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GD Script-Marijo Trkulja 2019-08-19 Complete book format tutorial for GD Script. GD Script is Godot game engine's main script. Are you creating a new game? Are you Godot game developer? Do you want to learn something interesting and new? If yes, GD Script book is for you. Godot game engine is a leading open-source game engine for 2D and 3D game creation. You will learn how to create games using only GD Script. This will give you the freedom to create games with lots of possibilities. You will learn how to create many different 2D, 3D and control objects with GD Script only, how to implement them inside the game scene and how to combine them into a good computer game. Book is an important tool for SLAVS MAKE GAMES courses students. After you bought GD Script book all SLAVS MAKE GAMES courses are with a discount for you.

Godot Engine Game Development Projects-Chris Bradfield 2018-06-29 A project based guides to learn animation, advanced shaders, environments, particle rendering, and networked games with Godot 3.0 Key Features Learn the art of developing cross-platform games Leverage Godot’s node and scene system to design robust, reusable game objects Integrate Blender easily and efficiently with Godot to create powerful 3D games Book Description Godot Engine Game Development Projects is an introduction to the Godot game engine and its new 3.0 version. Godot 3.0 brings a large number of new features and capabilities that make it a strong alternative to expensive commercial game engines. For beginners, Godot offers a friendly way to learn game development techniques, while for experienced developers it is a powerful, customizable tool that can bring your visions to life. This book consists of five projects that will help developers achieve a sound understanding of the engine when it comes to building games. Game development is complex and involves a wide spectrum of knowledge and skills. This book can help you build on your foundation level skills by showing you how to create a number of small-scale game projects. Along the way, you will learn how Godot works and discover important game development techniques that you can apply to your projects. Using a straightforward, step-by-step approach and practical examples, the book will take you from the absolute basics through to sophisticated game physics, animations, and other techniques. Upon completing the final project, you will have a strong foundation for future success with Godot 3.0. What you will learn Get started with the Godot game engine and editor Organize a game project Import graphical and audio assets Use Godot’s node and scene system to design robust, reusable game objects Write code in GDScript to capture input and build complex behaviors Implement user interfaces to display information Create visual effects to spice up your game Learn techniques that you can apply to your own game projects Who this book is for Godot Engine Game Development Projects is for both new users and experienced developers, who want to learn to make games using a modern game engine. Some prior programming experience in C and C++ is recommended.

Moving from Unity to Godot-Alan Thorn 2020-06-13 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.

Game AI Pro 3-Steve Rabin 2017-07-12 Game AI Pro3: Collected Wisdom of Game AI Professionals presents state-of-the-art tips, tricks, and techniques drawn from developers of shipped commercial games as well as some of the best-known academics in the field. This book acts as a toolbox of proven techniques coupled with the newest advances in game AI. These techniques can be applied to almost any game and include topics such as behavior trees, utility theory, path planning, character behavior, and tactical reasoning. KEY FEATURES Contains 42 chapters from 50 of the game industry’s top developers and researchers. Provides real-life case studies of game AI in published commercial games. Covers a wide range of AI in games, with topics applicable to almost any game. Includes downloadable demos and/or source code, available at <http://www.gameai.pro.com> SECTION EDITORS Neil Kirby General Wisdom Alex Champanard Architecture Nathan Sturtevant Movement and Pathfinding Damian Isla Character Behavior Kevin Dill Tactics and Strategy; Odds and Ends

Learning Unreal Engine Android Game Development-Nitish Misra 2015-06-30 Have you ever wanted to create games that will get users hooked to their phones? Unreal Engine 4, with all its tools and power, will help make your dreams come true! Designed to get you working with Unreal Engine 4 from the very first page, this book will quickly guide you through the basics in the first two chapters. Once you get the hang of things, we will start developing our game—Bloques is a puzzle game with four rooms. Each room will be more challenging than the previous, and as you develop, you will graduate from movement and character control to AI and spawning. Once you've created the game, you will learn how to port and publish your game to the Google Play Store. In addition to building an Android game from start to finish, you will also discover how to generate revenue, and how to optimize game performance using the tools and functionalities the engine provides. With this book, you will be inspired to come up with your own great ideas for your future game development projects.

Mastering Godot-Marijo Trkulja 2021-01-09 New book by the author of the well-known titles on Godot game engine and GDScript such as "GD Script", "Making games with GDScript" and "Autonomous Cars". The book uses the MTH method for learning and is written for both beginner and experienced game developers. Beginners are advised to read a book from the beginning, and game developers to use it as a reminder and troubleshooting guide. (From book preface) If you are a complete beginner, start reading from the beginning. You will learn the basics of GDScript through the features and methods of the 2D node class. After that, go through the "GDScript in the programming" chapter. Later, you can learn about StaticBody2D, RigidBody2D, and KinematicBody2D. Game examples after @GDScript class and after 2D Body’s chapter will be of additional help to you. In addition to the above for beginners, I advise you to watch free video tutorials on my Udemey account (Slavs Make Games M.D.C.). The book is a complete manual for making video games and comes with a lot of additional educational material. A game developer reading this book will find properties and methods for a particular class. In addition, each property and method is illustrated by a code example. At the end of the class description, is also a code example. Examples like this are often parts of computer games. After ordering the book, write to e-mail letray2@yahoo.com to get additional educational content with the book. Additional educational content includes: - free courses - Discount coupons for courses - free pdf educational materials

