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Add Blender to your Unity game development projects to unlock new possibilities and decrease your dependency on third-party creators Key FeaturesDiscover how you can enhance your games with BlenderLearn how to implement Blender in real-world scenariosCreate new or modify existing assets in Blender and import them into your Unity gameBook Description Blender is an incredibly powerful, free computer graphics program that provides a world-class, open-source graphics toolset for creating amazing assets in 3D. With Mind-Melding Unity and Blender for 3D Game Development, you'll discover how adding Blender to Unity can help you unlock unlimited new possibilities and reduce your reliance on third parties for creating your game assets. This game development book will broaden your knowledge of Unity and help you to get to grips with Blender's core capabilities for enhancing your games. You'll become familiar with creating new assets and modifying existing assets in Blender as the book shows you how to use the Asset Store and Package Manager to download assets in Unity and then export them to Blender for modification. You'll also learn how to modify existing and create new sci-fi-themed assets for a minigame project. As you advance, the book will guide you through creating 3D model props, scenery, and characters and demonstrate UV mapping and texturing. Additionally, you'll get hands-on with rigging, animation, and C# scripting. By the end of this Unity book, you'll have developed a simple yet exciting mini game with audio and visual effects, and a GUI. More importantly, you'll be ready to apply everything you've learned to your Unity game projects. What you will learnTransform your imagination into 3D scenery, props, and characters using BlenderGet to grips with UV unwrapping and texture models in BlenderUnderstand how to rig and animate models in BlenderAnimate and script models in Unity for top-down, FPS, and other types of gamesFind out how you can roundtrip custom assets from Blender to Unity and backBecome familiar with the basics of ProBuilder, Timeline, and Cinemachine in UnityWho this book is for This book is for game developers looking to add more skills to their arsenal by learning Blender from the ground up. Beginner-level Unity scene and scripting skills are necessary to get started. Publisher's note: This edition from 2020 is outdated and does not make use of the most recent Unity and C# features. A new sixth edition, updated for Unity 2021 and including new advanced C# topics, such as reading, writing, and serializing data, has now been published. Key FeaturesUnderstand C# programming basics, terminology, and coding best practicesPut your knowledge of C# concepts into practice by building a fun and playable gameCome away with a clear direction for taking your C# programming and Unity game development skills to the next levelBook Description Over the years, the Learning C# by Developing Games with Unity series has established itself as a popular choice for getting up to speed with C#, a powerful and versatile programming language that can be applied in a wide array of application areas. This book presents a clear path for learning C# programming from the ground up without complex jargon or unclear programming logic, all while building a simple game with Unity. This fifth edition has been updated to introduce modern C# features with the latest version of the Unity game engine, and a new chapter has been added on intermediate collection types. Starting with the basics of software programming and the C# language, you'll learn the core concepts of programming in C#, including variables, classes, and object-oriented programming. Once you've got to grips with C# programming, you'll enter the world of Unity game development and discover how you can create C# scripts for simple game mechanics. Throughout the book, you'll gain hands-on experience with programming best practices to help you take your Unity and C# skills to the

next level. By the end of this book, you'll be able to leverage the C# language to build your own real-world Unity game development projects. What you will learn

- Discover easy-to-follow steps and examples for learning C# programming fundamentals
- Get to grips with creating and implementing scripts in Unity
- Create basic game mechanics such as player controllers and shooting projectiles using C#
- Understand the concepts of interfaces and abstract classes
- Leverage the power of the latest C# features to solve complex programming problems
- Become familiar with stacks, queues, exceptions, error handling, and other core C# concepts
- Explore the basics of artificial intelligence (AI) for games and implement them to control enemy behavior

Who this book is for If you're a developer, programmer, hobbyist, or anyone who wants to get started with C# programming in a fun and engaging manner, this book is for you. Prior experience in programming or Unity is not required. Unity Android Game Development by Example Beginner's Guide consists of different game application examples. No prior experience with programming, Android, or Unity is required. You will learn everything from scratch and will have an organized flow of information specifically designed for complete beginners to Unity.

