

Unity Pro Programming Guide

Unity Android Game Development by Example Beginner's Guide

Unity Android Game Development by Example Beginner's Guide consists of different game application examples. No prior experience with programming, Android, or Unity is required. You will learn everything from scratch and will have an organized flow of information specifically designed for complete beginners to Unity. Great for developers new to Unity, Android, or both, this book will walk you through everything you need to know about game development for the Android mobile platform. No experience with programming, Android, or Unity is required. Most of the assets used in each chapter project are provided with the book, but it is assumed that you have some access to basic image and model creation software. You will also need access to an Android powered device.

Unity 4.x Game Development by Example Beginner's Guide

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.

Holistic Game Development with Unity

The independent developer has ascended, and the new business model demands agility. You have to be able to work on all aspects of game creation, and your team's game will publish directly to platforms like Android, iPhone, and Facebook. You'll use Unity, the hottest game engine out there, to do it. In order to earn your place on the elite development team, you must master both sides of the development coin: art and programming. Holistic Game Development with Unity is an authoritative guide to creating games in Unity. Taking you through game design, programming, and art, Penny de Byl uses a holistic approach to equip you with the multidisciplinary skills you need for the independent games industry. With this book, you will master essential digital art and design principles while learning the programming skills necessary to build interactivity into your games. The tutorials will put these skills into action. The companion website offers: source code for completed projects from the book, art assets, instructional videos, a forum, author blog and lesson plans and challenge questions for professors. Examines art and programming in unison-the only one-stop shop for individual developers and small teams looking to tackle both tasks.

Unity Game Development

If you don't know anything about programming in general, writing code, writing scripts, or have no idea where to even begin, then this book is perfect for you. If you want to make games and need to learn how to write C# scripts or code, then this book is ideal for you. Unity is a cross-platform development platform initially created for developing games but is now used for a wide range of things such as: architecture, art, children's apps, information management, education, entertainment, marketing, medical, military, physical installations, simulations, training, and many more. Unity takes a lot of the complexities of developing games and similar interactive experiences and looks after them behind the scenes so people can get on with designing and developing their games. These complexities include graphics rendering, world physics and compiling. More advanced users can interact and adapt them as needed but for beginners they need not worry about it. Games in Unity are developed in two halves; the first half -within the Unity editor, and the second half - using code, specifically C#. Unity is bundled with MonoDeveloper Visual Studio 2015 Community for writing C#.

Game Programming

Unity is a cross-platform development platform initially created for developing games but is now used for a wide range of things such as architecture, art, children's apps, information management, education, entertainment, marketing, medical, military, physical installations, simulations, training, and many more. Almost half of all games are created using the Unity game engine. Unity is great for both new and experienced

game developers. This book will discuss the major foundations of scripting with C# in Unity and apply what we've learned into a mini-project. You will learn about the core fundamentals that are used when scripting in Unity such as creating and manipulating variables, understanding the different types of operators, and how we can create instructions for our game objects using functions.

Moving from Unity to Godot

Are you a Unity developer looking to switch to the Godot engine quickly? If so, this no-nonsense book is your guide to mastering the most popular open-source game engine. Godot is a completely free game engine for creating high-quality 2D and 3D games that can be launched on multiple platforms. You'll see how to transition seamlessly from Unity to Godot, getting up and running quickly and effectively, using practical case studies. In addition to building functional worlds from meshes and physical interactions, you'll work with reusable assets, such as textures. The book then moves on to lighting and rendering 2D and 3D scenes with baked and real-time lighting. You'll also work with navigation and path-finding for NPCs, and see how to create save-game states with JSON. With Moving from Unity to Godot you'll be ready to create amazing 2D and 3D games that will supercharge your business. What You Will Learn Explore the similarities and differences between Unity and Godot Maximize the benefits from Unity and Godot Create believable game world and characters with Godot Master the unique aspects of C# coding in Godot Who This Book is For Developers familiar with Unity who want to master another game engine, such as Godot.

Unity 3d Game Development by Example Beginner's Guide

The book is suitable for anybody who wants to create games in Unity. You don't need a programming background. If you love playing games and want to try your hand at creating them, this book is the place to start.

