

## GAME DEVELOPMENT

# Learn How To Make A Video Game From Scratch

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Learning how to make a video game from scratch can be a very fun and rewarding process. With the rise of mobile gaming, people throughout the world are taking advantage of the huge video game market by creating and selling their games. Different video games for different platforms and operating systems are created slightly differently, but they are all based on the same general concepts.

You will need to learn how to code in at least one language before you can make your own game, especially if you want to be able to customize the way it looks and works. Programming is the basis of video game development, and learning how to mak



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make your own game, and I'll introduce you to the different programming languages that are used to build games on different platforms. Finally, I'll give you a brief insight into a few of the other things that you will need to learn if you're serious about learning how to make a video game from scratch, instead of simply by following a template.

## Table of Contents [hide]

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- 1 Game Development vs Game Design
- 2 What Are The Steps To Making A Video Game?
  - 2.1 Step 1: Do Some Research & Conceptualize Your Game
  - 2.2 Step 2: Work On A Design Document
  - 2.3 Step 3: Decide Whether You Need Software
  - 2.4 Step 4: Start Programming
  - 2.5 Step 5: Test Your Game & Start Marketing!
- 3 What Languages Can I Use To Make A Video Game?
  - 3.1 JavaScript
  - 3.2 Java
  - 3.3 Swift
  - 3.4 The C languages
- 4 What Other Skills Do I Need To Learn?
  - 4.1 How To Use Different Types Of Software
  - 4.2 A Few Design Skills
- 5 Conclusion

## Game Development vs Game Design

Before jumping into the main steps that you will need to follow to make your first game from scratch, it's important to consider the difference between video game development and game design. *Note that you will need both if you want to learn how to make a game on your own.*

To put it simply, video game design refers to the actual artistic design of a video game. Game designers spend their time conceptualizing new aspects of their games. TI



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On the other hand, game developers – or game programmers – are the people who know best how to make a video game by writing the code so the game would do what it's supposed to. In the rest of this guide, I will focus on the development side of learning how to code a video game, but it's important for you to understand that you will have to design your game before you can program it.

*Note that it's entirely possible for the game designer and the game developer to be the same person. The design and the development process can be completed side by side if you're building simple games.*

## What Are The Steps To Making A Video Game?

At first, learning **how to make your own game** can appear very difficult. You might be tempted to back off and leave game development to the experts. However, I wouldn't recommend doing this! Instead, you should put in a bit of work to learn the basics of video game creation. ***It isn't as hard as you might think.***

With this in mind, here's a very general step by step guide to help you learn how to make a video game. Note that the exact process varies according to the type of game you're building and the platform you want to release it on, but this will give you an idea of what's involved.

### Step 1: Do Some Research & Conceptualize Your Game

The first thing that you need to do when you're trying to create your first game is to think about exactly what sort of game you're planning on creating. Do some research and find out exactly what skills you need to build this game, and what sort of features it should have.

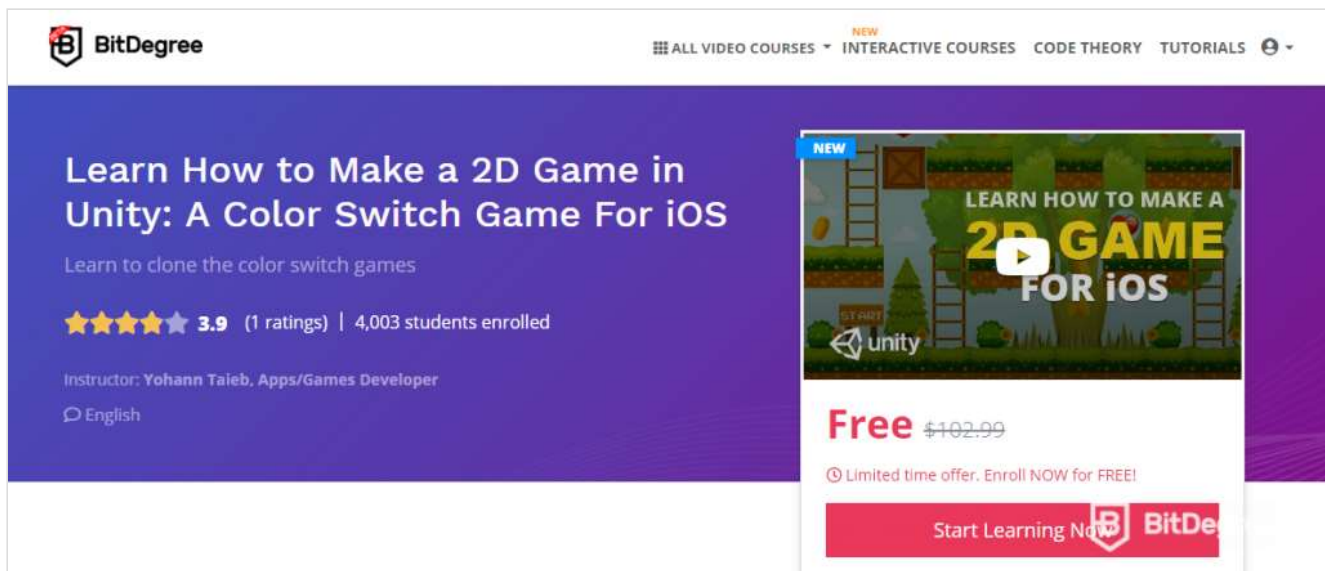
If you're serious about learning how to make a video game, then you should take a couple of introductory courses before you move any further. For example, if you're interested in building a 2D role-playing game, I would recommend having a look at something like the **Learn to Make a 2D Game in Unity course**.