Great for developers new to Unity, Android, or both, this book will walk you through everything you need to know about game development for the Android mobile platform. No experience with programming, Android, or Unity is required. Most of the assets used in each chapter project are provided with the book, but it is assumed that you have some access to basic image and model creation software. You will also need access to an Android powered device. In just 24 lessons of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 5 game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program, and many other sizzling-hot games! This book 's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you 've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions. Learn C# programming from scratch using Unity as a fun and accessible entry point with this updated edition of the bestselling series. Includes invitation to join the online Unity Game Development community to read the book alongside peers, Unity developers/C# programmers and Harrison Ferrone. Purchase of the print or Kindle book includes a free eBook in the PDF format.

Key Features

- Learn C# programming basics, terminology, and coding best practices
- Become confident with Unity fundamentals and features in line with Unity 2021
- Apply your C# knowledge in practice and build a working first-person shooter game prototype in Unity

Book Description The Learning C# by Developing Games with Unity series has established itself as a popular choice for getting up to speed with C#, a powerful and versatile programming language with a wide array of applications in various domains. This bestselling franchise presents a clear path for learning C# programming from the ground up through the world of Unity game development. This sixth edition has been updated to introduce modern C# features with Unity 2021. A new chapter has also been added that covers reading and writing binary data from files, which will help you become proficient in handling errors and asynchronous operations. The book acquaints you with the core concepts of programming in C#, including variables, classes, and object-oriented programming. You will explore the fundamentals of Unity game development, including game design, lighting basics, player movement, camera controls, and collisions. You will write C# scripts for simple game mechanics, perform procedural programming, and add complexity to your games by introducing smart enemies and damage-causing projectiles. By the end of the book, you will have developed the skills to become proficient in C# programming and built a playable game prototype with the Unity game engine. What you will learn

- Follow simple steps and examples to create and implement C# scripts in Unity
- Develop a 3D mindset to build games that come to life
- Create basic game mechanics such as player controllers and shooting projectiles using C#
- Divide your code into pluggable building blocks using interfaces, abstract classes, and class extensions
- Become familiar with stacks, queues, exceptions, error handling, and other core C# concepts
- Learn how to handle text, XML, and JSON data to save and load your game data
- Explore the basics of AI for games and implement them to control enemy behavior

Who this book is for If you're a developer, programmer, hobbyist, or anyone who wants to get started with Unity and C# programming in a fun and engaging manner, this book is for you. You'll still be able to follow along if you don't have programming experience, but knowing the basics will help you get the most out of this book. Provides information on using the Unity game engine to build games for any platform, including the Web, the Wii, and on smartphones. In just 24 hours, readers will learn how to get started developing games with Unity. The approach is hands-on and modular. Each chapter covers an essential component of the game development process. Topics are illustrated with sample projects. The book also concludes with a complete game project. This book's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. 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. 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. This is a practical and light-hearted guide to get to grips with creating your first games, with easy-to-follow, step-by-step tutorials using the award winning Unity engine. If you've ever wanted to enter the world of independent game development but have no prior knowledge of programming or game development, then this is the book for you. Game developers transitioning from other tools like GameMaker and Flash will find this a useful tool to get them up to speed on the Unity engine, as will anyone who has never handled the Unity engine before. 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. If you are new to Unity scripting and want to learn simple and modular code and advance your knowledge to the next level, this is the book for you. 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. In just 24 sessions of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program and many other sizzling-hot games! You'll learn everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Unity 5 game development tasks. Quizzes and Exercises at the end of each chapter help you test your knowledge. Notes present interesting information related to the discussion. Tips offer advice or show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Learn how to... Create and work with game objects, Unity's fundamental building blocks Work efficiently with Unity's graphical asset pipeline Apply shaders and textures to any 3D object Sculpt stunning game worlds with Unity's terrain and environmental toolsets Script tasks ranging from capturing input to building complex behaviors Quickly create repeatable, reusable game objects with prefabs Implement easy, intuitive game user interfaces Create amazing effects with Unity's particle system Leverage the full power of Unity's Mecanim animation system Integrate ambient 2D/3D audio into your games Use mobile device accelerometers and multi-touch displays Modify a desktop game for mobile platforms Apply the "finishing touches" and deploy your game This hands-on beginners guide gets you building games fast, all with the awesome Unity engine! You'll speed past the basics and use your existing coding skills to create 2D, 3D, and AR/VR games. In Unity in Action, Third Edition, you will learn how to: Create characters that run, jump, and bump into things Build 3D first-person shooters and third-person action games Construct 2D card games and side-scrolling platformers Script enemies with AI Improve game graphics by importing models and images Design an intuitive user interface for your games Play music and spatially-aware sound effects Connect your games to the internet for online play Deploy your games to desktop, mobile, and the web Thousands of new game developers have chosen Joe Hocking's Unity in Action as their first step toward Unity mastery. Starting with the initial groundwork of a new game development project, you'll quickly start writing custom code instead of clicking together premade scripts. This fully updated third edition comes packed with fully refreshed graphics, Unity's latest features, and coverage of augmented and virtual reality toolkits. You'll master the Unity toolset from the