Godot From Zero to Proficiency (Foundations)-Patrick Felicia 2021-03-11 Get started with Godot and game programming fast without the headaches Godot 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 Godot the hard way. This book is the only one that will get you to learn Godot fast without wasting so much time. This book is the first book in the series “Godot from Zero to Proficiency” where you will learn to code fast and be able to create your own video games with Godot 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 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. - Create an island with sandy beaches, mountains, and water. - Include and control a car. - Export your games for Mac or PC. Who this book is for: This book is for: - Hobbyists who need a book that gets them started with Godot 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 Godot fast and to enjoy the journey without the frustration. This book includes six chapters that painlessly guide you through the necessary skills to master Godot’s interface, use its core features, and create and navigate through realistic 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 Godot 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. - 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 Godot 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 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 Godot today, then buy this book now

Game Engine Black Book: DOOM v1.1-Fabien Sanglard 2018 It was early 1993 and id Software was at the top of the PC gaming industry. Wolfenstein 3D had established the First Person Shooter genre and sales of its sequel Spear of Destiny were skyrocketing. The technology and tools id had taken years to develop were no match for their many competitors. It would have been easy for id to coast on their success, but instead they made the audacious decision to throw away everything they had built and start from scratch. Game Engine Black Book: Doom is the story of how they did it. This is a book about history and engineering. Don’t expect much prose (the author’s English has improved since the first book but is still broken). Instead you will find inside extensive descriptions and drawings to better understand all the challenges id Software had to overcome. From the hardware -- the Intel 486 CPU, the Motorola 68040 CPU, and the NeXT workstations -- to the game engine’s revolutionary design, open up to learn how DOOM changed the gaming industry and became a legend among video games.

Godot Engine Game Development Projects-Chris Bradfield 2018-06-29 A project based guides to learn animation, advanced shaders, environments, particle rendering, and networked games with Godot 3.0 Key Features Learn the art of developing cross-platform games Leverage Godot’s node and scene system to design robust, reusable game objects Integrate Blender easily and efficiently with Godot to create powerful 3D games Book Description Godot Engine Game Development Projects is an introduction to the Godot game engine and its new 3.0 version. Godot 3.0 brings a large number of new features and capabilities that make it a strong alternative to expensive commercial game engines. For beginners, Godot offers a friendly way to learn game development techniques, while for experienced developers it is a powerful, customizable tool that can bring your visions to life. This book consists of five projects that will help developers achieve a sound understanding of the engine when it comes to building games. Game development is complex and involves a wide spectrum of knowledge and skills. This book can help you build on your foundation level skills by showing you how to create a number of small-scale game projects. Along the way, you will learn how Godot works and discover important game development techniques that you can apply to your projects. Using a straightforward, step-by-step approach and practical examples, the book will take you from the absolute basics through to sophisticated game physics, animations, and other techniques. Upon completing the final project, you will have a strong foundation for future success with Godot 3.0. What you will learn Get started with the Godot game engine and editor Organize a game project Import graphical and audio assets Use Godot’s node and scene system to design robust, reusable game objects Write code in GDScript to capture input and build complex behaviors Implement user interfaces to display information Create visual effects to spice up your game Learn techniques that you can apply to your own game projects Who this book is for Godot Engine Game Development Projects is for both new users and experienced developers, who want to learn to make games using a modern game engine. Some prior programming experience in C and C++ is recommended.

Game Engine Architecture, Third Edition-Jason Gregory 2018-07-20 In this new and improved third edition of the highly popular Game Engine Architecture, Jason Gregory draws on his nearly two decades of experience at Midway, Electronic Arts and Naughty Dog to present both the theory and practice of game engine software development. In this book, the broad range of technologies and techniques used by AAA game studios are each explained in detail, and their roles within a real industrial-strength game engine are illustrated. New to the Third Edition This third edition offers the same comprehensive coverage of game engine architecture provided by previous editions, along with updated coverage of: computer and CPU hardware and memory caches, compiler optimizations, C++ language standardization, the IEEE-754 floating-point representation, 2D user interfaces, plus an entirely new chapter on hardware parallelism and concurrent programming. This book is intended to serve as an introductory text, but it also offers the experienced game programmer a useful perspective on aspects of game development technology with which they may not have deep experience. As always, copious references and citations are provided in this edition, making it an excellent jumping off point for those who wish to dig deeper into any particular aspect of the game development process. Key Features Covers both the theory and practice of game engine software development Examples are grounded in specific technologies, but discussion extends beyond any particular engine or API. Includes all mathematical background needed. Comprehensive text for beginners and also has content for senior engineers.

