Getting Started Making Games

An **Amazon Appstore** eBook

amazon appstore

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Foreword

If you are new to making games, you may be wondering where to start? While there are lots of resources out there to teach you game design, art, and programming, it may feel a bit overwhelming. Over the years, I have created dozens of games, some successful and some not. Like any skill, making games takes time, practice, and perseverance. I have put together this guide to help point you in the right direction to get started making your games, especially if you have never done so before, as well as offer some tips to those looking to improve their skills.

~ Jesse Freeman

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Documenting your idea

You have a game idea and want to start building right away. But, making a game is more than just having a good idea and the skill to code it. Before you write a single line of code, you first need to think through the gameplay, your target audience, and ultimately create a map for what you are going to build.

Creating a game design document

To help you simplify your idea to something manageable, start by getting it down on paper. No one builds a house without a blueprint, and you shouldn't make a game without a solid plan either. Your plan can be as simple as a task list with everything you need to do or something more specific, such as a document outlining all the details. Either way, your game design process is going to start with a blank page. Let's talk about how to fill it in.

In traditional game development, you are encouraged to make a game design document (GDD). The GDD is usually a large document outlining every aspect of a game. It's the blueprint that the rest of the team must follow when building out the game. If you are a single developer, this may be excessive for your needs. You can easily boil down a GDD into a single list of tasks with a few introduction paragraphs and any collateral or references, such as screen shots and links to other games or game mechanics you like.

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Keep in mind, the more you work through the details, the better your project will end up. It's very "cheap" to work out your ideas on paper or in your head before you start coding. Once you begin the coding process and need to go back, you amass what we call technical debt that can make your code unmanageable or, even worse, kill your productivity altogether by forcing you to constantly hack together new solutions or refactor code you've already written.

Finding inspiration

As you start jotting down your ideas, you also need to start playing games, a lot of games. As a game maker, your hobby should be playing games, taking them apart, and figuring out what makes them tick. Keep a notebook of all the games that you play, and even the ones you don't play but see online. Write down what you like about the game, what you don't like, and some of your big takeaways from playing it. If you like the art style, capture it through screenshots and keep links to any other collateral. You never know how a game will inspire you, so it's important to be as detailed as you can. It sounds like a lot of work, but this process will be invaluable in helping you find inspiration and avoid common pitfalls.

Sharing your ideas

Now that you have played a boatload of other people's games and solidified your GDD, it's time to gather peer feedback. Find a select group of trusted friends and share your document with them. It is easier to validate your idea before you start writing your code. Some feedback might be difficult to hear, but listening to feedback with an open mind will ensure you create the best possible product. Going back to the idea of "technical debt," uncovering what resonates and what doesn't early on, will help save you from making costly edits to your game once you're in production.

2 Choosing a framework

You can speed up your app's development by using frameworks. Frameworks allow you to work with existing code libraries, so you don't have to create these libraries yourself. These libraries perform functions such as rendering objects in 3D or connecting to external services. Cross-platform frameworks can help you create platform-agnostic apps, meaning you only have to create an app once before deploying it to different types of devices. Now that you have a well-rounded idea of the end-product you are hoping to create, choosing a framework that best meets your needs will be a lot easier.

Features to consider

When choosing which one is right for your game, you will want to look for:

- Collision, physics, and handles inputs. These will help speed up the development process.
- Documentation and an active community for any questions that will inevitably arise.
- UI that matches your skill level. For beginners, you will want to look for drag and drop solutions. More seasoned developers might prefer to have low-level access.
- Multi-platform distribution, allowing you to deliver your new game on as many devices as possible.

