

Libgdx Game Development By Example

Create enthralling Android games with Unity Faster Than Ever Before About This Book Develop complex Android games with the help of Unity's advanced features such as artificial intelligence, high-end physics, and GUI transformations. Create amazing Graphical User Interfaces (GUIs) with Unity's new uGUI system Unravel and deploy exciting games across Android devices Who This Book Is For If you are a Unity 5 developer and want to expand your knowledge of Unity 5 to create high-end complex Android games, then this book is for you. Readers are expected to have a basic understanding of Unity 5, working with its environment, and its basic concepts. What You Will Learn Develop your own Jetpack Joyride clone game Explore the advanced features of Unity 5 by building your own Action Fighting game Develop remarkable Graphical User Interfaces (GUIs) with Unity's new uGUI system Enhance your game by adding stunning particle systems and complex animations Build pleasing virtual worlds with special effects, lights, sky cube maps, and cameras Make your game more realistic by providing music and sound effects Debug and deploy your games on different Android devices In Detail Game engines such as Unity are the power-tools behind the games we know and love. Unity is one of the most widely-used and best loved packages for game development and is used by everyone, from hobbyists to large studios, to create games and interactive experiences for the Web, desktop, mobile, and console. With Unity's intuitive, easy-to-learn toolset and this book, it's never been easier to become a game developer. You will begin with the basic concepts of Android game development, a brief history of Android games, the building blocks of Android games in Unity 5, and the basic flow of games. You will configure an empty project for the Jetpack Joyride Clone Game, add an environment and characters, and control them. Next you will walk through topics such as particle systems, camera management, prefabs, animations, triggers, colliders, and basic GUI systems. You will then cover the basic setup for 3D action fighting games, importing models, textures and controlling them with a virtual on-screen joystick. Later you will set up Scene for 3D Configuration, create basic gameplays, and manage input controls. Next you will learn to create the interface for the main menu, gameplay, game over, achievements, and high score screens. Finally you will polish your game with stats, sounds, and Social Networking, followed by testing the game on Android devices and then publishing it on Google Play, Amazon, and OUYA Stores. Style and approach A step-by-step and detailed guide to developing high-end complex Android games utilizing the advanced concepts of Unity.

Computer technologies are forever evolving and it is vital that computer science educators find new methods of teaching programming in order to maintain the rapid changes occurring in the field. One of the ways to increase student engagement and retention is by integrating games into the curriculum. Gamification-Based E-Learning Strategies for Computer Programming Education evaluates the different approaches and issues faced in integrating games into computer education settings. Featuring emergent trends on the application of gaming to pedagogical strategies and technological tactics, as well as new methodologies and approaches being utilized in computer programming courses, this book is an essential reference source for practitioners, researchers, computer science teachers, and students pursuing computer science.

If you are a jMonkey developer or a Java developer who is interested to delve further into the game making process to expand your skillset and create more technical games, then this book is perfect for you.

LibGDX Game Development By ExamplePackt Publishing Ltd

A handbook for game development with coverage of both team management topics, such as task tracking and creating the technical design document, and outsourcing strategies for contents, such as motion capture and voice-over talent. It covers various aspects of game development.

Learn how to build an exciting 3D game with LibGDX from scratch About This Book Implement an exhaustive list of features that LibGDX unleashes to build your 3D game. Write, test, and debug your application on your desktop and deploy them on multiple platforms. Gain a clear understanding of the physics behind LibGDX and libraries like OpenGL and WebGL that make up LibGDX. Who This Book Is For If you are a game developer or enthusiasts who want to build 3D games with LibGDX, then this book is for you. A basic knowledge of LibGDX and Java programming is appreciated. What You Will Learn Learn the potential of LibGDX in game development Understand the LibGDX architecture and explore platform limitation and variations Explore the various approaches for game development using LibGDX Learn about the common mistakes and possible solutions of development Discover the 3D workflow with Blender and how it works with LibGDX Implement 3D models along with textures and animations into your games Familiarize yourself with Scene2D and its potential to boost your game's design In Detail LibGDX is a hugely popular open source, cross-platform, Java-based game development framework built for the demands of cross-platform game development. This book will teach readers how the LibGDX framework uses its 3D rendering API with the OpenGL wrapper, in combination with Bullet Physics, 3D Particles, and Shaders to develop and deploy a game application to different platforms You will start off with the basic IntelliJ environment, workflow and set up a LibGDX project with necessary APIs for 3D development. You will then go through LibGDX's 3D rendering API main features and talk about the camera used for 3D. Our next step is to put everything together to build a basic 3D game with Shapes, including basic gameplay mechanics and basic UI. Next you will go through modeling, rigging, and animation in Blender. We will then talk about refining mechanics, new input implementations, implementing enemy 3D models, mechanics, and gameplay balancing. The later part of this title will help you to manage secondary resources like audio, music and add 3D particles in the game to make the game more realistic. You will finally test and deploy the app on a multitude of different platforms, ready to start developing your own titles how you want! Style and approach A step by step guide on building a 3D game with LibGDX and implementing an exhaustive list of features that you would wish to incorporate into your 3D game