ground up, learning the skills to go from application coder to game developer. Foreword by Jesse Schell. About the technology Writing games is rewarding and fun—and with Unity, it's easy to get started! Unity handles the heavy lifting, so you can focus on game play, graphics, and user experience. C# support and a huge ecosystem of prebuilt components help even first-time developers go from the drawing board to the screen fast. About the book Unity in Action, Third Edition teaches you to create games with the Unity game platform. It's many 2D, 3D, and AR/VR game examples give you hands-on experience with Unity's workflow tools and state-of-the-art rendering engine. This fully updated third edition presents new coverage of Unity's XR toolkit and shows you how you can start building with virtual and augmented reality. What's inside Create characters that run, jump, and bump into things Script enemies with AI Play music and spatially-aware sound effects Deploy your games to desktop, mobile, and the web About the reader For programmers who know any object-oriented programming language. Examples are in C#. About the author Joe Hocking is a software engineer and Unity expert specializing in interactive media development. Table of Contents PART 1 FIRST STEPS 1 Getting to know Unity 2 Building a demo that puts you in 3D space 3 Adding enemies and projectiles to the 3D game 4 Developing graphics for your game PART 2 GETTING COMFORTABLE 5 Building a Memory game using Unity's 2D functionality 6 Creating a basic 2D platformer 7 Putting a GUI onto a game 8 Creating a third-person 3D game: Player movement and animation 9 Adding interactive devices and items within the game PART 3 STRONG FINISH 10 Connecting your game to the internet 11 Playing audio: Sound effects and music 12 Putting the parts together into a complete game 13 Deploying your game to players' devices In just 24 lessons of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 5 game engine at the heart of Hearthstone: Heroes of Warcraft, Kerbal Space Program, and many other sizzling-hot games! This book's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions. Learn how to ... Get up and running fast with the Unity 5 game engine and editor Work efficiently with Unity's graphical asset pipeline Make the most of lights and cameras Sculpt stunning worlds with Unity's terrain and environmental tools Script tasks ranging from capturing input to building complex behaviors Quickly create repeatable, reusable game objects with prefabs Implement easy, intuitive game user interfaces Control players through built-in and custom character controllers Build realistic physical and trigger collisions Leverage the full power of Unity's Mecanim animation system Integrate complex audio into your games Use mobile device accelerometers and multi-touch displays Modify desktop games for mobile platforms Apply the "finishing touches" and deploy your games. Learn how to build a complete 3D game using the industry-leading Unity game development engine and Blender, the graphics software that gives life to your ideas About This Book Learn the fundamentals of two powerful tools and put the concepts into practice Find out how to design and build all the core elements required for a great game - from characters to environments, to props— Learn how to integrate Artificial Intelligence (AI) into your game for sophisticated and engaging gameplay Who This Book Is For This book has been created for anyone who wants to learn how to develop their own game using Blender and Unity, both of which are freely available, yet very popular and powerful, tools. Not only will you be able to master the tools, but you will also learn the entire process of creating a game from the ground up. What You Will Learn Design and create a game concept that will determine how your game will look and how it will be played Construct 3D models of your game characters and create animations for them before importing them into the game Build the game environment from scratch by constructing the terrain and props, and eventually put it all together to form a scene Import and integrate game assets created in Blender into Unity—for example, setting up textures, materials, animation states, and prefabs Develop game structures including a game flow, user interface diagram, game logic, and a state machine Make the game characters move around and perform certain actions either through player inputs or fully controlled by artificial intelligence Create particles and visual effects to enhance the overall visual aesthetic Deploy the game for various types of platforms In Detail In the wake of the indie game development scene, game development tools are no longer luxury items costing up to millions of dollars but are now affordable by smaller teams or even individual developers. Among these cutting-edge applications, Blender and Unity stand out from the crowd as a powerful combination that allows small-to-no budget indie developers or hobbyists alike to develop games that they have always dreamt of creating. Starting from the beginning, this book will cover designing the game concept, constructing the gameplay, creating the characters and environment, implementing game logic and basic artificial intelligence, and finally deploying the game for others to play. By sequentially working through the steps in each chapter, you will quickly master the skills required to develop your dream game from scratch. Style and approach A step-by-step approach with tons of screenshots and sample code for readers to follow and learn from. Each topic is explained sequentially and placed in context so that readers can get a better understanding of every step in the process of creating a fully functional game. A practical guide on how to use Unity for building cross-platform mobile games and Augmented Reality apps using the latest Unity 2020 toolset Key Features Create, deploy, and monetize captivating and immersive games on Android and iOS platforms Take your