C# in Unity

C# in Unity Programming C# in Unity Engine, a guide book for beginners----- Explain programming concepts- simple explanation- Many examples- Summaries-----When I first started looking into iOS game development, Xcode (before SpriteKit) made game development look very challenging. Unity on the other hand had a powerful visual editor and was also capable of publishing to mobile. Looking further, its asset store and fantastic developer community made Unity a very compelling option indeed. Today it is able to boast more games being made with Unity than any other game technology. And with support for almost 30 platforms including mobile, VR, desktop and console, it's no longer a great place to start, but the perfect place to start!- The role of the Game Designer is how the game works correctly during its design process. It sets goals, rules and procedures, sets the story and gives life, and is also responsible for planning everything that makes the game acceptable. Level Design Whether it is based on architecture or sketching on blueprint, it also coordinates the story (the overall scenario) of the game. Anyone who has dreamed of a distinguished Hollywood job can now do what he wants by writing the story script and releasing it completely. The previous disciplines are now fully divided, each person responsible for one of them, but the successful game developer must be familiar with the details of each specialty. Door Learn something about everything, but what are things needed to become a game designer? What talents and abilities are required? What is the best way to design a game? This is all we will discover through this book .

Unity Certified Programmer: Exam Guide

A practical guide to Unity game scripting using C#, backed with practice tests, exam tips, and easy-to-follow examples to help you better prepare for the exam and become a pro in Unity programming Key Features Discover the essentials of game scripting with Unity and C# to customize every aspect of your game Overcome challenges in Unity game development using effective techniques and easy solutions Pass the Unity certification exam with the help of mock tests, exam tips, and self-assessment questions Book Description Unity Certified Programmer is a global certification program by Unity for anyone looking to become a professional Unity developer. The official Unity programmer exam will not only validate your Unity knowledge and skills, but also enable you to be part of the Unity community. This study guide will start by building on your understanding of C# programming and take you through the process of downloading and installing Unity. You'll understand how Unity works and get to grips with the core objectives of the Unity exam. As you advance, you'll enhance your skills by creating an enjoyable side-scrolling shooter game that can be played within the Unity Editor or any recent Android mobile device. This Unity book will test your knowledge with self-assessment questions and help you take your skills to an advanced level by working with Unity tools such as the Animator, Particle Effects, Lighting, UI/UX, Scriptable Objects, and debugging. By the end of this book, you'll have developed a solid understanding of the different tools in Unity and understand how to create impressive Unity applications by making the most of its toolset. What you will learn Discover techniques for writing modular, readable, and reusable scripts in Unity Implement and configure objects, physics, controls, and movements for your game projects Understand 2D and 3D animation and write scripts that interact with Unity's Rendering API Explore Unity APIs for adding lighting, materials, and texture to your apps Write Unity scripts for building interfaces for menu systems, UI navigation, application settings, and much more Delve into SOLID principles for writing clean and maintainable Unity applications Who this book is for The book is for game developers, software developers, mobile app developers, and Unity developers who want to advance in the game or related industry. Basic knowledge of C# programming and Unity engine is required.

Mastering Unity

Mastering Unity: A Beginner's Guide introduces developers of all ages to the beautiful and valuable world of Unity. Unity is a popular cross-platform game engine. It was initially unveiled and distributed as a Mac OS X-exclusive game engine in June 2005 at Apple Inc.'s Worldwide Developers Conference. Unity is used to produce nearly 50% of all games in the world. Its real-time platform, driven by tools and services, provides fantastic opportunities for game developers and innovators across sectors and applications. Mastering Unity covers the creation of both three-dimensional (3D) and two-dimensional (2D) games as well as interactive simulations and other experiences. Since Unity as an engine has been used in sectors other than video games, including film, automotive, architectural, engineering, manufacturing, and even by the armed forces, Mastering Unity focuses on a broader usage for Unity. This book starts with the setup and installation of Unity, which is followed by additional info related to its usage. Mastering Unity covers such topics as scene management, debugging, 2D and 3D physics, and Unity Hub setup. Considering the fact that C# is often the primary programming language used in Unity, this book covers object-oriented principles as well as C# coding at great length. That said, you can use any other language in Unity, including JavaScript, Rust, or Mono. For the most part, Mastering Unity strives to be programming language-neutral to help you fully understand the Unity concepts. If you are an absolute beginner, Mastering Unity will help you understand the basics about Unity, its features, technical requirements, architecture, and the scripting language used in Unity. This book also focuses on setting up Unity, which encompasses installation, project creation, and launches of a project scene. Mastering Unity also addresses dealing with scenes and game objects, prefabs, and storing scenes as well as animations in Unity and performance optimization. Mastering Unity will also help you learn how to test and release a game in Unity to various platforms. Learn more about our other Mastering titles at: <https://www.routledge.com/Mastering-Computer-Science/book-series/MCS>