Alternatively, if you'd rather build some sort of puzzle or word game, I would recommend the **Learn How to Make a Puzzle Game course**. This course will teach you how to create a simple game with no coding, but this isn't always the best idea I think that it's always better to learn how to code a game, rather than building a generi



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The screenshot shows a BitDegree course page. The main title is 'Learn How to Make a 2D Game in Unity: A Color Switch Game For iOS'. Below the title, it says 'Learn to clone the color switch games'. The course has a rating of 3.9 stars from 1 rating and 4,003 students enrolled. The instructor is Yohann Taieb, an Apps/Games Developer, and the course is in English. A video thumbnail on the right shows a 2D game scene with a play button and the text 'LEARN HOW TO MAKE A 2D GAME FOR iOS'. Below the thumbnail, the price is listed as 'Free' (originally \$102.99) with a note 'Limited time offer. Enroll NOW for FREE!'. A red button at the bottom says 'Start Learning Now'.

## Step 2: Work On A Design Document

Once you've figured out how to make a video game, conceptualized it and started to think about what you want it to look like, you need to put together a design document. For most people, a design document is a brief outline of a game, what it should look like, and what you need to do to build it.

When you're putting together your design document, consider the following things:

- The skills at your disposal. Things can get expensive if you have to start hiring people to do things because you don't have the right skills.
- What language/languages you're going to use. This will help you narrow down the way things are going to be built.
- What it needs to look/behave like.
- Whether you want to include updates and new releases in the future. If you do, then you should think about how you're going to make them happen.

Once you've put your design document together it's almost time to start programming!

## Step 3: Decide Whether You Need Software

The last thing you need to do before you start discovering how to make a video game is working out what software you need. Simple mobile game development doesn't require a lot of fancy software – in many cases, you can get away with a code editor and