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

Book Description Unity 2020 brings a lot of new features that can be harnessed for building powerful games for popular mobile platforms. This updated second edition delves into Unity development, covering the new features of Unity, modern development practices, and augmented reality (AR) for creating an immersive mobile experience. The book takes a step-by-step approach to building an endless runner game using Unity to help you learn the concepts of mobile game development. This new edition also covers AR features and explains how to implement them using ARCore and ARKit with Unity. The book explores the new mobile notification package and helps you add notifications for your games. You'll learn how to add touch gestures and design UI elements that can be used in both landscape and portrait modes at different resolutions. The book then covers the best ways to monetize your games using Unity Ads and in-app purchases before you learn how to integrate your game with various social networks. Next, using Unity's analytics tools, you'll enhance your game by gaining insights into how players like and use your game. Finally, you'll take your games into the real world by implementing AR capabilities and publishing them on both Android and iOS app stores. By the end of this book, you will have learned Unity tools and techniques and be able to use them to build robust cross-platform mobile games. What you will learn

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

Who this book is for If you are a game developer or mobile developer who wants to learn Unity and use it to build mobile games for iOS and Android, then this Unity book is for you. Prior knowledge of C# and Unity will be beneficial but is not mandatory.

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

In just 24 sessions of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 4 game engine at the heart of Temple Run and many other sizzling-hot mobile games! You'll learn everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Unity 4 game development tasks. Quizzes and Exercises at the end of each chapter help you test your knowledge. Notes present interesting information related to the discussion. Tips offer advice or show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Learn how to...