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.

Beginning Python Games Development, Second Edition teaches you how to create compelling games using Python and the PyGame games development library. It will teach you how to create visuals, do event handling, create 3D games, add media elements, and integrate OpenGL into your Python game. In this update to the first ever book to cover the popular open source PyGame games development library, you'll stand to gain valuable technical insights and follow along with the creation of a real-world, freely downloadable video game. Written by industry veterans and Python experts Will McGugan and Harrison Kinsley, this is a comprehensive, practical introduction to games development in Python. You can also capitalize upon numerous tips and tricks the authors have accumulated over their careers creating games for some of the world's largest game developers.

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.gameaipro.com> SECTION EDITORS Neil Kirby General Wisdom Alex Chamandard Architecture Nathan Sturtevant Movement and Pathfinding Damian Isla Character Behavior Kevin Dill Tactics and Strategy; Odds and Ends

Beginning Android3D Game Development is a unique book for today's Android and game app developers who want to learn how to build 3D game appsthat run on the latest Android KitKat platform using Java and OpenGL ES. ADrone Grid game case study is included.

Learn to design and create video games using the Java programming language and the LibGDX software library. Working through the examples in this book, you will create 12 game prototypes in a variety of popular genres, from collection-based and shoot-em-up arcade games to side-scrolling platformers and sword-fighting adventure games. With the flexibility provided by LibGDX, specialized genres such as card games, rhythm games, and visual novels are also covered in this book. Major updates in this edition include chapters covering advanced topics such as alternative sources of user input, procedural content generation, and advanced graphics. Appendices containing examples for game design documentation and a complete JavaDoc style listing of the extension classes developed in the book have also been added. What You Will Learn Create 12 complete video game projects Master advanced Java programming concepts, including data structures, encapsulation, inheritance, and algorithms, in the context

of game development Gain practical experience with game design topics, including user interface design, gameplay balancing, and randomized content Integrate third-party components into projects, such as particle effects, tilemaps, and gamepad controllers Who This Book Is For The target audience has a desire to make video games, and an introductory level knowledge of basic Java programming. In particular, the reader need only be familiar with: variables, conditional statements, loops, and be able to write methods to accomplish simple tasks and classes to store related data.

RPG Programming Using XNA Game Studio 3.0 provides detailed information on role-playing games (RPGs) and how to create them using Microsoft's XNA Game Studio 3.0. The book examines the history of the genre and takes a piece-by-piece approach to producing a 2D tile-based game, demonstrating how to create the various components that make up an RPG and implement them using C# and XNA Game Studio 3.0. By the end of the book, readers will have built a complete toolset that can be used to create data for their own RPGs. Learn how to:

- * Creating the characters and monsters that populate RPG worlds
- * Add stats and skills to allow game entities to perform actions
- * Populate the game world with items and treasures. Construct a conversation editor to add another degree of interaction
- * Create a multiple-step quest system to give players goals to research during gameplay
- * Creating a tile engine for displaying the world
- Populating the game world with items and treasure
- * Implementing a sound and music system
- * Adding multiplayer support

If you are a Java developer who wants to learn LibGDX and create great games, then this book is for you. To take full advantage of this book, you are expected to be familiar with Java or any other object-oriented language. Experience of using Eclipse will be very useful.