3D Game Engine Design-David Eberly 2006-11-03 A major revision of the international bestseller on game programming!Graphics hardware has evolved enormously in the last decade. Hardware can now be directly controlled through techniques such as shader programming, which requires an entirely new thought process of a programmer. 3D Game Engine Design, Second Edition shows step-by-step how to make

Practical Shader Development-Kyle Halladay 2019-04-10 It’s time to stop thinking that shaders are magical. You can use shaders to turn data into stunning visual effects, and get your hands dirty by building your own shader with this step-by-step introduction to shader development for game and graphics developers. Learn how to make shaders that move, tint, light up, and look awesome, all without cracking open a math textbook. Practical Shader Development teaches the theory behind how shaders work. The book also shows you how to apply that theory to create eye-popping visual effects. You’ll learn to profile and optimize those effects to make sure your projects keep running quickly with all their new visuals. You’ll learn good theory, good practices, and without getting bogged down in the math. Author Kyle Halladay explains the fundamentals of shader development through simple examples and hands-on experiments. He teaches you how to find performance issues in shaders you are using and then how to fix them. Kyle explains (and contrasts) how to use the knowledge learned from this book in three of the most popular game engines today. What You’ll Learn Understand what shaders are and how they work Get up to speed on the nuts and bolts of writing vertex and fragment shaders Utilize color blending and know how blend equations work Know the coordinate spaces used when rendering real-time computer graphics Use simple math to animate characters, simulate

lights, and create a wide variety of visual effects Find and fix performance problems in shaders See how three popular game engines (Unity, UE4, Godot) handle shaders Who This Book Is For Programmers who are interested in writing their own shaders but do not know where to start, anyone who has ever seen shader code on a forum and wished they knew how to modify it just a little bit to fit into their own projects, and game developers who are tired of using the default shaders found in the game engines they are using. The book is especially useful for those who have been put off by existing shader tutorials which introduce complex math and graphics theory before ever getting something on the screen.

Beginning C++ Game Programming-John Horton 2019-10-31 Get to grips with programming techniques and game development using C++ libraries and Visual Studio 2019 Key Features Learn game development and C++ with a fun, example-driven approach Build clones of popular games such as Timberman, Zombie Survival Shooter, a co-op puzzle platformer, and Space Invaders Discover tips to expand your finished games by thinking critically, technically, and creatively Book Description The second edition of Beginning C++ Game Programming is updated and improved to include the latest features of Visual Studio 2019, SFML, and modern C++ programming techniques. With this book, you'll get a fun introduction to game programming by building five fully playable games of increasing complexity. You'll learn to build clones of popular games such as Timberman, Pong, a Zombie survival shooter, a coop puzzle platformer and Space Invaders. The book starts by covering the basics of programming. You'll study key C++ topics, such as object-oriented programming (OOP) and C++ pointers, and get acquainted with the Standard Template Library (STL). The book helps you learn about collision detection techniques and game physics by building a Pong game. As you build games, you'll also learn exciting game programming concepts such as particle effects, directional sound (spatialization), OpenGL programmable shaders, spawning objects, and much more. Finally, you'll explore game design patterns to enhance your C++ game programming skills. By the end of the book, you'll have gained the knowledge you need to build your own games with exciting features from scratch What you will learn Set up your game development project in Visual Studio 2019 and explore C++ libraries such as SFML Explore C++ OOP by building a Pong game Understand core game concepts such as game animation, game physics, collision detection, scorekeeping, and game sound Use classes, inheritance, and references to spawn and control thousands of enemies and shoot rapid-fire machine guns Add advanced features to your game using pointers, references, and the STL Scale and reuse your game code by learning modern game programming design patterns Who this book is for This book is perfect for you if you have no C++ programming knowledge, you need a beginner-level refresher course, or you want to learn how to build games or just use games as an engaging way to learn C++. Whether you aspire to publish a game (perhaps on Steam) or just want to impress friends with your creations, you'll find this book useful.

Mastering the Art of Unreal Engine 4 - Blueprints-Ryan Shah 2014-06-15 Mastering the Art of Unreal Engine 4 - Blueprints takes a concise, clear, informative but fun approach to developing Unreal Engine 4, without touching a single line of code. By using this book, you'll be creating various small projects completely in blueprint. From this book, you'll be equipped with the know-how you'll need to create the game of your dreams. On top of mastering the Blueprints system in Unreal Engine 4, you'll also learn the secrets behind getting the most out of the beast of an engine.