A Quick Guide to c# with Unity

Why this book can help you to get started fast with C# in Unity It can be intimidating to start with Unity, and while several books can provide comprehensive information, you may, like many other readers, just want to focus on a particular topic and get started fast. This book is part of a series entitled Quick Guides, and does just this. In this book series, you have the opportunity to get started on a particular topic in less than 60 minutes, delving right into the information that you really need. Of course, you can, after reading this book, move-on to more comprehensive books; however, quite often, you may have little time to complete a project or to get comfortable with a topic fast. In this book entitled A Quick Guide to C# in Unity, you will discover how to program in C# and you will learn most of the foundation blocks that you need to get started with C# (e.g., variables, methods, events, or Object-Oriented concepts) using a hands-on approach where you learn and practice as you go. By following the techniques and suggestions described in this short book, I can promise you that you will get started very fast and create your own C# scripts. Along the way, you will also learn about best coding practices, as well as common errors and how to avoid them easily. Content and structure of this book In this book, you will learn about using C# with Unity, including: - Object-Oriented Principles (e.g., classes, variable scope, events, constructors, etc.). - Variables, conditional statements, loops, and other useful structures. - Common C# methods used in Unity and their uses. - The work flow involved in creating and running a script in Unity. The main idea behind this book is to help you to get started quickly with C#. So, if you want to start coding in C# with Unity : download this book now!

Unity 2d Game Development

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

Unity From Zero to Proficiency (Foundations)

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.

Learn Unity 4 for iOS Game Development

Unity is an incredibly powerful and popular game creation tool, and Unity 4 brings even more great features, including Mechanim animation. Learn Unity 4 for iOS Game Development will show you how to use Unity with Xcode to create fun, imaginative 3D games for iPhone, iPad, and iPod touch. You'll learn how to optimize your game for both speed and quality, how to test and profile your game, and how to get the most out of your iOS device features, including the gyroscope and accelerometer. You'll also learn how to incorporate the latest Game Center improvements in iOS 6 into your game, how to make sure your game gets into the App Store, and even how to promote your app and track revenue. If you have a great 3D game idea, and you want to make it a reality in the App Store, then Learn Unity 4 for iOS Game Development has exactly what you need.

Game Programming with Unity and C#

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.

Learn Programming Unity 3D

Learn Programming Unity 3D C# and Unity Engine - A guide for beginners by dr.moaml mohammed----- simple explanation- Many examples- Summaries- Photos-----Unity is a 2D/3D engine and framework that gives you a system for designing game or app scenes for 2D, 2.5D and 3D. I say games and apps because I've seen not just games, but training simulators, first-responder applications, and other

business-focused applications developed with Unity that need to interact with 2D/3D space. Unity allows you to interact with them via not only code, but also visual components, and export them to every major mobile platform and a whole lot more-for free. (There's also a pro version that's very nice, but it isn't free. You can do an impressive amount with the free version.) Unity supports all major 3D applications and many audio formats, and even understands the Photoshop .psd format so you can just drop a .psd file into a Unity project. Unity allows you to import and assemble assets, write code to interact with your objects, create or import animations for use with an advanced animation system, and much more

Learning 2D Game Development with Unity

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

Learning C# by Developing Games with Unity 3D

This book uses the learning-by-example approach. It takes simple examples from games to introduce all the main concepts of programming in an easy-to-digest and immediately recognizable way. This book is for the total beginner to any type of programming, focusing on the writing of C# code and scripts only. There are many parts that make up the Unity game engine. It is assumed that the reader already knows their way around Unity's user interface. The code editor used in this book is the MonoDevelop editor supplied by Unity.