Gaming has historically been a strong driver of technology, whether we're talking about hardware or software performance, the variety of input methods, or graphics support, and the Android game platform is no different. Android is a mature, yet still growing, platform that many game developers have embraced as it provides tools, APIs, and services to help bootstrap Android projects and ensure their success, many of which are specially designed to help game developers. This book is a progressive, hands-on guide to developing highly interactive and complex Android games from scratch. You will learn all the aspects of developing a game using a space shooter game as the example that will evolve with you through the chapters. You will learn all about frame-by-frame animations and resource animations. You will also create beautiful and responsive menus and dialogs and explore the different options for playing sound effects and music in Android. You will then learn the basics of creating a particle system and how to use the Leonids library. Finally, we will configure and use Google Play Services on the developer console and port our game to the big screen.

If you want to make cross-platform games without the hassle and dangers of writing platform-specific code, or If you are a game programmer who may have some experience with Java and you want to learn everything you need to know about Libgdx to produce awesome work, this is the book for you. To take full advantage of the recipes in this book, you are expected to be familiar with java with good game programming knowledge.

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 CPU's 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.

Learn how to create your very own game using the libGDX cross-platform framework

About This Book

- Learn the core features of libGDX to develop your own exciting games
- Explore game development concepts through example projects
- Target games for major app stores quickly and easily with libGDX's cross-platform functionality

Who This Book Is For

This book is intended for those who wish to learn the concepts of game development using libGDX. An understanding of Java and other programming languages would definitely be helpful, although it is not a must.

What You Will Learn

- Create and configure a libGDX project to get started with making games
- Get to grips with a simple game loop that will drive your games
- Manage game assets to reduce code duplication and speed up development
- Pack game assets together into single assets to increase your game's performance
- Display textures on the screen and manipulate them with play input
- Play various types of sounds that a game can generate
- Design and modify a game user interface with libGDX's built-in tools
- Develop a game that will run across various platforms

In Detail

LibGDX is a cross-platform game development framework in Java that makes game programming easier and fun to do. It currently supports Windows, Linux, Mac OS X, Android, and HTML5. With a vast feature set on offer, there isn't a game that can't be made using libGDX. It allows you to write your code once and deploy it to multiple platforms without modification. With cross-platform delivery at its heart, a game can be made to target the major markets quickly and cost effectively. This book starts with a simple game through which the game update cycle is explained, including loading textures onto your screen, moving them around, and responding to input. From there you'll move on to more advanced concepts such as creating a formal game structure with a menu screen, adding a game screen and loading screen, sprite sheets, and animations. You'll explore how to introduce a font to optimize text, and with the help of a game that you'll create, you'll familiarise yourself with the 2D tile map API to create worlds that scroll as the characters move. In the final sample game of the book, you'll implement a basic version of an Angry Birds clone, which will allow you to use the physic library box2D that libGDX provides access to. An overview of exporting games to different platforms is then provided. Finally, you will discover how to integrate third-party services into games and take a sneak peak at the Social Media API to get a basic understanding of how it fits into the libGDX ecosystem.

Style and approach

With this book you'll learn game development with libGDX through example game projects. You'll finish the book with a thorough understanding of libGDX game development, along with completed games that you'll have built yourself.

Summary Play for Scala shows you how to build Scala-based web applications using the Play 2 framework. This book starts by

introducing Play through a comprehensive overview example. Then, you'll look at each facet of a typical Play application both by exploring simple code snippets and by adding to a larger running example. Along the way, you'll deepen your knowledge of Scala as a programming language and work with tools like Akka. About this Book Play is a Scala web framework with built-in advantages: Scala's strong type system helps deliver bug-free code, and the Akka framework helps achieve hassle-free concurrency and peak performance. Play builds on the web's stateless nature for excellent scalability, and because it is event-based and nonblocking, you'll find it to be great for near real-time applications. Play for Scala teaches you to build Scala-based web applications using Play 2. It gets you going with a comprehensive overview example. It then explores each facet of a typical Play application by walking through sample code snippets and adding features to a running example. Along the way, you'll deepen your knowledge of Scala and learn to work with tools like Akka. Written for readers familiar with Scala and web-based application architectures. No knowledge of Play is assumed. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Intro to Play 2 Play's MVC structure Mastering Scala templates and forms Persisting data and using web services Using Play's advanced features About the Authors Peter Hiltonv, Erik Bakker, and Francisco Canedo, are engineers at Lunatech, a consultancy with Scala and Play expertise. They are contributors to the Play framework. Table of Contents PART 1: GETTING STARTED Introduction to Play Your first Play application PART 2: CORE FUNCTIONALITY Deconstructing Play application architecture Defining the application's HTTP interface Storing data—the persistence layer Building a user interface with view templates Validating and processing input with the forms API PART 3: ADVANCED CONCEPTS Building a single-page JavaScript application with JSON Play and more Web services, iteratees, and WebSockets