Real-Time Rendering-Tomas Akenine-Möller 2019-01-18 Thoroughly revised, this third edition focuses on modern techniques used to generate synthetic three-dimensional images in a fraction of a second. With the advent of programmable shaders, a wide variety of new algorithms have arisen and evolved over the past few years. This edition discusses current, practical rendering methods used in games and other applications. It also presents a solid theoretical framework and relevant mathematics for the field of interactive computer graphics, all in an approachable style. The authors have made the figures used in the book available for download for fair use..Download Figures. Reviews Rendering has been a required reference for professional graphics practitioners for nearly a decade. This latest edition is as relevant as ever, covering topics from essential mathematical foundations to advanced techniques used by today's cutting edge games. -- Gabe Newell, President, Valve, May 2008 Rendering ... has been completely revised and revamped for its updated third edition, which focuses on modern techniques used to generate three-dimensional images in a fraction of the time old processes took. From practical rendering for games to math and details for better interactive applications, it's not to be missed. -- The Bookwatch, November 2008 You'll get brilliantly lucid explanations of concepts like vertex morphing and variance shadow mapping—as well as a new respect for the incredible craftsmanship that goes into today's PC games. -- Logan Decker, PC Gamer Magazine , February 2009

Unreal Engine Game Development Blueprints-Nicola Valcasara 2015-12-29 Discover all the secrets of Unreal Engine and create seven fully functional games with the help of step-by-step instructions About This Book Understand what a Blueprint is and how to create a complex visual scripting code Discover the infinite possibilities that Unreal Engine offers, and understand which tool to use, where and when Learn to think like a real game developer in order to create enjoyable and bug-free games using this comprehensive and practical handbook Who This Book Is For This book is ideal for intermediate level developers who know how to use Unreal Engine and want to go through a series of projects that will further their expertise. Working knowledge of C++ is a must. What You Will Learn Write clean and reusable Blueprint scripts Develop any kind of game you have in mind, following the rules used by experts Move through Unreal Engine 4, always knowing what you are doing and where to find the right tool for your needs Integrate C++ code into your projects using Visual Studio and the tools that Unreal provides Extricate between classes, nodes, interfaces, macros, and functions Work with different types of assets, from 3D objects to audio sources, from UI buttons to animations Explore all the aspects of the game logic—collisions, navigation meshes, matinees, volumes, events, and states In Detail With the arrival of Unreal Engine 4, a new wonderful tool was born: Blueprint. This visual scripting tool allows even non-programmers to develop the logic for their games, allowing almost anyone to create entire games without the need to write a single line of code. The range of features you can access with Blueprint script is pretty extensive, making it one of the foremost choices for many game developers. Unreal Engine Game Development Blueprints helps you unleash the real power of Unreal by helping you to create engaging and spectacular games. It will explain all the aspects of developing a game, focusing on visual scripting, and giving you all the information you need to create your own games. We start with an introductory chapter to help you move fluidly inside the Blueprint user interface, recognize its different components, and understand any already written Blueprint script. Following this, you will learn how to modify generated Blueprint classes to produce a single player tic-tac-toe game and personalize it. Next, you will learn how to create simple user interfaces, and how to extend Blueprints through code. This will help you make an informed decision between choosing Blueprint or code. You will then see the real power of Unreal unleashed as you create a beautiful scene with moving, AI controlled objects, particles, and lights. Then, you will learn how to create AI using a behavior tree and a global level Blueprint, how to modify the camera, and how to shoot custom bullets. Finally, you will create a complex game using Blueprintable components complete with a menu, power-up, dangerous objects, and different weapons. Style and approach This is an easy-to-follow guide full of practical game examples. Each chapter contains step-by-step instructions to build a complete game and each game uses a different tool in order to cover all the topics in a detailed and progressive manner.

Pixel Art for Game Developers-Daniel Silber 2015-07-28 Is the art for your video game taking too long to create? Learning to create Pixel Art may be the answer to your development troubles. Uncover the secrets to creating stunning graphics with Pixel Art for Game Developers. The premier how-to book on Pixel Art and Pixel Art software, it focuses on the universal principles of the craft.The book provide

Killer Game Programming in Java-Andrew Davison 2005-05-20 Although the number of commercial Java games is still small compared to those written in C or C++, the market is expanding rapidly. Recent updates to Java make it faster and easier to create powerful gaming applications-particularly Java 3D-is fueling an explosive growth in Java games. Java games like Puzzle Pirates, Chrome, Star Wars Galaxies, Runescape, Alien Flux, Kingdom of Wars, Law and Order II, Roboforge, Tom Clancy's Politika, and scores of others have earned awards and become bestsellers.Java developers new to graphics and game programming, as well as game developers new to Java 3D, will find Killer Game Programming in Java invaluable. This new book is a practical introduction to the latest Java graphics and game programming technologies and techniques. It is the first book to thoroughly cover Java's 3D capabilities for all types of graphics and game development projects.Killer Game Programming in Java is a comprehensive guide to everything you need to know to program cool, testosterone-drenched Java games. It will give you reusable techniques to create everything from fast, full-screen action games to multiplayer 3D games. In addition to the most thorough coverage of Java 3D available, Killer Game Programming in Java also clearly details the older, better-known 2D APIs, 3D sprites, animated 3D sprites, first-person shooter programming, sound, fractals, and networked games. Killer Game Programming in Java is a must-have for anyone who wants to create adrenaline-fueled games in Java.

Beginning 3D Game Development with Unity-Sue Blackman 2011-08-18 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.

