

How can I begin to learn about game development?

The fact that you've come to this page indicates that you're interested in making computer games, and are interested in pursuing this exciting and rewarding area of study at college.

However, if you've tried to do any of your own research into getting started then you may well have been overwhelmed by an array of buzzwords, programming languages and technologies. Of course, all *you* want to do is make some cool games. That's what this page is here for, i.e. to point you in the right direction so that you can begin to make games and learn some fundamentals of game design and development.

Bear in mind, though, that this is just to whet your appetite a little. Some of the more advanced of you may have heard of some common game development technologies like C++ or 3D Studio Max. Don't worry, you'll learn about these – and more - in our games degree, but here we'll introduce some simple tools for making a computer game.

Game Maker

Game Maker provides a simple environment that allows complete beginners to quickly start building games, using an icon-based system of events and actions.



Figure 1: Sample game created using Game Maker

Game Maker's drag-and-drop programming technique provides an easy way to learn about game development and allows you to create complete games without going near a traditional programming language. For more powerful use, though, the tool also has its own scripting language; this means you get a higher level of control over how things happen but, of course, you must learn to use the language - it's not that hard as long as you learn to walk before you try to run!

You can download a free version of Game Maker at <http://www.yoyogames.com/gamemaker>. In addition, the site contains links to tutorials and lots of other useful information.

If you're interested in a book on Game Maker, a great title is "The Game Makers Apprentice" by Jacob Habgood and Mark Overmars. You can find more information on this title at <http://book.gamemaker.nl/>

Note: there's a free sample chapter at: http://www.teachnet-uk.org.uk/2009%20Projects/CCGame_Maker/Game%20Maker%20Resources/resources/Manual%20and%20Book%20Extracts/TGMA%20-%20Chapter3.pdf

Greenfoot

One of the first programming languages you'll learn about in our games development course is Java (**PROVIDE A LINK TO THE learn about programming WEB PAGE?**).

You will also learn a little bit about games development in Java using a framework called greenfoot. Greenfoot aids in the development of simple 2D games and simulations using Java.

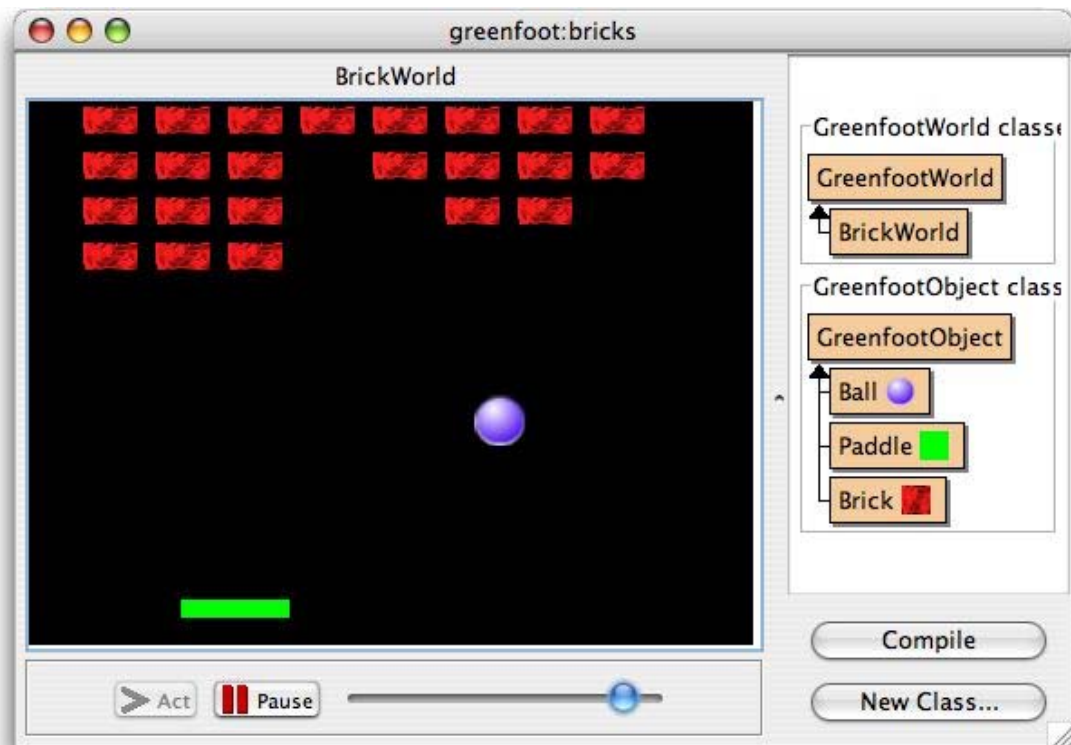


Figure 2: Sample game being developed in greenfoot

So, if you know a little Java, or are interested in learning about it using greenfoot, you can visit <http://www.greenfoot.org/> to download the framework. There's lots of other information, including tutorials, here too.