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

Printed in full color. Android is booming like never before, with millions of devices shipping every day. It's never been a better time to learn how to create your own 3D games and live wallpaper for Android. You'll find out all about shaders and the OpenGL pipeline, and discover the power of OpenGL ES 2.0, which is much more feature-rich than its predecessor. If you can program in Java and you have a creative vision

that you'd like to share with the world, then this is the book for you. This book will teach you everything you need to know to create compelling graphics on Android. You'll learn the basics of OpenGL by building a simple game of air hockey, and along the way, you'll see how to initialize OpenGL and program the graphics pipeline using shaders. Each lesson builds upon the one before it, as you add colors, shading, 3D projections, touch interaction, and more. Then, you'll find out how to turn your idea into a live wallpaper that can run on the home screen. You'll learn about more advanced effects involving particles, lighting models, and the depth buffer. You'll understand what to look for when debugging your program, and what to watch out for when deploying to the market. OpenGL can be somewhat of a dark art to the uninitiated. As you read this book, you'll learn each new concept from first principles. You won't just learn about a feature; you'll also understand how it works, and why it works the way it does. Everything you learn is forward-compatible with the just-released OpenGL ES 3, and you can even apply these techniques to other platforms, such as iOS or HTML5 WebGL.

Leverage the power of LibGDX to create a fully functional, customizable RPG game for your own commercial title About This Book Learn game architecture and design patterns with concrete examples using proper software engineering principles Save time and money with this handy reference guide for future game development with LibGDX Design and develop a fully functional RPG video game from scratch with a hands on, step-by-step approach using LibGDX Who This Book Is For If you are an intermediate-level game developer who wants to create an RPG video game but found the creation process overwhelming, either by lack of tutorials or by getting lost in a sea of game-related technologies, engines, or frameworks, then this book is for you. This book assumes familiarity with Java and some basic knowledge of LibGDX. What You Will Learn Develop characters with stat attributes, player movement, animation, physics, and collision detection Create interactive NPC characters with speech windows and build immersion via dialog trees Build inventory management system UIs with drag and drop items to sell, buy, and equip Design a quest system to expand out the content of your game Form interesting enemies with battle mechanics and spawn points Devise scripted cutscenes to add an element of story and drama Develop save and load game profiles Create special effects to give the game extra "juiciness" and polish, and help build the atmosphere In Detail LibGDX is a Java-based framework developed with a heavy emphasis on performance, and includes cross-platform support out of the box (Windows, OS X, Linux, iOS, Android, and HTML5) as well as providing all the low-level functionality so that you can focus on developing your game and not battling with the platform. LibGDX also has an engaged and responsive community, active maintenance, and is available for free without a prohibitive license. Starting from the beginning, this book will take you through the entire development process of creating an RPG video game using LibGDX. First, this book will introduce you to the features specific to RPG games, as well as an overview of game architecture. Then, you will create map locations, develop character movement, add animation, integrate collision detection, and develop a portal system. Next, you will learn and develop a HUD and other UI components, as well as an inventory management system. You will then develop NPC interactions including dialog trees, shopkeepers, and quest givers. After this, you will design and create battle features for fighting enemies, as well as event triggers for world events. Finally, you will add the final polish with sound, music, and lighting effects. By the end of this book, you will have learned and applied core components from the LibGDX framework, as well as have a finished game to use as a springboard for customization and story development for your own commercial video game. Style and approach This book walks you through the concepts and implementation of developing a complete RPG game, unfolding chapter by chapter and building upon previous concepts. Each chapter can be used as an individual reference with diagrams to explain core concepts with concrete example code explained in detail.