Unreal Engine VR Cookbook-Mitch McCaffrey 2017-02-09 This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. “With his YouTube channel, Mitch’s VR Lab, Mitch has helped thousands of people understand the foundations of locomotion and interaction mechanics with clear and concise UE4 videos. I’m thrilled that he has taken the time to bring all his knowledge and experience in working with Unreal Engine and Virtual Reality to the Unreal® Engine VR Cookbook.... Mitch is uniquely qualified to share this book with the world.” —Luis Cataldi, Unreal Engine Education, Epic Games, Inc. For game developers and visualization specialists, VR is the next amazing frontier to conquer—and Unreal Engine 4 is the ideal platform to conquer it with. Unreal ® Engine VR Cookbook is your complete, authoritative guide to building stunning experiences on any Unreal Engine 4-compatible VR hardware. Renowned VR developer and instructor Mitch McCaffrey brings together best practices, common interaction paradigms, specific guidance on implementing these paradigms in Unreal Engine, and practical guidance on choosing the right approaches for your project. McCaffrey’s tested “recipes” contain step-by-step instructions, while empowering you with concise explanations of the underlying theory and math. Whether you’re creating first-person shooters or relaxation simulators, the techniques McCaffrey explains help you get immediate results, as you gain “big picture” knowledge and master nuances that will help you succeed with any genre or project. Understand basic VR concepts and terminology Implement VR logic with Blueprint visual scripting Create basic VR projects with Oculus Rift, HTC Vive, Gear VR, PSVR, and other environments Recognize and manage differences between seated and standing VR experiences Set up trace interactions and teleportation Work with UMG and 2D UIs Implement character inverse kinematics (IK) for head and hands Define effective motion controller interaction Help users avoid motion sickness Optimize VR applications Explore the VR editor, community resources, and more If you’re ready to master VR on Unreal Engine 4, this is the practical resource you’ve been searching for! Register your product at informit.com/register for convenient access to downloads, updates, and corrections as they become available.

Sams Teach Yourself Game Programming in 24 Hours-Michael Morrison 2003 Teaches fundamental C and C++ programming and provides information for programming games in Windows, exploring topics including game theory, double-buffered graphics, sprite animation, and digitized sound effects.

Game Programming Patterns-Robert Nystrom 2014-11-03 The biggest challenge facing many game programmers is completing their game. Most game projects fizzle out, overwhelmed by the complexity of their own code. Game Programming Patterns tackles that exact problem. Based on years of experience in shipped AAA titles, this book collects proven patterns to untangle and optimize your game, organized as independent recipes so you can pick just the patterns you need. You will learn how to write a robust game loop, how to organize your entities using components, and take advantage of the CPUs cache to improve your performance. You'll dive deep into how scripting engines encode behavior, how quadtrees and other spatial partitions optimize your engine, and how other classic design patterns can be used in games.

GameMaker Language: An In-Depth Guide [Soft Cover]-Benjamin Anderson

Learn Mobile Game Development in One Day Using Gamesalad-Jamie Cross 2015-04-27 Learn Mobile Game Development in One Day Using Gamesalad is for anyone who wants to learn how to create their own video games for desktop and mobile devices. While this is an introductory book that assumes you have no previous game development experience, you'll find that once you have completed all of the chapters and exercises, you'll be able to create your own amazing video games from scratch. The book is meant to be used as a learning tool, it's filled with over 35 hands-on exercises and four chapters dedicated to learning how to make four different game types. Once you have completed the book you will already have four mobile ready games created and ready to be customized and published to the Apple App Store! In This Book You Will Learn: What game development is What some of the requirements for a successful game are What Gamesalad is How to create game scenes and levels To create images and animations How to design a game and its rules How to incorporate music and sound effects To create amazing particle effects How to add physical properties to the game's actors To create a clean, informative graphical user interface How to publish games to the Apple App Store Much More! Gamesalad Creator is a modern 2D game development kit (GDK). Over 750,000 developers in 189 countries around the world use it and it has been used to make 70 of the top 100 games in the U.S. Apple App Store. One of the highlights of Gamesalad is that you DO NOT need to learn how to write traditional computer programming code to make your games. Gamesalad offers a simple, yet full-featured, drag and drop interface that lets you build commercial-quality games much quicker than learning traditional programming. Once you are familiar with Gamesalad, you will be able to prototype a game in a few days and complete the entire project in as little as a few weeks instead of the typical months or years it could take to develop a game with another GDK.

Developing 2D Games with Unity-Jared Halpern 2019-01-03 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.

Procedural Content Generation for C++ Game Development-Dale Green 2016-01-30 Get to know techniques and approaches to procedurally generate game content in C++ using Simple and Fast Multimedia Library About This Book This book contains a bespoke Simple and Fast Multimedia Library (SFML) game engine with complete online documentation Through this book, you'll create games that are non-predictable and dynamic and have a high replayability factor Get a breakdown