- Create and work with game objects, Unity's fundamental building blocks
- Work efficiently with Unity's graphical asset pipeline
- Apply shaders and textures to any 3D object
- Sculpt stunning game worlds with Unity's terrain and environmental toolsets
- Script tasks ranging from capturing input to building complex behaviors
- Quickly create repeatable, reusable game objects with prefabs
- Implement easy, intuitive game user interfaces
- Create amazing effects with Unity's new Shuriken particle system
- Leverage the full power of Unity's new Mecanim animation system
- Integrate ambient 2D/3D audio into your games
- Use mobile device accelerometers and multi-touch displays
- Modify a desktop game for mobile platforms
- Apply the "finishing touches" and deploy your game

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 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 √ In just 24 lessons of one hour or less, **Sams Teach Yourself Unity Game Development in 24 Hours** will help you master the Unity game engine. This book's straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and Tips point out shortcuts and solutions. Learn how to Get up and running fast with the Unity game engine and editor Work efficiently with Unity's graphical asset pipeline Make the most of lights and cameras Sculpt stunning worlds with Unity's terrain and environmental tools Script tasks ranging from capturing input to building complex behaviors Quickly create repeatable, reusable game objects with prefabs Implement easy, intuitive game user interfaces Control players through built-in and custom character controllers Build realistic physical and trigger collisions Leverage the full power of Unity's Animation and new Timeline systems Integrate complex audio into your games Use mobile device accelerometers and multi-touch displays Build engaging 2D games with Unity's 2D tools and Tilemap Apply the finishing touches and deploy your games. Discover the latest features of Unity 2021 and dive deeper into the nuances of professional game development with Unity Key Features Discover the latest features of Unity 2021 including coverage of AR/VR development Follow practical recipes for better 2D and 2D character development with Unity GameKits Learn powerful techniques and expert best practices in building 3D objects, textures, and materials **Book Description** If you are a Unity developer looking to explore the newest features of Unity 2021 and recipes for advanced challenges, then this fourth edition of **Unity Cookbook** is here to help you. With this cookbook, you'll work through a wide variety of recipes that will help you use the essential features of the Unity game engine to their fullest potential. You familiarize yourself with shaders and Shader Graph before exploring animation features to enhance your skills in building games. As you progress, you will gain insights into Unity's latest editor, which will help you in laying out scenes, tweaking existing apps, and building custom tools for augmented reality and virtual reality (AR/VR) experiences. The book will also guide you through many Unity C# gameplay scripting techniques, teaching you how to communicate with database-driven websites and process XML and JSON data files. By the end of this Unity book, you will have gained a comprehensive understanding of Unity game development and built your development skills. The easy-to-follow recipes will earn a

permanent place on your bookshelf for reference and help you build better games that stay true to your vision. What you will learn

Discover how to add core game features to your projects with C# scripting

Create powerful and stylish UI with Unity's UI system, including power bars, radars, and button-driven scene changes

Work with essential audio features, including background music and sound effects

Discover Cinemachine in Unity to intelligently control camera movements

Add visual effects such as smoke and explosions by creating and customizing particle systems

Understand how to build your own Shaders with the Shader Graph tool

Who this book is for

If you're a Unity developer looking for better ways to resolve common recurring problems with recipes, then this book is for you. Programmers dipping their toes into multimedia features for the first time will also find this book useful. Before you get started with this Unity engine book, you'll need a solid understanding of Unity's functionality and experience with programming in C#. Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create interactive games, ideal in scope for today's casual and mobile markets, while also giving you a firm foundation in game logic and design. The first part of the book explains the logic involved in game interaction, and soon has you creating game assets through simple examples that you can build upon and gradually expand. In the second part, you'll build the foundations of a point-and-click style first-person adventure game—including reusable state management scripts, dialogue trees for character interaction, load/save functionality, a robust inventory system, and a bonus feature: a dynamically configured maze and mini-map. With the help of the provided 2D and 3D content, you'll learn to evaluate and deal with challenges in bite-sized pieces as the project progresses, gaining valuable problem-solving skills in interactive design. By the end of the book, you will be able to actively use the Unity 3D game engine, having learned the necessary workflows to utilize your own assets. You will also have an assortment of reusable scripts and art assets with which to build future games. What you ' ll learn