The easy way to learn programming fundamentals with Python Python is a remarkably powerful and dynamic programming language that's

used in a wide variety of application domains. Some of its key distinguishing features include a very clear, readable syntax, strong introspection capabilities, intuitive object orientation, and natural expression of procedural code. Plus, Python features full modularity, supporting hierarchical packages, exception-based error handling, and modules easily written in C, C++, Java, R, or .NET languages, such as C#. In addition, Python supports a number of coding styles that include: functional, imperative, object-oriented, and procedural. Due to its ease of use and flexibility, Python is constantly growing in popularity—and now you can wear your programming hat with pride and join the ranks of the pros with the help of this guide. Inside, expert author John Paul Mueller gives a complete step-by-step overview of all there is to know about Python. From performing common and advanced tasks, to collecting data, to interacting with package—this book covers it all! Use Python to create and run your first application Find out how to troubleshoot and fix errors Learn to work with Anaconda and use Magic Functions Benefit from completely updated and revised information since the last edition If you've never used Python or are new to programming in general, Beginning Programming with Python For Dummies is a helpful resource that will set you up for success.

A clear and practical guide to building games in libGDX. This book is great for Indie and existing game developers, as well as those who want to get started with game development using libGDX. Java game knowledge of game development basics is recommended.

Design and create video games using Java, with the LibGDX software library. By reading Beginning Java Game Development with LibGDX, you will learn how to design video game programs and how to build them in Java. You will be able to create your own 2D games, using various hardware for input (keyboard/mouse, gamepad controllers, or touchscreen), and create executable versions of your games. The LibGDX library facilitates the game development process by providing pre-built functionality for common tasks. It is a free, open source library that includes full cross-platform compatibility, so programs written using this library can be compiled to run on desktop computers (Windows/MacOS), web browsers, and smartphones/tablets (both Android and iOS). Beginning Java Game Development with LibGDX teaches by example with many game case study projects that you will build throughout the book. This ensures that you will see all of the APIs that are encountered in the book in action and learn to incorporate them into your own projects. The book also focuses on teaching core Java programming concepts and applying them to game development. What You Will Learn How to use the LibGDX framework to create a host of 2D arcade game case studies How to compile your game to run on multiple platforms, such as iOS, Android, Windows, and MacOS How to incorporate different control schemes, such as touchscreen, gamepad, and keyboard Who This Book Is For Readers should have an introductory level knowledge of basic Java programming. In particular, you should be familiar with: variables, conditional statements, loops, and be able to write methods and classes to accomplish simple tasks. This background is equivalent to having taken a first-semester college course in Java programming.

Demonstrates how games that will run on all Windows 8 devices can be developed using C# and XAML. Covers the whole game development experience from initial setup and game design through to user interface design, coding, and deployment to the Windows Store. Intended for users who are already familiar with programming one of the two main managed Visual Studio languages, C# or Visual Basic.NET.

Android, one of the most popular mobile operating systems, uses Java as one of the primary languages for building apps of all types. This new, improved, and updated third edition is unlike other Android books; it doesn't assume any Java programming experience and shows you how to build Android games from scratch using five exciting game projects.

The book "Simulation and Gaming" discusses the following topics and research areas: game-based methods of problem solution and data

processing, analysis, and information mining; educational games and game features, including game characteristics, story, mechanics, and methodology; development of integrated games tasked with helping students in interpreting, translating, and manipulating the field of kinematics through formal presentations; possibility of research integration through real and practical examples and games as well, in the field of physics; analysis of game engines from various aspects such as modularity, performance, and usability; virtual reality (VR) and interaction mechanisms used for three-dimensional (3D) game development; analysis, development, design, implementation, and evaluation of the simulation model in the field of engineering and metallurgy, according to ADDIE model; concept of computational thinking, with an accent on its inclusion in compulsory education; overview of the current prominence of AI simulation based in the gaming leisure industry, mainly for research purposes in the context of gambling and forecasting of online casino patron's churn behavior; innovative modeling and simulation approach using newly proposed advanced game-based mathematical framework, unified game-based acquisition framework, and a set of war-gaming engines to address the challenges for acquisition of future space systems; modification of simulation of a complex system and a physics model through programming, achieved with a block-based programming language.