of the key techniques and approaches applied to a real game. Who This Book Is For If you are a game developer who is familiar with C++ and is looking to create bigger and more dynamic games, then this book is for you. The book assumes some prior experience with C++, but any intermediate concepts are clarified in detail. No prior experience with SFML is required. What You Will Learn Discover the systems and ideology that lie at the heart of procedural systems Use Random number generation (RNG) with C++ data types to create random but controlled results Build levels procedurally with randomly located items and events Create dynamic game objects at runtime Construct games using a component-based approach Assemble non-predictable game events and scenarios Operate procedural generation to create dynamic content fast and easily Generate game environments for endless replayability In Detail Procedural generation is a growing trend in game development. It allows developers to create games that are bigger and more dynamic, giving the games a higher level of replayability. Procedural generation isn't just one technique, it's a collection of techniques and approaches that are used together to create dynamic systems and objects. C++ is the industry-standard programming language to write computer games. It's at the heart of most engines, and is incredibly powerful. SFML is an easy-to-use, cross-platform, and open-source multimedia library. Access to computer hardware is broken into succinct modules, making it a great choice if you want to develop cross-platform games with ease. Using C++ and SFML technologies, this book will guide you through the techniques and approaches used to generate content procedurally within game development. Throughout the course of this book, we'll look at examples of these technologies, starting with setting up a roguelike project using the C++ template. We'll then move on to using RNG with C++ data types and randomly scattering objects within a game map. We will create simple console examples to implement in a real game by creating unique and randomised game items, dynamic sprites, and effects, and procedurally generating game events. Then we will walk you through generating random game maps. At the end, we will have a retrospective look at the project. By the end of the book, not only will you have a solid understanding of procedural generation, but you'll also have a working roguelike game that you will have extended using the examples provided. Style and approach This is an easy-to-follow guide where each topic is explained clearly and thoroughly through the use of a bespoke example, then implemented in a real game project.

Program Arcade Games-Paul Craven 2015-12-31 Learn and use Python and PyGame to design and build cool arcade games. In Program Arcade Games: With Python and PyGame, Second Edition, Dr. Paul Vincent Craven teaches you how to create fun and simple quiz games; integrate and start using graphics; animate graphics; integrate and use game controllers; add sound and bit-mapped graphics; and build grid-based games. After reading and using this book, you'll be able to learn to program and build simple arcade game applications using one of today's most popular programming languages, Python. You can even deploy onto Steam and other Linux-based game systems as well as Android, one of today's most popular mobile and tablet platforms. You'll learn: How to create quiz games How to integrate and start using graphics How to animate graphics How to integrate and use game controllers How to add sound and bit-mapped graphics How to build grid-based games Audience<div>This book assumes no prior programming knowledge.

Game Development with Blender-Mike Pan 2013-06-19 GAME DEVELOPMENT WITH BLENDER is the complete guide to the Blender game engine. More than two years in the making, the book spans topics ranging from logic brick and physics to graphics, animation, scripting, and more. Each chapter covers in detail a different aspect of the Blender game engine, with tutorials, extensive documentation, and valuable advice on when to use the tools--all distilled from the authors' 20 years of combined Blender experience. Blender is a free, open-source 3D content-creation suite, a powerful and flexible platform that allows you to build games and interactive applications such as architecture walk-throughs, science visualizations, experimental projects, and much more. In this comprehensive guide, you will learn how to design a complete game from beginning to end, create games without writing a single line of code, bring your 3D characters to life with animations, unleash the power of material creation with nodes, have fun making JELL-O bounce with the physics engine, program in Python like a pro, make your games run faster using lightmaps and normal maps, publish your games for Windows, Mac, and Linux, and improve your games by learning from 10 real-world projects. This book has been prepared for the release of Blender 2.66a, ensuring that you have the most up-to-date information in your hands. Whether you are new to Blender or a seasoned Blenderhead, GAME DEVELOPMENT WITH BLENDER will help you create the games you've always wanted. Purchasing this book also gives you access to more than 100 online companion files, which include tutorials, sample files, and extra demos that will help you get the most out of the Blender game engine.

Learn Unity for Android Game Development-Adam Sinicki 2017-07-21 Get a thorough and practical introduction to Unity development for Android devices with no previous experience with game development needed. In this book, you'll go through every step from downloading and installing Unity and the Android SDK, to creating fully functional games. The bulk of Learn Unity for Android Game Development is a simple project to create a 2D platform game complete with touchscreen controls, physics, enemies, respawning, collectibles and more. The book closes with a brief introduction to creating 3D games, virtual reality games for the Gear VR, and other more advanced applications. It also provides some guidance on publishing and marketing, as well as thinking about game design and mechanics. Resources including sprites and scripts are provided in the code download. What You Will Learn Install Unity with the Android SDK Understand and use scripts, prefabs and Android Studio Design a great game Build a game app Add a bit of polish Deploy for various Android devices Build and deploy for 3D games, virtual reality and more Promote your game and make money Who This Book Is For This book requires no previous experience with programming or game development of any kind. Prior experience with the Android ecosystem recommended.

The Rust Programming Language (Covers Rust 2018)-Steve Klabnik 2019-09-03 The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as: • Ownership and borrowing, lifetimes, and traits • Using Rust's memory safety guarantees to build fast, safe programs • Testing, error handling, and effective refactoring • Generics, smart pointers, multithreading, trait objects, and advanced pattern matching • Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies • How best to use Rust's advanced compiler with compiler-led programming techniques You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust development tools and editions.