Game Frameworks with Fire OS Support

If you are looking to build a game you can publish on Amazon's Appstore, you'll need to look for frameworks with support for creating Fire OS or Generic Android APKs. Here is a list of frameworks that already supports Fire OS out of the box:

Framework	Primary Audience	Supported Platforms	Cost
GameSalad	Non-programmers	Android, Fire TV, GameSalad Arcade, HTML5, iOS, Kindle Fire, macOS, Tizen	$17 - 29/mo
Construct 2	Non-programmers	HTML5 (e.g. Chrome, Firefox, IE 9+, Opera)	Free - $430
Game Maker	GM Script (Beg)	Android, Blackberry 10, iOS, Linux, macOS, PS 4, PS Vita, web, Windows, WP8, Xbox One	Free (PC) + each platform is extra.
Corona	Lua Programmers (Beg-Adv)	Android, iOS, Kindle Fire, macOS, tvOS, Windows, WP8	Free (+paid extensions)
Unity 3D	C# Programmers (Beg-Adv)	Android, Blackberry 10, iOS, Linux, macOS, Nintendo 3DS, PS 4, PS Vita, web, Wii, Wii U, Windows, WP8, Xbox 360, Xbox One	Free - $125+/mo (+paid extensions)
Cordova	Javascript Programmers (Inter-Adv)	Android, Blackberry 10, iOS, macOS, Ubuntu, Windows, WP8	Free
Cocos2d-x	C++ Programmers (Inter-Adv)	Android, iOS, Linux, macOS, Tizen, Windows	Free

Each of these frameworks also has support for some of our Appstore services such as IAP (In-App Purchases), Ads and cloud saving. For more information on frameworks, you can review summaries at developer.amazon.com/cross-platform.

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Working with art and sound

If you don't come from an art or music background, you might find this part of the game creation process the most daunting. Building a game for the first time will stretch all of your skills, including your ability to be creative and be design-minded. It's easy to get bogged down in the details and forget the most valuable part of making a game: building something fun to play.

Starting without art and sound

To minimize productivity-draining distractions, use placeholder art and sound to start out. This way you can focus on getting the game mechanics right. If you build a compelling enough game, you may even be able to convince an artist or musician to provide your game's art and sound (for a share of the profits, of course). It also helps to look at games that use minimalistic or dynamically generated art as inspiration, such as Thomas Was Alone, or Super Hexagon. Both of these examples use very simple artwork and hooked players because of their captivating gameplay.

Adding in art

Possibly the easiest path is to create pixel art. The style will make your game feel like a throw-back to the early days of video games. If you are feeling more ambitious, however, you can explore the following design tools:

Photoshop

This software is one of the most popular and expensive art tools on the market, but with Adobe's new Creative Cloud plan, you can pay for it as a monthly service. Photoshop is ideal for creating rasterized and vector artwork, as well as layout.

Illustrator

Similar to Photoshop, this is the most popular vector-based art tool out there. We suggest using a vector-based editor if you are going for a "cartoony" look or want to ensure your game's artwork can scale to any resolution.

Aseprite

If you are doing pixel art, this is one of the best editors available on the market. Not only is it free and open source, but it is also perfect for making pixel animation, and supports importing and exporting sprite sheets.

GIMP

If you are searching for a Photoshop alternative, check out GIMP. It is free and a lot of today's game developers and artists use it.

Adding in sound

Similar to artwork, creating sound effects can be a daunting process. One secret weapon we recommend is Bfxr, which you can use online or install on your computer as an AIR app.

Bfxr is perfect for generating simple, 8-bit sound effects for your game. The tool features many pre-defined sound templates, such as pickup, laser, explosion, and jump sounds. You can also use the **randomize button** to develop new sound effects and the **synth option** to modify your sounds.

Once you have created your sound effects, you will need to convert them. Bfxr likes to generate .wav files, but most frameworks do not use this file format. You can use programs such as Audacity to output your sound as .mp3 and .ogg files, and more.

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Polishing your game

Your game works and now has brand new artwork and unique sounds. You're almost ready to release your game into the wild. Your final task is to ensure your game is perfectly polished.

Consistent design

Ensure your art style is consistent throughout the game. Your in-game graphics and your UI (and even the splash screen) should all look and feel like they belong together. Don't get overzealous with promotional artwork. You want to make sure that you are setting the right expectations for new users, and nothing disappoints more than being drawn into a game for its promotional artwork only to find out that the in-game design doesn't align.

Multiple resolution support

When it comes to designing for multiple resolutions, you must understand how aspect ratio works and decide whether your game will attempt to maintain it. We recommend starting with a comp of the three main resolutions you plan to support and make sure your game works across all three. As the aspect ratio increases, the key is to show more gameplay and adjust the UI elements accordingly. For smaller 800x480 resolutions show less action, and scale the UI down to ensure there is no overlapping.

