms - all through hands-on examples using easily customizable techniques. Discover how to emulate vision and hearing capabilities for your agent, for natural and humanlike AI behaviour, and improve them with the help of graphs. Empower your AI with decision-making functions through programming simple board games such as Tic-Tac-Toe and Checkers, and orchestrate agent coordination to get your AIs working together as one. Style and approach This recipe-based guide will take you through implementing various AI algorithms. Each topic is explained and placed among other related techniques, sometimes building on the knowledge from previous chapters. There are also references to more technical books and papers, so you can dig deeper if you want to. Provides information on using the Unity game engine to build games for any platform, including the Web, the Wii, and on smartphones. 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 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. Master performance optimization for Unity3D applications with tips and techniques that cover every aspect of the Unity3D Engine About This Book Optimize CPU cycles, memory usage, and GPU throughput for any Unity3D application Master optimization techniques across all Unity Engine features including Scripting, Asset Management, Physics, Graphics Features, and Shaders A practical guide to exploring Unity Engine's many performance-enhancing methods Who This Book Is For This book is intended for intermediate and advanced Unity developers who have experience with most of Unity's feature-set, and who want to maximize the performance of their game. Familiarity with the C# language will be needed. What You Will Learn Use the Unity Profiler to find bottlenecks anywhere in our application, and discover how to resolve them Implement best-practices for C# scripting to avoid common pitfalls Develop a solid understanding of the rendering pipeline, and maximize its performance through reducing draw calls and avoiding fill rate bottlenecks Enhance shaders in a way that is accessible to most developers, optimizing them through subtle yet effective performance tweaks Keep our scenes as dynamic as possible by making the most of the Physics engine Organize, filter, and compress our art assets to maximize performance while maintaining high quality Pull back the veil on the Mono Framework and the C# Language to implement low-level enhancements that maximize memory usage and avoid garbage collection Get to know the best practices for project organization to save time through an improved workflow In Detail Competition within the gaming industry has become significantly fiercer in recent years with the adoption of game development frameworks such as Unity3D. Through its massive feature-set and ease-of-use, Unity helps put some of the best processing and rendering technology in the hands of hobbyists and professionals alike. This has led to an enormous explosion of talent, which has made it critical to ensure our games stand out from the crowd through a high level of quality. A good user experience is essential to create a solid product that our users will enjoy for many years to come. Nothing turns gamers away from a game faster than a poor user-experience. Input latency, slow rendering,