Game Mechanics-Ernest Adams 2012-06-18 This in-depth resource teaches you to craft mechanics that generate challenging, enjoyable, and well-balanced gameplay. You'll discover at what stages to prototype, test, and implement mechanics in games and learn how to visualize and simulate game mechanics in order to design better games. Along the way, you'll practice what you've learned with hands-on lessons. A free downloadable simulation tool developed by Joris Dormans is also available in order to follow along with exercises in the book in an easy-to-use graphical environment. In Game Mechanics: Advanced Game Design, you'll learn how to: * Design and balance game mechanics to create emergent gameplay before you write a single line of code. * Visualize the internal economy so that you can immediately see what goes on in a complex game. * Use novel prototyping techniques that let you simulate games and collect vast quantities of gameplay data on the first day of development. * Apply design patterns for game mechanics—from a library in this book—to improve your game designs. * Explore the delicate balance between game mechanics and level design to create compelling, long-lasting game experiences. * Replace fixed, scripted events in your game with dynamic progression systems to give your players a new experience every time they play. "I've been waiting for a book like this for ten years: packed with game design goodness that tackles the science without undermining the art." --Richard Bartle, University of Essex, co-author of the first MMORPG "Game Mechanics: Advanced Game Design by Joris Dormans & Ernest Adams formalizes game grammar quite well. Not sure I need to write a next book now!" -- Raph Koster, author of A Theory of Fun for Game Design.

Cocos2d-x by Example Beginner's Guide-Roger Engelbert 2013-04-25 Get to grips with Cocos2D-X using step-by-step examples. Roger Engelbert will have you smiling throughout and learning valuable information at every turn.If you have brilliant ideas for amazing games and want to bring them to life, then this book is what you need. Work through easy-to-follow examples and learn exactly what you need to know to make your games a reality.No programming experience necessary!

Theatre of the Oppressed-Augusto Boal 2013-10-15 The innovative Brazilian playwright, director and international lecturer explicates Aristotle's poetics and the philosophies of Machiavelli, Hegel and Brecht to determine the extent to which their chief components--imitation, catharsis and, ultimately, audience control--serve up to support the status quo of a society rather than facilitate change.

OpenGL SuperBible-Richard Wright 2007-06-18 OpenGL ® SuperBible, Fourth Edition , begins by illuminating the core techniques of “classic” OpenGL graphics programming, from drawing in space to geometric transformations, from lighting to texture mapping. The authors cover newer OpenGL capabilities, including OpenGL 2.1’s powerful programmable pipeline, vertex and fragment shaders, and advanced buffers. They also present thorough, up-to-date introductions to OpenGL implementations on multiple platforms, including Windows, Mac OS X, GNU/Linux, UNIX, and embedded systems. Coverage includes · An entirely new chapter on OpenGL ES programming for handhelds · Completely rewritten chapters on OpenGL for Mac OS X and GNU/Linux · Up-to-the-minute coverage of OpenGL on Windows Vista · New material on floating-point color buffers and off-screen rendering · In-depth introductions to 3D modeling and object composition · Expert techniques for utilizing OpenGL’s programmable shading language · Thorough coverage of curves, surfaces, interactive graphics, textures, shadows, and much more · A fully updated API reference, and an all-new section of full-color images You’ll rely on this book constantly—whether you’re learning OpenGL for the first time, deepening your graphics programming expertise, upgrading from older versions of OpenGL, or porting applications from other environments. Now part of the OpenGL Technical Library—The official knowledge resource for OpenGL developers The OpenGL Technical Library provides tutorial and reference books for OpenGL. The Library enables programmers to gain a practical understanding of OpenGL and shows them how to unlock its full potential. Originally developed by SGI, the Library continues to evolve under the auspices of the OpenGL Architecture Review Board (ARB) Steering Group (now part of the Khronos Group), an industry consortium responsible for guiding the evolution of OpenGL and related technologies.

Unity from Zero to Proficiency (Beginner)-Patrick Felicia 2019-02-13 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", or "this game engine is so complex that I just don't know where to get started". This is quite common, and you can easily overcome these issues with a step-by-step approach that gets you to progressively develop and use your skills. This is the approach that I have used successfully over the past years to take students from no knowledge of coding or game development to good levels of proficiency in Unity and coding. Of course, it takes some time and dedication; however, by following the techniques and suggestions described in this book, I can promise you that you will progress, regardless of your background, and become more comfortable with Unity and coding. Content and structure of this book In this book, the second book in the series, you will become comfortable with scripting in Unity by creating a simple survival game. The book includes: A list of the learning objectives at the start of each chapter. Step-by-step activities. Opportunities to engage in deeper learning and problem-solving skills through challenges at the end of each chapter. Quizzes to test your knowledge. Full project and code solutions (in JavaScript and C#) for each chapter. Cheat-sheets (i.e., shortcuts, best practice, etc.) that you can download. The content of each chapter is as follows: Chapter 1 gives an introduction to JavaScript and to core principles that will help you to get started with coding. You will learn key programming concepts such as variables, variable types, or functions. Chapter 2 helps you to code your first script. You will learn how to code following best coding practices, debug your code, and also avoid common errors. Chapter 3 gets you to improve your scripting skills, enhance your game and add more interaction. You will learn to implement a scoring system, to detect collisions, and to load new levels. Chapter 4 explains how you can create and update a user interface for your game (e.g., displaying images and messages onscreen) using scripting. Chapter 5 explains how you can polish-up your game. You will add a splash-screen, a simple inventory system, sound effects, as well as a mini-map. Chapter 6 explains how to add Non-Player Characters (NPCs) with Artificial Intelligence (AI). You will configure each NPC and get them to either follow the player or walk along a simple path of your choice, and also detect collision with them. Chapter 7 provides answers to Frequently Asked Questions (FAQs) (e.g., scripting, audio, AI, or user interface). If you want to start scripting with Unity, using a tried-and-tested method: download this book now