Game Development with Unity for .NET Developers

Get up and running with Unity with the help of expert guidance for addressing the performance issues encountered in Unity development Key Features • Discover solutions to common problems faced by .NET developers while creating games in Unity • Explore tips, tricks, best practices, and advanced Unity coding techniques for creating impressive games • Understand how to program with C# code using Unity's built-in modules and add engaging effects Book Description Understand what makes Unity the world's most widely used real-time 3D development platform and explore its powerful features for creating 3D and 2D games, as well as the Unity game engine and the Microsoft Game Dev, including the Microsoft Azure Cloud and Microsoft Azure PlayFab services, to create games. You will start by getting acquainted with the Unity editor and the basic concepts of Unity script programming with C#. You'll then learn how to use C# code to work with Unity's built-in modules, such as UI, animation, physics, video, and audio, and understand how to develop a game with Unity and C#. As you progress through the chapters, you'll cover advanced topics such as the math involved in computer graphics and how to create a custom render pipeline in Unity with the new Scriptable Render Pipeline, all while optimizing performance in Unity. Along the way, you'll be introduced to Microsoft Game Dev, Azure services, and Azure PlayFab, and using the Unity3D PlayFab SDK to access the PlayFab API. By the end of this Unity book, you'll have become familiar with the Unity engine and be ready to develop your own games while also addressing the performance issues that you could encounter in the development process. What you will learn • Get to grips with using the Unity Editor • Use C# scripts to work with Unity's built-in modules such as UI, animation, physics, video, and audio • Create a custom render pipeline in Unity Engine with the latest Scriptable Render Pipeline • Write high-performance multithreaded code with the latest DOTs in Unity • Discover the Azure PlayFab Client library for C# in Unity • Understand how the asset management and serialization system within Unity really works • Explore some of the most commonly used profiler tools in Unity development Who this book is for The book is for developers with intermediate .NET and C# programming experience who are interested in learning game development with Unity. Basic experience in C# programming is assumed.

UNITY GAME PROGRAMMING

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

Basic Math for Game Development with Unity 3D

Second Edition updated for Unity 2017, Published in February 2018 Why this book can help you to get started with Game Development 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 to get started. Often, these barriers seem higher than they actually are. Maybe you are a teacher trying to introduce games in your classroom or a parent trying to help your child with coding, but with no previous coding or game development experience; maybe you are a hobbyist who would love to create interactive environments based on your favorite games; maybe you are a student getting started with game development but you just don't know where to start or what resources to use; or maybe you have tried online video tutorials but found them disjointed. You may be wondering: \"How can I start to create my games if I have no experience of coding\\

Unity from Zero to Proficiency (Beginner)

Do you need to venture into game development? If yes, this is the right book for you. It guides you on how to develop games using the Unity platform. The author begins by guiding you on how to get started with the Unity platform by installing it. The basic elements of the Unity platform and games have been discussed. You have then been guided on how to create the graphical user interface (GUI) for your game. You will know how to add the inbuilt game objects to the game scenes. You will also know how to import your own images and use them in your game. Once the user interface for the game has been created, the objects should be made to do something by interacting with the other elements in the scene. The author guides you on how to write the code instructing the objects to do this. You will also know how to handle collisions between the various elements of the game. You will learn from this book: Getting Started with Unity Basics of Unity Basic Game Elements Unity 3D Rigidbodies Physics Components Adding C# Script Moving Game Objects with C# Handling Collisions Subjects include: unity guide, unity game programming, unity 3d games, unity, unity game kindle, unity game design, unity 3d programming, unity 3d game development, game development with unity, game design, 3d games.

Unity Game Development

c# programming with unityC# and Unity - A guide book for beginners - simple explanation - Many examples - Summaries ----- Become the expert Our approach has been designed to lead advanced developers to the next level. ----- This book is all about starting to learn how to develop video games using the C# programming language and the Unity game engine on Windows or Mac. Why use C# and Unity instead of some other language and game engine? Well, C# is a really good language for learning how to program and then programming professionally. Also, the Unity game engine is very popular with indie game developers; Unity games were downloaded 16,000,000,000 times in 2016! Finally, C# is one of the programming languages you can use in the Unity environment.This book doesn't assume you have any previous programming experience. Don't worry if you've never written code before; we'll start at the very beginning and work our way up to building small games by the end of the book . Throughout the course you'll learn core programming concepts that apply to lots of programming languages, including C#, and you'll also learn how to apply those concepts when you develop games.