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

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

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

What is inventory logic and how to manage it

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

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

How to handle characters, scrollers, and more

How to create or integrate a story/walkthrough

How to use the new Mecanim animation

Who this book is for

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

Table of Contents

01. Introduction to Game Development

02. Unity UI basics

03. Introduction to Scripting

04. Terrain Generation and Environment

05. Exploring Navigation

06. Cursor Control and Interaction

07. Importing Assets

08. Action Objects

09. Managing State

10. Exploring Transitions

11. Physics and Special Effects

12. Message Text and HUD

13. Inventory Logic

14. Managing Inventory

15. Dialogue Trees

16. Mecanim

17. Game Environment

18. Setting up the Game

19. Menus and Levels

In just 24 lessons of one hour or less, Sams Teach Yourself Unity Game Development in 24 Hours will help you master the Unity 2018 game engine at the heart of Ori and the Blind Forest, Firewatch, Monument Valley, and many other sizzling-hot games! This book ' s straightforward, step-by-step approach teaches you everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you ' ve already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Unity game development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and Tips point out shortcuts and solutions

Learn how to... Get up and running fast with the Unity 2018 game engine and editor

Work efficiently with Unity ' s graphical asset pipeline

Make the most of lights and cameras

Sculpt stunning worlds with Unity ' s terrain and environmental tools

Script tasks ranging from capturing input to building complex behaviors

Quickly create repeatable, reusable game objects with prefabs

Implement easy, intuitive game user interfaces

Control players through built-in and custom character controllers

Build realistic physical and trigger collisions

Leverage the full power of Unity ' s Animation and new Timeline systems

Integrate complex audio into your games

Use mobile device accelerometers and multi-touch displays

Build engaging 2D games with Unity ' s 2D tools and Tilemap

Apply the " finishing touches " and deploy your games

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

With iPhone and Unity, game developers are empowered to create compelling games but they must be careful to specifically address the unique challenges of the iPhone hardware cpu and gpu requirements. This book teaches artists how to circumvent the potential pitfalls. 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. 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. 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. 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. Get up to speed with a series of performance-enhancing coding techniques and methods that will help you improve the performance of your Unity applications Key Features Optimize graphically intensive games using the latest features of Unity such as Entity Component System (ECS) and the Burst compiler Explore techniques for solving performance issues with your VR projects Learn best practices for project organization to save time through an improved workflow Book Description Unity engine comes with a great set of features to help you build high-performance games. This Unity book is your guide to optimizing various aspects of your game development, from game characters and scripts, right through to animations. You'll explore techniques for writing better game scripts and learn how

to optimize a game using Unity technologies such as ECS and the Burst compiler. The book will also help you manage third-party tooling used with the Unity ecosystem. You'll also focus on the problems in the performance of large games and virtual reality (VR) projects in Unity, gaining insights into detecting performance issues and performing root cause analysis. As you progress, you'll discover best practices for your Unity C# script code and get to grips with usage patterns. Later, you'll be able to optimize audio resources and texture files, along with effectively storing and using resource files. You'll then delve into the Rendering Pipeline and learn how to identify performance problems in the pipeline. In addition to this, you'll learn how to optimize the memory and processing unit of Unity. Finally, you'll cover tips and tricks used by Unity professionals to improve the project workflow. By the end of this book, you'll have developed the skills you need to build interactive games using Unity and its components. What you will learn

- Apply the Unity Profiler to find bottlenecks in your app, and discover how to resolve them
- Discover performance problems that are critical for VR projects and learn how to tackle them
- Enhance shaders in an accessible way, optimizing them with subtle yet effective performance tweaks
- Use the physics engine to keep scenes as dynamic as possible
- Organize, filter, and compress art assets to maximize performance while maintaining high quality
- Use the Mono framework and C# to implement low-level enhancements that maximize memory usage and prevent garbage collection

Who this book is for The book is intended for intermediate Unity game developers who wants to maximize the performance of their game. The book assumes familiarity with C# programming. 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.