Build classic arcade, shooter and platform games with Unity 2D toolset Key Features Leverage the amazing new functionalities of the latest Unity 2017 2D toolkit. Learn to create 2D characters, animations, fast and efficient game play experiences while keeping your games very lightweight Create engaging games that enable you to perform intergalactic warfare and also fun games similar to temple run and so on. Book Description 2D games are everywhere! Timeless and popular, 2D games represent a substantial segment of the games market. The Unity engine has revolutionized the gaming industry, by making it easier for game developers to create quality games on a budget. If you are looking for a guide to create 2D games using Unity 2017, look no further. With this book, you will learn all the essentials of 2D game development by creating three epic games in a step-by-step manner throughout the course of this book. The first game will have you collecting as many cakes as possible. The second will transport you to outer space to traverse as far as possible while avoiding enemy spaceships. The last game will have you running and jumping across platforms to collect coins and other exotic items. Throughout all these three games, you will create characters, make them move, and create some enemies. And then, of course, write code to destroy them!. After showing you the necessities of creating a game, this book will then help you to porting the game to a mobile platform, and provide a path to publish it on the stores. By the end of this book, you will not only have created three complete great games, but be able to apply your knowledge to create and deploy your own games. What you will learn Work with Unity 2017's new 2D workflow and create a 2D scene Set the scene with different types of backgrounds, either static or dynamically using a tileset Bring your character to life through simple animations Understand the core concepts of programming by creating basic code that controls a character and destroys an enemy Create buttons and game controls by using code snippets for input detection Develop three 2D games from genres such as classic arcade, space shooter, and platformer games Add audio and feedback and

deploy your games Who this book is for If you are interested in creating your very own 2D games from scratch, then this book will give you all the tools you need to succeed. No C# knowledge is required, all you need is basic coding and scripting knowledge. Whether you are completely new to Unity or have used Unity before and would like to learn about the new 2D features of Unity, this book is for you.

Provides information on creating games for Android mobile devices, covering such topics as implementing the game loop, integrating user input, building virtual worlds with tile maps, and creating a scoring framework.

Beginning Android 4 Games Development offers everything you need to join the ranks of successful Android game developers. You'll start with game design fundamentals and programming basics, and then progress toward creating your own basic game engine and playable game that works on Android 4.0 and earlier devices. This will give you everything you need to branch out and write your own Android games. The potential user base and the wide array of available high-performance devices makes Android an attractive target for aspiring game developers. Do you have an awesome idea for the next break-through mobile gaming title? Beginning Android 4 Games Development will help you kick-start your project. The book will guide you through the process of making several example games for the Android platform, and involves a wide range of topics: The fundamentals of Android game development targeting Android 1.5-4.0+ devices The Android platform basics to apply those fundamentals in the context of making a game The design of 2D and 3D games and their successful implementation on the Android platform

Explore modern game programming and rendering techniques to build games using C++ programming language and its popular libraries Key Features Learn how you can build basic 2D and complex 3D games with C++ Understand shadows, texturing, lighting, and rendering in 3D game development using OpenGL Uncover modern graphics programming techniques and GPU compute methods using the Vulkan API Book Description Although numerous languages are currently being used to develop games, C++ remains the standard for fabricating expert libraries and tool chains for game development. This book introduces you to the world of game development with C++. C++ Game Development By Example starts by touching upon the basic concepts of math, programming, and computer graphics and creating a simple side-scrolling action 2D game. You'll build a solid foundation by studying basic game concepts such as creating game loops, rendering 2D game scenes using SFML, 2D sprite creation and animation, and collision detection. The book will help you advance to creating a 3D physics puzzle game using modern OpenGL and the Bullet physics engine. You'll understand the graphics pipeline, which entails creating 3D objects using vertex and index buffers and rendering them to the scene using vertex and fragment shaders. Finally, you'll create a basic project using the Vulkan library that'll help you get to grips with creating swap chains, image views, render passes, and frame buffers for building high-performance

graphics in your games. By the end of this book, you'll be ready with 3 compelling projects created with SFML, the Vulkan API, and OpenGL, and you'll be able take your game and graphics programming skills to the next level. What you will learn Understand shaders and how to write a basic vertex and fragment shader Build a Visual Studio project and add SFML to it Discover how to create sprite animations and a game character class Add sound effects and background music to your game Grasp how to integrate Vulkan into Visual Studio Create shaders and convert them to the SPIR-V binary format Who this book is for If you're a developer keen to learn game development with C++ or get up to date with game development, this book is for you. Some knowledge of C++ programming is assumed.