C# Programming with Unity

If you don't know anything about programming in general, writing code, writing scripts, or have no idea where to even begin, then this book is perfect for you. If you want to make games and need to learn how to write C# scripts or code, then this book is ideal for you.Unity is a cross-platform development platform initially created for developing games but is now used for a wide range of things such as: architecture, art, children's apps, information management, education, entertainment, marketing, medical, military, physical installations, simulations, training, and many more.Unity takes a lot of the complexities of developing games and

similar interactive experiences and looks after them behind the scenes so people can get on with designing and developing their games. These complexities include graphics rendering, world physics and compiling. More advanced users can interact and adapt them as needed but for beginners they need not worry about it. Games in Unity are developed in two halves; the first half - within the Unity editor, and the second half - using code, specifically C#. Unity is bundled with MonoDeveloper Visual Studio 2015 Community for writing C#.

Unity Game Development

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

Unity 2020 By Example

Demystifies the Processes of Game Development. Game Development for iOS with Unity 3D takes you through the complete process of Unity iOS game development. A game developer for over 12 years, the author presents production-proven techniques and valuable tips and tricks needed to plan, build, test, and launch games for the iPhone, iPod, and iPad. He walks you through all the necessary procedures, including how to publish your game to the App Store. Encompasses the Whole Range of iOS Game Development. This practical book begins with advice on writing a game design document and getting Apple developer certification. It then covers the build processes of the Unity Remote application and explains how to use the Unity editor. After focusing on debugging and optimization, the author describes tips for designing and marketing a successful App Store page. The book also features two iOS-ready games to explore, adapt, and play. Source files for the game examples are available at www.crcpress.com. Guides You in Creating a Functional iOS Game. Accessible to indie game developers and small- to medium-sized studios, this hands-on guide gives you the tools and knowledge needed to start building and launching iOS games. It helps you create games using Unity 3D and publish them to the App Store.

Game Development for iOS with Unity 3D

programming unity with c# C# and Unity - A guide book for beginners - simple explanation - Many examples - Summaries ----- Become the expert Our approach has been designed to lead advanced developers to the next level. ----- This book is all about starting to learn how to develop video games using the C# programming language and the Unity game engine on Windows or Mac. Why use C# and Unity instead of some other language and game engine? Well, C# is a really good language for learning how to program and then programming professionally. Also, the Unity game engine is very popular with indie game developers; Unity games were downloaded 16,000,000,000 times in 2016! Finally, C# is one of the programming languages you can use in the Unity environment. This book doesn't assume you have any previous programming experience. Don't worry if you've never written code before; we'll start at the very beginning and work our way up to building small games by the end of the book. Throughout the course you'll learn core programming concepts that apply to lots of programming languages, including C#, and you'll also learn how to apply those concepts when you develop games.

Programming Unity with C#

Master game design and digital art principles simultaneously with this all-in-one guide to creating games in the cutting-edge game engine Unity. Reworked for C# and Unity 2018 & 2019, and bursting with images and tutorials, Penny de Byl's Holistic Game Development with Unity will help the reader gain the multidisciplinary skills needed to succeed in the independent game industry. Holistic Game Development with Unity includes new coverage on Augmented Reality, Networking, and Virtual Reality such as the Oculus Rift. Supplementary material, including instructional videos, discussion forums and art assets are provided in the companion website located at www.holistic3d.com. Learn to combine the beauty of art and the functionality of programming in de Byl's third edition for Unity game development. Key features: Art and programming in Unity, the only one-stop shop for individual developers and small teams looking to tackle both tasks. Proven step-by-step tutorials show you how to design and structure an entire game in Unity with art assets. Revised to cover the Unity game engine versions 2018 and 2019. New coverage of Nav Meshes, Augmented Reality, Mobile Builds and Mecanim. An introduction to essential two- and three-dimensional mathematical and physics concepts. A portfolio of royalty free reusable game mechanics. Revamped and expanded accompanying website, www.holistic3d.com, features project source code, instructional videos, art assets, author blog, and discussion forums. Additional challenge questions and lesson plans are available online for an enhanced learning experience.

Holistic Game Development with Unity 3e

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. Aiming to be prolific with examples, 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.

Unity 3D Game Development by Example

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

Game Programming with Unity and C#

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.