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. In just 24 sessions of one hour or less, *Sams Teach Yourself Unity Game Development in 24 Hours* will help you master the Unity 4 game engine at the heart of *Temple Run* and many other sizzling-hot mobile games! You'll learn everything from the absolute basics through sophisticated game physics, animation, and mobile device deployment techniques. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Unity 4 game development tasks. Quizzes and Exercises at the end of each chapter help you test your knowledge. Notes present interesting information related to the discussion. Tips offer advice or show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Learn how to ...

- Create and work with game objects, Unity's fundamental building blocks
- Work efficiently with Unity's graphical asset pipeline
- Apply shaders and textures to any 3D object
- Sculpt stunning game worlds with Unity's terrain and environmental toolsets
- Script tasks ranging from capturing input to building complex behaviors
- Quickly create repeatable, reusable game objects with prefabs
- Implement easy, intuitive game user interfaces
- Create amazing effects with Unity's new Shuriken particle system
- Leverage the full power of Unity's new Mecanim animation system
- Integrate ambient 2D/3D audio into your games
- Use mobile device accelerometers and multi-touch displays
- Modify a desktop game for mobile platforms
- Apply the "finishing touches" and deploy your game. Using a projects based approach you will learn the coolest aspects of Unity 3D game development. With each project you will be able to show off a creation that shows only the best of Unity 3D. This book is for users who already have some basic knowledge of how to use the Unity 3D game engine and intermediate users who want to explore Unity 3D above and beyond the basic techniques. An easy-to-follow, tutorial manner that uses the learning-by-example approach. If you are a developer who wants to start making multiplayer games with the Unity game engine, this book is for you. This book assumes you have some basic experience with

programming. No prior knowledge of the Unity IDE is required. Achieve mesmerizing game experiences using the latest Unity 2021 features by following a practical approach to building professional games

Key Features

- Unleash the capabilities of C# scripting to create UIs, graphics, game AI agents and more
- Explore Unity's latest tools, including Universal Render Pipeline, Shader Graph, UI Toolkit, Visual Scripting, and VFX graph, to enhance graphics and animation
- Build an AR experience using Unity's AR Foundation

Book Description

Learning how to use Unity is the quickest way to creating a full game, but that's not all you can do with this simple, yet comprehensive suite of video game development tools – Unity is just as useful for creating AR/VR experiences, complex simulations, real-time realistic rendering, films, and practical games for training and education. Hands-On Unity 2021 Game Development outlines a practical journey to creating your first full game from the ground up, building it step-by-step and applying your knowledge as you progress. Complete with hands-on tutorials and projects, this easy-to-follow guide will teach you how to develop the game using several Unity tools. As you advance, you will learn how to use the Unity engine, create simple scripts using C#, integrate graphics, sound, and animations, and manipulate physics to create interesting mechanics for your game. You'll be able to apply all the knowledge that you gain to a real-world game. Later chapters will show you how to code a simple AI agent to challenge the user and use profiling tools to ensure that the code runs efficiently. Finally, you'll work with Unity's AR tools to create AR experiences for 3D apps and games. By the end of this Unity book, you will have created a complete game and built a solid foundation in using a wide variety of Unity tools. What you will learn

- Explore both C# and Visual Scripting tools to customize various aspects of a game, such as physics, gameplay, and the UI
- Program rich shaders and effects using Unity's new Shader Graph and Universal Render Pipeline
- Implement postprocessing to improve graphics quality with full-screen effects
- Create rich particle systems for your Unity games from scratch using VFX Graph and Shuriken
- Add animations to your game using the Animator, Cinemachine, and Timeline
- Use the brand new UI Toolkit package to create user interfaces
- Implement game AI to control character behavior

Who this book is for

This book is best suited for game developers looking to upgrade their knowledge and those who want to migrate their existing skills to the Unity game engine. Those with prior Unity knowledge will also benefit from the chapters exploring the latest features. While you'll still be able to follow along if you don't have any programming experience, knowing the fundamentals of C# programming will help you get the most out of this book.

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