Perceived performance optimizations

Often, developers spend countless days trying to optimize their code and end up forgetting that a few minor tweaks to the way their game runs can give the impression of better performance to players. Don't stop at optimizing artwork. Try making your loading screen look more interesting for people while they wait. Or, make transitions from screen to screen more seamless. Finally, use animation transitions and frames to reduce the feeling of slowness or unresponsiveness in gameplay.

Supporting Fire devices

If you are interested in publishing your game to Amazon Fire TV and tablet devices, you can check out the following design guidelines:

fireTV

Fire TV Display and Layout Guide

fire

TABLETS

Fire Tablet Screen and Layout Guide

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Marketing your game

You are finally ready to release your game to the world. While there is a lot you can do after you have completed your game to help make it a success, you should always be thinking about marketing your game, even from the very beginning. Promoting a game is not an exact science, and its overall success has a lot to do with the actual quality of your game (and sometimes, luck!). However, there are a few necessary steps to ensure your game gets the attention it deserves.

Naming your game

The name of your game is one of the most important decisions you make. No wonder large companies spend large amounts of money conducting market research to come up with product names. Since you likely don’t have the luxury of a large marketing research budget, your best bet is to come up with a clear and descriptive name.

Try out some of these tried and true naming methods:

Main character(s): While this won't necessarily describe what a player will do in your game, it helps establish the lead, and his/her name helps defines your brand. For extra points, use an adjective to describe your main character.

Story of a spoiler alert: Put your game's ending right in the title. We are all familiar with the Legend of a certain princess. Letting people know what to expect from your game will pique interest.

Gameplay description: Is there a main action that your players perform throughout the game?

Naming your game is another area where playing a lot of other games will come in handy. Look through the list of the games you played and try and remember why you chose them in the first place. This will help you zero in on a naming convention that will work for you. Finally, make sure your game's name makes sense for sequels and continuations if you find yourself with a hit on your hands.

Optimizing your store listing

Think of your detail page as a place to create a narrative about your app. A great product description can help to put your app in the best light and convert users. Make sure your description is clear, honest, and straightforward. Introduce your app clearly and succinctly, while describing your app's most notable features. Explain why and how your app benefits users. Make sure not to make any grandiose promises about your app, as customers can see through inflated claims—you don't want to lose credibility. End your description with a strong call to action (CTA), such as "Get started now," or "Download now and play today!"

Recruiting people to play your game

The key to success is getting your game in the hands of as many players as possible. Hopefully, when you chose your framework, you selected one that allows you to release a version of your game on all of the major platforms: Web, iOS, Android, FireOS, and desktop.

Having your game available on as many platforms as possible helps ensure that players can not only find your game on their platform of preference but that you increase your chances of being discovered.

Using social media

Social media sites, including Facebook, Twitter, Instagram, SnapChat, and even LinkedIn can provide effective opportunities to connect with fans and reach new users.

Create a presence to share videos, artwork, and screen grabs, and also deliver news about updates, exciting new features, and your upcoming projects. You will also find that these sites provide a mechanism for users to reach out with their customer service queries. Be sure to respond to these questions as soon as you can.

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Make more games

Making a game is a learning experience. The more games you make, the better you become at designing games which increases your chances you will make a hit new game. Even if people don't download your first, second, or even third game, you should never give up.

In fact, one of the best things your game can be is a promotional tool for you and your next game. You can use your Appstore listings and in-app messages to include links to your latest games. Over time, you will find that you have developed a following of fans who are willing to pay for your next game.

Publish to Amazon Appstore

App submission for Android apps and games is easy: 85 percent of apps submitted to the Amazon Appstore just work, with no additional modification. Also, because Fire OS is based on Android, the games you publish can be available on millions of Fire tablets, Amazon Fire TVs, and Android devices in 236 countries and territories.

Get Started

- Review the Amazon Appstore Presubmission Checklist, and make sure that your app meets the specified requirements and guidelines.
- Pre-test your app and see if it passes. Address any failures before submitting your app.
- Follow the instructions on the Submitting apps to the Amazon Appstore page to publish your app.