The Game Maker's Apprentice shows you how to create nine exciting games using the wildly popular Game Maker game creation tool. This book covers a range of genres, including action, adventure, and puzzle games--complete with professional quality sound effects and visuals. It discusses game design theory and features practical examples of how this can be applied to making games that are more fun to play. Game Maker allows games to be created using a simple drag-and-drop interface, so you don't need to have any prior coding experience. It includes an optional programming language for adding advanced features to your games, when you feel ready to do so. You can obtain more information by visiting book.gamemaker.nl. The authors include the creator of the Game Maker tool and a former professional game programmer, so you'll glean understanding from their expertise.

Learn the art of making Android games and turn your game development dreams into reality About This Book Leverage the latest features of Android N to create real-world 2D games Architect a 2D game from scratch and level up your Android game development skill Transition from developing simple 2D games to 3D games using basic Java code Who This Book Is For If you are a mobile developer who has basic Java programming knowledge, then this book is ideal for you. Previous Android development experience is not needed; however, basic mobile development knowledge is essential. What You Will Learn Understand the nuts and bolts of developing highly interactive and interesting games for Android N Link the interface to the code used in games through simple methods Interact with the images on the screen and also learn to animate them Set and save the game state and save high scores, hit points, and so on for your games Get a grasp of various collision techniques and implement the bounding box technique Convert your 2D games to 3D games using Android N Get an understanding of the process of UI creation using Android Studio In Detail In this book, we'll start with installing Android studio and its components, and setting it up ready for Android N. We teach you how to take inputs from users, create images and interact with them, and work with sprites to create animations. You'll then explore the various collision detection methods and use sprites to create an explosion. Moving on, you'll go through the process of UI creation and see how to create buttons as well as display the score and other parameters on screen. By

the end of the book, you will have a working example and an understanding of a 2D platform game like Super Mario and know how to convert your 2D games to 3D games. Style and approach This easy-to-understand guide follows a step-by-step approach to building games, and contains plenty of graphical examples for you to follow and grasp quickly, giving you the chance to implement the concepts practically.

Design and create video games using Construct 2. No prior experience is required. Game Development with Construct 2 teaches you to create 12 different game projects from a variety of genres, including car racing and tower defense to platformer and action-adventure. The software is user friendly and powerful, and the games you create can be exported to run on the web, desktop computers, and smartphones. What You'll Learn Create complete functional games using the Construct 2 game engine Understand general logical structures underlying video game programs Use practical game design advice (such as visual feedback and gameplay balancing) Understand programming concepts useful throughout computer science Who This Book Is For Middle school and high school students with no prior programming knowledge, and only minimal mathematical knowledge (graphing (x,y) coordinates, measuring angles, and applying formulas)

Android Game Development Made Easy. If you've always wanted to make Android games but didn't know where to start, this book is for you. Whether you are an absolute beginner with no programming experience or an experienced Java developer wanting to get started with game development, this comprehensive book will help you accomplish your goals and teach you how to build your own games from scratch-no game engines needed. In this beginner-friendly guide, you will find focused, step-by-step approaches designed to help you learn and practice one fundamental concept at a time. You will study Java and write object-oriented applications. You will experiment with the building blocks of Android and create fun, interactive 2D games with touch controls. You will even learn how to integrate social features such as a global leaderboard and publish your game to be shared with the billion Android users across the world. This book provides access to an extensive library of sample Java and Android game projects via its companion website so that you can continue learning on your own and grow as a game programmer. With this up-to-date guide in your hand, you will be able to successfully navigate common pitfalls and get up and running with your own projects in no time. Tested on Android Lollipop. All the code in the book has been tested on the Android Lollipop SDK (5.0), and is available under the open source MIT license at the book's companion site. Table of Contents: *Unit 1: Java Basics *Chapter 1: The Fundamentals of Programming, *Chapter 2: Beginning Java, *Chapter 3: Designing Better Objects, *Unit 2: Java Game Development, *Chapter 4: Laying the Foundations, *Chapter 5: Keeping It Simple, *Chapter 6: The Next Level, *Unit 3: Android Game Development, *Chapter 7: Beginning Android Development, *Chapter 8: The Android Game Framework, *Chapter 9: Building the Game, *Unit 4: Finishing Touches, * Chapter 10: Releasing Your Game, *Chapter 11: Continuing the