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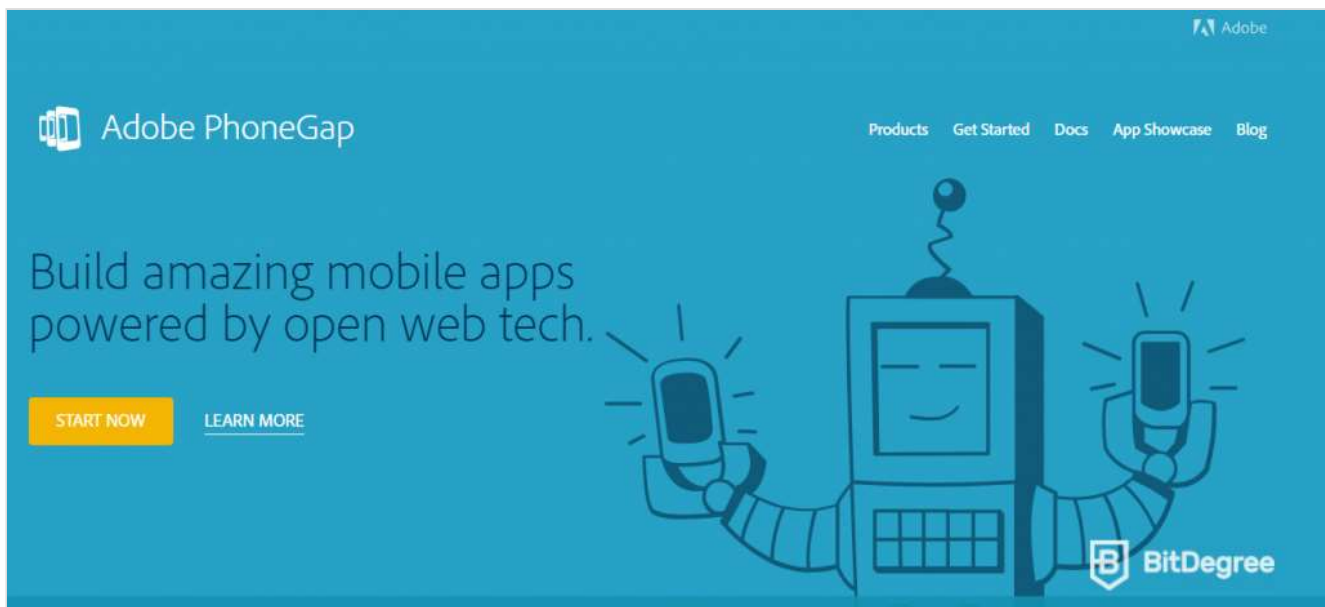
*Note that you will also need a computer with a high-quality processor and a lot of RAM to run much of the software required to create complex games.*

## Step 4: Start Programming

Once you've downloaded the required software, it's time to start coding! Although more complex games require game engines to run on, simple mobile games don't need anything like this. Simply decide what language you're going to write your game in and get right into it!

If you want to know how to make a video game with a lot of variabilities, such as an RPG game, then you should look at the [Unity Video Game Creation Tutorial](#). This course contains an incredible 28 hours of video lectures. It will teach you everything you need to know to start using the Unity editor.

Alternatively, simpler games can be built on simple platforms like PhoneGap, which helps you create high-quality mobile apps with the least amount of work possible. Learn how to build mobile apps and games with PhoneGap by working through the [PhoneGap Tutorial](#). Using PhoneGap, you can create simple games using only JavaScript, HTML, and CSS. Imagine being able to do that!



## Step 5: Test Your Game & Start Marketing!

Knowing how to make a video game will not make it successful, to be so you will need marketing. The first thing that you have to do is make sure that you test everything



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Marketing is relatively straightforward. I would recommend hiring a marketing consultant to at least get you started, especially if you don't have any marketing experience yourself. Getting your game out there for people to purchase is slightly more difficult, and you have some options:

- Create a website where people can purchase your game for download.
- Create hard copies of your game and distribute it via different game stores and other retailers.
- If you've built a mobile game, make sure that you list it on the Apple app store and the Google Play store.

These are just a few of your options. Again, speak to an expert if you're not sure what the best way to sell your game is.

## What Languages Can I Use To Make A Video Game?

Simple mobile games can be created using a wide range of programming languages. If you're proficient in one language, you probably have enough knowledge to learn how to make a video game for mobile devices. However, more complicated games designed for computers or consoles will require a much deeper understanding of programming languages and how they can be used to develop games. A few of the languages you can use to make your own game include:

### JavaScript

Learning how to make a game with JavaScript is quite simple. As noted above, you can create simple mobile apps and games by combining JavaScript, HTML, and CSS with the PhoneGap platform. Millions of people throughout the world have a working JavaScript knowledge already, which means that they already have the majority of the skills that they need to start building their games.

However, there's no need to worry if you don't already have a strong working knowledge of JavaScript – in fact, learning how to make your own game can be even easier if you don't have any previous bad habits. I would recommend starting with a simple JavaScript course such as the [Interactive JavaScript tutorial](#) before moving onto something specific for game creation like the PhoneGap, which can also be found on our Courses section.



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Java is the most popular programming language for creating Android games. When combined with the Android Studio, Java can be used to create games that are fully customized with respects to looks and behavior. Games built on Java are fast, efficient, and very easy to personalize.