Game Engines

Please note that the tools mentioned are advanced and some experience with 3D content creation is preferable.

State-of-the-art commercial games typically involve quite large development teams (artists, animators, game designers, programmers) and often license a game engine to speed up the development process.

The concept of a game engine is fairly simple: it exists to abstract the details of doing common game-related tasks, like rendering, physics, and input, so that the developers can focus on the details that make their games unique.

There are loads of engines available for development. Most engines cost money to license. However, recently, some of the more powerful engines have provided free versions to work with (then, for example, you pay fees when you actually sell your game).

Mentioned below are two popular and powerful engines:

Unity 3 is a game development tool that has been designed to let you focus on creating amazing games. You can find out more at <http://unity3d.com/>



Figure 3: from the iPhone game “Ravensword”, which was created using the Unity engine

Epic Games offers a free edition of its *Unreal Engine 3*, including a suite of game-making tools, together in package called the **Unreal Development Kit (UDK)**.

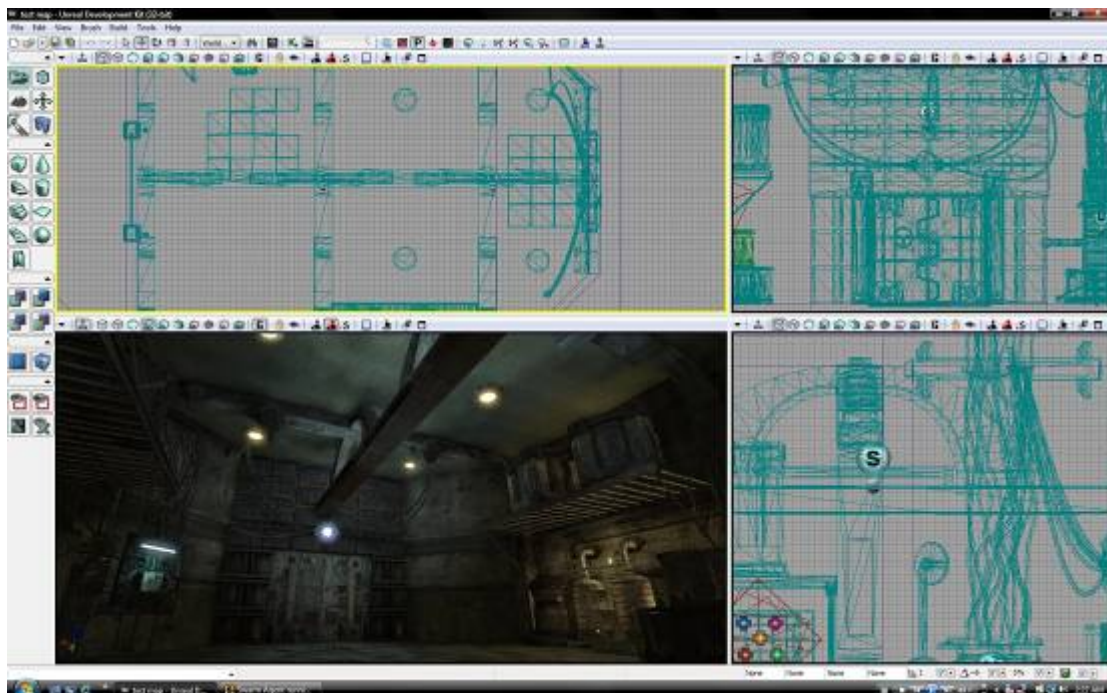


Figure 4: Using the Unreal Development Kit

Content Creation

When it comes to creating graphics, models and sounds for your game there are numerous options. Listed below are some of the more popular ones.

Graphics: Free software: **Gimp**. Commercial software: **Adobe Photoshop**

3D modeling: Free software: **Blender**. Commercial: **3D Studio Max**

Audio: Free software: **Audacity**