broken physics, stutters, freezes, and crashes are among a gamer's worst nightmares and it's up to us as game developers to ensure this never happens. High performance does not need to be limited to games with the biggest teams and budgets. Initially, you will explore the major features of the Unity3D Engine from top to bottom, investigating a multitude of ways we can improve application performance starting with the detection and analysis of bottlenecks. You'll then gain an understanding of possible solutions and how to implement them. You will then learn everything you need to know about where performance bottlenecks can be found, why they happen, and how to work around them. This book gathers a massive wealth of knowledge together in one place, saving many hours of research and can be used as a quick reference to solve specific issues that arise during product development. Style and approach This book is organized based on the major features of Unity engine and should be treated as a reference guide. It is written as a series of investigations into both common and unusual performance pitfalls, each including a study on why the bottleneck is causing us problems, and a list of enhancements or features that can be used to work around them. Differences in effectiveness, behaviors, or feature-sets between Unity 4.x and Unity 5.x will be highlighted. Get ahead of the game with Unity 4. The Unity engine is the tool of choice for many indie and AAA game developers. Unity 4 Fundamentals gives readers a head start on the road to game development by offering beginners a comprehensive, step by step introduction to the latest Unity 4 engine. The author takes a theory-to-practice approach to demonstrate what Unity 4 has to offer which includes: Asset management tools Real-time lighting and lightmapping Particle systems Navigation and pathfinding Create enthralling Android games with Unity Faster Than Ever Before About This Book Develop complex Android games with the help of Unity's advanced features such as artificial intelligence, high-end physics, and GUI transformations. Create amazing Graphical User Interfaces (GUIs) with Unity's new uGUI system Unravel and deploy exciting games across Android devices Who This Book Is For If you are a Unity 5 developer and want to expand your knowledge of Unity 5 to create high-end complex Android games, then this book is for you. Readers are expected to have a basic understanding of Unity 5, working with its environment, and its basic concepts. What You Will Learn Develop your own Jetpack Joyride clone game Explore the advanced features of Unity 5 by building your own Action Fighting game Develop remarkable Graphical User Interfaces (GUIs) with Unity's new uGUI system Enhance your game by adding stunning particle systems and complex animations Build pleasing virtual worlds with special effects, lights, sky cube maps, and cameras Make your game more realistic by providing music and sound effects Debug and deploy your games on different Android devices In Detail Game engines such as Unity are the power-tools behind the games we know and love. Unity is one of the most widely-used and best loved packages for game development and is used by everyone, from hobbyists to large studios, to create games and interactive experiences for the Web, desktop, mobile, and console. With Unity's intuitive, easy-to-learn toolset and this book, it's never been easier to become a game developer. You will begin with the basic concepts of Android game development, a brief history of Android games, the building blocks of Android games in Unity 5, and the basic flow of games. You will configure an empty project for the Jetpack Joyride Clone Game, add an environment and characters, and control them. Next you will walk through topics such as particle systems, camera management, prefabs, animations, triggers, colliders, and basic GUI systems. You will then cover the basic setup for 3D action fighting games, importing models, textures and controlling them with a virtual on-screen joystick. Later you will set up Scene for 3D Configuration, create basic gameplays, and manage input controls. Next you will learn to create the interface for the main menu, gameplay, game over, achievements, and high score screens. Finally you will polish your game with stats, sounds, and Social Networking, followed by testing the game on Android devices and then publishing it on Google Play, Amazon, and OUYA Stores. Style and approach A step-by-step and detailed guide to developing high-end complex Android games utilizing the advanced concepts of Unity. 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. A fast-paced guide to building impressive games and applications for Android devices with Unity 5 About This Book Design beautiful effects, animations, physical behaviors, and other different real-world features for your Android games and applications Optimize your project and any other real-world projects for Android devices Follows a tutorial-based approach to learning the best practices for accessing Android functionality, rendering high-end graphics, and expanding your project using Asset Bundles Who This Book Is For This book is perfect for competent Unity developers who want to learn how to develop, optimize, and publish games for Android devices in a quick and easy manner. This book assumes basic knowledge of game design concepts and/or some experience with other game technologies such as Unreal Engine 4, CryEngine, or GameMaker. What You Will Learn Discover tips and tricks to optimize Unity scripts Create Java and native C plugins for the Android platform Access Android features and sensors inside the Unity 5 engine Render high quality graphics and optimize Cg shaders Play Legacy and Mecanim animations in Unity 5 Download new assets and code behavior while your game is running on an Android device in order to expand your game in real time Debug your games and applications on Android devices using the Unity Profiler tool In Detail Unity is a very popular and effective technology for creating 2D and 3D games and applications. The Unity rendering engine provides great real-time rendering of high quality graphics without too much cost and effort. It boasts industry leading multi-platform support and world class monetization and retention services for mobile games, making it the first choice for many game developers across the world. Unity 5 is a great starting point for game developers looking to develop stunning and robust games. Starting with a refresher on the basics of Unity 5, this book will take you all the way through to creating your first custom game. By the end of the book, you will understand how to work with all the aspects of Unity 5. You will quickly explore all the major key features of the Unity 5 engine and learn to implement real-world Android game and application features in practice. We begin by introducing how to set up the Android SDK on Windows and Mac OS X and configure Unity 5 settings for the Android platform. As you progress through the chapters, you will learn to implement innovative and user-friendly features with the aid of real-world examples. You will explore how to render high quality graphics with physically-based shaders and global illumination to enhance your project's performance. Building on this, you will then learn to transform your native C# and JavaScript code into Unity scripts. Best practices to improve your Android games will also be discussed to help you create games fast and efficiently. Finally, putting together all these concepts, you will learn to create your own Android game from scratch. This book will teach you how to harness the benefits of different tools to become proficient at game design and development processes. Style and approach This book is a simple and fast-paced guide that helps you through the process of creating real-world Android games and applications with the Unity engine using step-by-step and practical examples that progressively build upon each other. In this book, the fourth book in the series, you will learn to create a simple network game, generate levels procedurally, and optimize the performance of your game. This book can be read as a standalone (you don't need to have read the previous books in the series, although it may help) and focuses on four aspects: procedural level creation, database access, multi-player networked games, and code and project optimization (i.e., memory and speed).The main idea behind this book is to save you some headaches when you need to maintain your code or expand your game, and to help you to find the time to actually code your game, by explaining simple and effective ways and best coding and organizational practices that you can use easily to create more code (and games) in less time with less stress and more fun.The content of each chapter is as follows: Chapter 1 explains how you can create procedural levels, using arrays, text files, XML files, or images, and avoid spending a lot of time creating your scene manually. Chapter 2 explains how you can read and write data from/to a database through Unity to save and update user preferences. Chapter 3 explains how to create a simple (but fun) network tank game that can be played by two remote players. Chapter 4 explains advanced techniques to boost the performance of your game, and to make your code and project easily maintainable. Chapter 5 provides answers to frequently-asked questions. The book includes: Step-by-step activities. Challenges at the end of each chapter. Quizzes. Code solutions for each chapter. Cheat-sheets (i.e., shortcuts, best practice, etc.) that you can download. Leverage the power of Unity 5 to create fun and unbelievable AI entities in your games!About This Book- Compose richer games by learning the essential concepts in artificial intelligence with exciting examples- Explore the brand new Unity 5 features that make implementing artificial intelligence in your game easier than ever- Using this practical guide become a competent Unity 3D developer by learning AI techniques, methods and the applicability of AIWho This Book Is ForThis book is intended for Unity developers with a basic understanding of C# and the Unity editor. Whether you're looking to build your first game or are looking to expand your knowledge as a game programmer, you will find plenty of exciting information and examples of game AI in terms of concepts and implementation. It does not require any prior technical knowledge of how game AI works.What You Will Learn- Understand the basic terminology and concepts in game AI- Implement a basic finite state machine using state machine behaviors in Unity 5- Create