A Beginner's Guide to 2D Platform Games with Unity

beginning c# programming with unity C# and Unity - A guide book for beginners ----- simple explanation - Many examples - Summaries ----- This book is all about starting to learn how to develop video games using the C# programming language and the Unity game engine on Windows or Mac. Why use C# and Unity instead of some other language and game engine? Well, C# is a really good language for learning how to program and then programming professionally. Also, the Unity game engine is very popular with indie game developers; Unity games were downloaded 16,000,000,000 times in 2016! Finally, C# is one of the programming languages you can use in the Unity environment. This book doesn't assume you have any previous programming experience. Don't worry if you've never written code before; we'll start at the very beginning and work our way up to building small games by the end of the course. Throughout the course you'll learn core programming concepts that apply to lots of programming languages, including C#, and you'll also learn how to apply those concepts when you develop games. Computer programming is really fun in general, and programming games is even better! Caution: Beginning (assuming no prior programming knowledge) is not the same as easy (not hard to do). Learning to program IS hard to do, especially since this book is essentially the first half of a freshman-level college course. Meeting the course challenges while you master the material will be rewarding to you, but doing that will require hard work and maybe even a few expletives along the way. The role of the Game Designer is how the game works correctly during its design process. It sets goals, rules and procedures, sets the story and gives life, and is also responsible for planning everything that makes the game acceptable. Level Design Whether it is based on architecture or sketching on blueprint, it also coordinates the story (the overall scenario) of the game. Anyone who has dreamed of a distinguished Hollywood job can now do what he wants by writing the story script and releasing it completely. The previous disciplines are now fully divided, each person responsible for one of them, but the successful game developer must be familiar with the details of each specialty. Door Learn something about everything, but what are things needed to become a game designer? What talents and abilities are required? What is the best way to design a game? This is all we will discover through this book . -----

Learn Unity for Android Game Development

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.

Unity 3.x Game Development Essentials

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.

Beginning C# Programming with Unity

Create a high-quality first person shooter game using the Unity game engine and the popular UFPS and Probuilder frameworks About This Book Learn how to use Unity in conjunction with UFPS and ProBuilder to create a high-quality game quickly Create both interior and exterior environments A step-by step guide to building a project with clear examples and instructions to create a number of interesting scenarios Who This Book Is For This book is for those who want to create an FPS game in Unity and gain knowledge on how to customize it to be their very own. If you are familiar with the basics of Unity, you will have an easier time, but it should make it possible for someone with no prior experience to learn Unity at an accelerated pace. What You Will Learn Use UFPS to build custom weapons with custom meshes and behaviors Explore level design as you prototype levels, making use of Prototype to build levels out quickly Build environments that are realistic as possible while keeping peak performance and repetitiveness down Review tips and tricks on how to create environments using both terrain for outdoor areas and a modular workflow for interiors Develop a number of different encounters that your players can fight against, from a simple turret enemy to complex AI characters from Shooter AI Discover how to create unique objects such as exploding barrels and objects you can interact with Create a custom GUI to help your game stand out from the crowd Package your game for release, create an installer, and get your game out into the world In Detail Unity, available in free and pro versions, is one of the most popular third-party game engines available. It is a cross-platform game engine, making it easy to write your game once and then port it to PC, consoles, and even the web, making it a great choice for both indie and AAA developers. Building an FPS Game in Unity takes readers on an exploration of how to use Unity to create a 3D first person shooter (FPS) title, leveraging the powerful UFPS framework by VisionPunk and Prototype/ProBuilder 2.0 by ProCore3D. After some setting up, you will start by learning how to create custom weapons, prototype levels, create exterior and interior environments, and breathe life into our levels. We will then add polish to the levels. Finally, we will create a custom GUI and menus for our title to create a complete package. Style and approach An easy-to-follow guide with each project containing step-by-step explanations, diagrams, screenshots, and downloadable material. Concepts in Unity and C# are explained as they are used and for the more inquisitive, there are more details on the concepts used with additional external resources to learn from.

Unity 5 Game Optimization

The first book of its kind, Unity in Embedded System Design and Robotics provides a step-by-step guide to Unity for embedded system design and robotics. It is an open gateway for anyone who wants to learn Unity through real projects and examples as well as a particularly useful aid for both professionals and students in the fields of embedded system design and robotics. Each chapter contains a unique project. The user is guided through the different windows and sections of Unity every step of the way. The book also includes projects that connect Unity to Arduino and Raspberry Pi, which will help readers better understand various Unity applications in the real world.

Unity 5.x By Example

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

Building an FPS Game with Unity

Unity in Embedded System Design and Robotics

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