Journey

Learn how to create your very own game using the libGDX cross-platform framework About This Book Learn the core features of libGDX to develop your own exciting games Explore game development concepts through example projects Target games for major app stores quickly and easily with libGDX's cross-platform functionality Who This Book Is For This book is intended for those who wish to learn the concepts of game development using libGDX. An understanding of Java and other programming languages would definitely be helpful, although it is not a must. What You Will Learn Create and configure a libGDX project to get started with making games Get to grips with a simple game loop that will drive your games Manage game assets to reduce code duplication and speed up development Pack game assets together into single assets to increase your game's performance Display textures on the screen and manipulate them with play input Play various types of sounds that a game can generate Design and modify a game user interface with libGDX's built-in tools Develop a game that will run across various platforms In Detail LibGDX is a cross-platform game development framework in Java that makes game programming easier and fun to do. It currently supports Windows, Linux, Mac OS X, Android, and HTML5. With a vast feature set on offer, there isn't a game that can't be made using libGDX. It allows you to write your code once and deploy it to multiple platforms without modification. With cross-platform delivery at its heart, a game can be made to target the major markets quickly and cost effectively. This book starts with a simple game through which the game update cycle is explained, including loading textures onto your screen, moving them around, and responding to input. From there you'll move on to more advanced concepts such as creating a formal game structure with a menu screen, adding a game screen and loading screen, sprite sheets, and animations. You'll explore how to introduce a font to optimize text, and with the help of a game that you'll create, you'll familiarise yourself with the 2D tile map API to create worlds that scroll as the characters move. In the final sample game of the book, you'll implement a basic version of an Angry Birds clone, which will allow you to use the physic library box2D that libGDX provides access to. An overview of exporting games to different platforms is then provided. Finally, you will discover how to integrate third-party services into games and take a sneak peak at the Social Media API to get a basic understanding of how it fits into the libGDX ecosystem. Style and approach With this book you'll learn game development with libGDX through example game projects. You'll finish the book with a thorough understanding of libGDX game development, along with completed games that you'll have built yourself.

Create and develop exciting games from start to finish using SFML About This Book Familiarize yourself with the SFML library and explore additional game development techniques Craft, shape, and improve your games with SFML and common game design elements A practical guide that will teach you how to use utilize the SFML library to build your

own, fully functional applications Who This Book Is For This book is intended for game development enthusiasts with at least decent knowledge of the C++ programming language and an optional background in game design. What You Will Learn Create and open a window by using SFML Utilize, manage, and apply all of the features and properties of the SFML library Employ some basic game development techniques to make your game tick Build your own code base to make your game more robust and flexible Apply common game development and programming patterns to solve design problems Handle your visual and auditory resources properly Construct a robust system for user input and interfacing Develop and provide networking capabilities to your game In Detail Simple and Fast Multimedia Library (SFML) is a simple interface comprising five modules, namely, the audio, graphics, network, system, and window modules, which help to develop cross-platform media applications. By utilizing the SFML library, you are provided with the ability to craft games quickly and easily, without going through an extensive learning curve. This effectively serves as a confidence booster, as well as a way to delve into the game development process itself, before having to worry about more advanced topics such as “rendering pipelines” or “shaders.” With just an investment of moderate C++ knowledge, this book will guide you all the way through the journey of game development. The book starts by building a clone of the classical snake game where you will learn how to open a window and render a basic sprite, write well-structured code to implement the design of the game, and use the AABB bounding box collision concept. The next game is a simple platformer with enemies, obstacles and a few different stages. Here, we will be creating states that will provide custom application flow and explore the most common yet often overlooked design patterns used in game development. Last but not the least, we will create a small RPG game where we will be using common game design patterns, multiple GUI elements, advanced graphical features, and sounds and music features. We will also be implementing networking features that will allow other players to join and play together. By the end of the book, you will be an expert in using the SFML library to its full potential. Style and approach An elaborate take on the game development process in a way that compliments the reader's existing knowledge, this book provides plenty of examples and is kind to the uninitiated. Each chapter builds upon the knowledge gained from the previous one and offers clarifications on common issues while still remaining within the scope of its own subject and retaining clarity.

If you are a game enthusiast who would like to develop and publish your own game ideas onto different app stores, this is the book for you. Some knowledge of C++ or Java is helpful but not necessary.

This book is aimed at indie and existing game developers as well as those who want to get started with game development using LibGDX. Basic knowledge of Java programming and game development is required.

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. 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,