sensory systems for your AI with the most commonly used techniques- Implement an industry-standard path-finding system and a navigation mesh with the Unity 5 NavMesh feature- Build believable and highly-efficient artificial flocks and crowds- Create a basic behavior tree to drive a character's actions- Make your characters more engaging by implementing fuzzy logic concepts in your AI's decision-making- Tie all the concepts together with examples and guides

**In Detail**Unity 5 provides game and app developers with a variety of tools to implement artificial intelligence. Leveraging these tools via Unity's API or built-in features allows limitless possibilities when it comes to creating your game's worlds and characters. Whether you are developing traditional, serious, educational, or any other kind of game, understanding how to apply artificial intelligence can take the fun-factor to the next level!This book helps you break down artificial intelligence into simple concepts to give the reader a fundamental understanding of the topic to build upon. Using a variety of examples, the book then takes those concepts and walks you through actual implementations designed to highlight key concepts, and features related to game AI in Unity 5. Along the way, several tips and tricks are included to make the development of your own AI easier and more efficient.

**Starting from covering the basic essential concepts to form a base for the later chapters in the book, you will learn to distinguish the state machine pattern along with implementing your own. This will be followed by learning how to implement a basic sensory system for your AI agent and coupling it with a finite state machine (FSM). Next you will be taught how to use Unity's built-in NavMesh feature and implement your own A\* pathfinding system. Then you will learn how to implement simple flocks and crowd's dynamics, the key AI concepts. Then moving on you will learn how a behavior tree works and its implementation. Next you will learn adding layer of realism by combining fuzzy logic concepts with state machines. Lastly, you learn applying all the concepts in the book by combining them in a simple tank game.**

**Style and approach**An easy-to-follow guide that is full of example implementations of the concepts and is accompanied by easy-to-understand demonstrations and explanations of the code and concepts. 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. 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. Creating your own game can be very intimidating at the start, and quite often, regardless of your experience with games, it is sometimes difficult to find the time and motivation to get over the first barriers and get started. In this book you will become comfortable with Unity's interface and core features, by creating a project (with no coding involved) that includes both an indoor and an outdoor environment.

**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.

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