SFML Game Development-Jan Haller 2013-01-01 SFML Game Development is a fast-paced, step-by-step guide, providing you with all the knowledge and tools you need to create your first game using SFML 2.0.SFML Game Development addresses ambitious C++ programmers who want to develop their own game. If you have plenty of ideas for an awesome and unique game, but don't know how to start implementing them, then this book is for you. The book assumes no knowledge about SFML or game development, but a solid understanding of C++ is required.

2D Game Collision Detection-Thomas Schwarzl 2012-10-02 Are You Wondering How 2D Collision Detection In Video Games Works? Learn how to determine shot impacts, find out which enemies are covered by lines of sight, recognize collisions of race cars or simply check if the mouse cursor floats above a button. This Book Is Designed For Game Developers Who Want To Implement Fast And Efficient 2D Collision Detection. The only prerequisite you need is basic knowledge in procedural programming. If you are familiar with any popular programming language likeC, C++, Java, C# or Objective-C you have all you need to understand the code examples throughout the book. What You Will Get From This Book. The following topics get explained in detail: 2D vector mathematics, how to spot collisions of various 2D shapes, simple yet effective body representation of game objects, identifying clashing objects in motion and plenty of optimization tricks. Your Knowledge Will Be Built Up From Scratch. The book is written for beginners, new to the topic of geometrical 2D collision detection. There are plenty of illustrations and code examples which make it easy to understand the necessary concepts and algorithms. Use This Book As A Reference Guide. Aside its introductory nature this book is also designed to serve as a reference guide for looking up specific collision detection functions. So advanced game programmers will derive benefit from it as well. All The Presented Code Is Ready For Immediate Use. The code forged throughout the book can be downloaded from the book's website and can be used right away.

3D Game Engine Architecture-David H. Eberly 2005

Building a 3D Game Engine in C++-Brian Hook 1995-07-06 Everything you need to create your own 3D game engine Most game programming books hand you a finished game engine and then tell you how to add on a few features, so you're locked into someone else's design from the beginning. But why compromise? This book shows you how to build your own custom engine from scratch using AST3D, a powerful 3D graphics library that's included on the disk. Now you can build the game you want, and you'll never have to pay a licensing fee again. This book/disk set, written by professional game programmer Brian Hook, gives all the technical details, shortcuts, and tricks of the trade he had to learn the hard way. Find out how to: Design and develop games like the professionals Create real-time 3D graphics games Implement collision and boundary detection Create "intelligent" entities using AI algorithms Disk includes: AST3D, a C++ library specifically designed for 3D game programming Source code for Borland and Watcom C++ compilers An original 3D game engine you can use to create your own games

Entromancy-M. S. Farzan 2019-04-02 Entromancy is a tabletop roleplaying game set in San Francisco in the late 21st century. In our world, a quarter of the earth's power now runs on ceridium, a newly discovered element that has had the unintended consequence of spawning a new race of people, and several forms of magic that were once thought to have been forgotten. In Entromancy, you'll take the role of a character in a futuristic, technology-driven, magic-rich world complete with espionage, spellcasting, hacking, and engaging action sequences. Cyberpunk Fantasy Roleplaying. Enter a futuristic, magic-rich world where technology is ever-present and several forms of forgotten magics have resurfaced -- for better and worse. Unique Characters. Choose from five diverse races and five unique classes -- from the dual-pistol wielding Revolutionary to the magic-savvy Technomancer -- to create your character and begin your story. Progress your character by taking on challenging

missions and eventually embracing one of five brutally powerful destinies. d20 Mechanics. Experience a streamlined gameplay system based on the Fifth Edition of the world's most popular roleplaying game, simultaneously allowing for exciting action and storytelling while providing for a great deal of depth. Action Gameplay. Get into the game quickly with easy onboarding for new players and engage in action-packed gameplay with spellcasting, hacking, cybernetics, and much more. Faction-Based Espionage. Increase your standing with Entromancy's three competing factions of NIGHT, Aurichome, and the Unaligned, while attempting to make your mark on a

world that has become fractured after years of population explosion, socio-economic tension, and magic-based warfare.