If you're serious about learning how to make a video game for an Android device, the first thing that you need to do is learn how to code in Java. Luckily, Java is quite a simple language to learn. I would recommend starting with the [Learn Java 101 course](#) before moving onto more advanced learning.

## Swift

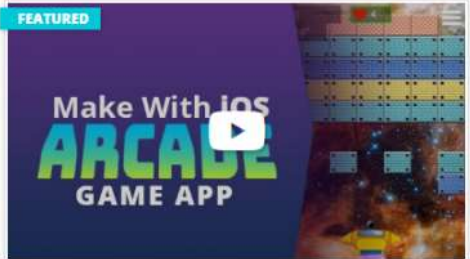
Swift is a relatively new programming language that has been designed for use on the iOS operating system. It was created to make iOS app and game development easier than it used to be, and it has quickly become a favorite among programmers learning how to make a game for the first time.

If you would like to learn how to make a video game for iOS devices, I would recommend learning how to write code with Swift. Sure, it's possible to create an iOS game or app without any coding knowledge at all but programming your own game gives you a lot more freedom and flexibility when it comes to customization. If you would like to find out more about Swift and how you can use it to make your iOS apps have a look at the [Beginner Friendly Swift Tutorial](#).

### Curriculum

- Section 1: How to Make Arcade Game App: The Ultimate iOS Guide, no Coding 3:00:35
  - Classic arcade game WATCH NOW 01:03
  - Changing the background music WATCH NOW 04:38
  - Choosing a game theme WATCH NOW 02:29
  - Creating and updating the launch images WATCH NOW 05:23
  - Creating bricks graphics live demo with Photoshop WATCH NOW 23:59
  - Creating the game icon live demo 32:36
  - Creating the game settings in iTunes Connect 09:41
  - Finalizing the iTunes Connect app settings 02:33
  - Finding graphics for the ball image 03:14
  - Getting the background image for free 02:23
  - Graphics for the bricks 03:07

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The C languages – C, C#, and C++ – are the most commonly used languages when it comes to advanced game and software development. Most console and desktop-based computer games are built with one or a combination of the C languages. However, these are very complex and difficult to learn. I wouldn't recommend starting with them unless you're extremely serious about learning how to make a video game and turning this into a career. If you would like to learn how to build a game with the C languages, I would suggest having a look at the [How to Make a Game in Unity course](#). This course teaches the basics of C# with a special focus on game development.

## What Other Skills Do I Need To Learn?

If you're serious about learning how to code a game, you will need to learn more than just a programming language. You will need to learn how to use various types of software, frameworks, and code libraries to build even the simplest games. Below are just a few of the most important skills to learn to get you started.

*As always, remember that different types of games require different skills and knowledge.*

## How To Use Different Types Of Software

As I've already noted, the software is the key element of how to make a video game. This is especially true if you're hoping to create a console game. One of the most common pieces of software that you will use when you're learning how to code a video game is a Unity – a cross-platform game engine that will form the basis of a wide range of different types of games.

If you would like to learn more about using Unity to build your first game, have a look at the [How To Make A Game In Unity](#) tutorial. Alternatively, head over to the Unity website and have a look around. Do some research regarding the type of game you want to create, and learn what sort of software you need to be familiar with according to your findings.

## A Few Design Skills

If you're planning on learning how to make a video game on your own, you will need at least a few design skills. Putting a video game together is about more than just coding – in fact, the coding doesn't even start until you've conceptualized and started designing your game. If you don't have many designing skills then consider either asking a



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Learning how to make your own game from scratch can be fun, rewarding, and extremely difficult. However, if you're interested in coding, gaming, or just entrepreneurship in general, it's worth doing. Start by understanding the general process that needs to take place for a game to be created. Even the simplest game needs to be imagined and conceptualized. This concept needs to be transformed into an in-depth design document, and then this document needs to be used to code the game that you want.

If you don't already know how to code in at least one language you will need to spend a few months learning this before thinking about starting to build a game. You will also need to get familiar with game engines like Unity. Besides that, you will need to make sure that you are working with someone who has at least some design skills.

Above all, don't let the bigger picture scare you away. Start small. Make a card game, a word game, or something equally simplistic.

*Remember, learning how to make a video game from scratch isn't something you can do in one weekend, but it will pay off if you will put enough effort!*

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