

Programming with GameSalad for Ideas into Action

www.gamesalad.com

What is GameSalad?

GameSalad is an intuitive drag-and-drop interface designed specifically for people without programming experience. Using this interface, you can create your own games and assign specific behaviors to various game assets without programming anything at all.

If you have some experience creating your own games, you may think GameSalad isn't for you. Believe it or not, GameSalad is relied on by professional game developers because it is a quick and easy way to create game concepts. In other words, you can create original games without worrying about the technicalities typically associated with creating even a basic game concept demonstration.

At this time, GameSalad is limited to creating 2-D games. Although 3-D games are becoming increasingly popular, many of the most popular (and best-selling) games on both the Android and iOS mobile platforms are 2-D games – games that can be created very easily using GameSalad. Don't forget that GameSalad also allows you to create games for the Windows 8 operating system. This is becoming a very lucrative platform for game developers as it is available on desktop PCs, laptops and even tablets.

Creating Your First Game

Once GameSalad is properly configured on your computer, the next step is to begin creating your very first game. Another feature that makes GameSalad so beginner-friendly is that it provides a number of templates that can be used to get started quickly. Templates range from basic shooter games to pong style games to cross-platform controller templates that are compatible with both iOS and Android.

The templates are important because it will help to build confidence as you begin creating your very first game. You do not have to worry about creating any of the behaviors or backgrounds as they are provided for you in the template. All you need to do is put a personal touch on your template-based games and you can be playing your very first game within hours.

Eventually, however, you will outgrow the templates and want to create your games from scratch. Even when creating games from scratch, GameSalad makes it extremely simple. Everything is drag-and-drop and pre-programmed behaviors can be assigned to any of your game assets with only a few mouse clicks.

When creating a game from scratch, you will probably want custom assets (or game characters). Fortunately, GameSalad provides a Marketplace where additional game assets can be downloaded. You can also create your own assets using Photoshop or another image-editing program.

Assuming you're using the free version of GameSalad, there's no rush to get a game into the market to recover your investment in software. Take your time and learn how to use the powerful toolset included in GameSalad to your advantage. Some very popular games have been created using this simple platform that anyone can use. GameSalad also offers free tutorials and a forum where you can ask questions and learn new techniques from other game developers.

Testing & Publishing Your Game

Here comes the fun part. After you have finished your game, you get to play it. The testing phase of development is just as important as the game development itself. Not only should you test your game but you should also get friends or family members to play your game as well. Listen to any feedback you receive to make your game better before publishing it to the Google Play Store or the Apple App Store. The last thing you want is negative feedback for something that could have been easily fixed during the testing phase.

Once you're satisfied with the functions of your new game, you are ready to publish it on your platform of choice. If you are publishing to the Apple App Store, you need to submit your application to Apple for approval – a process that typically takes 4 to 6 weeks.

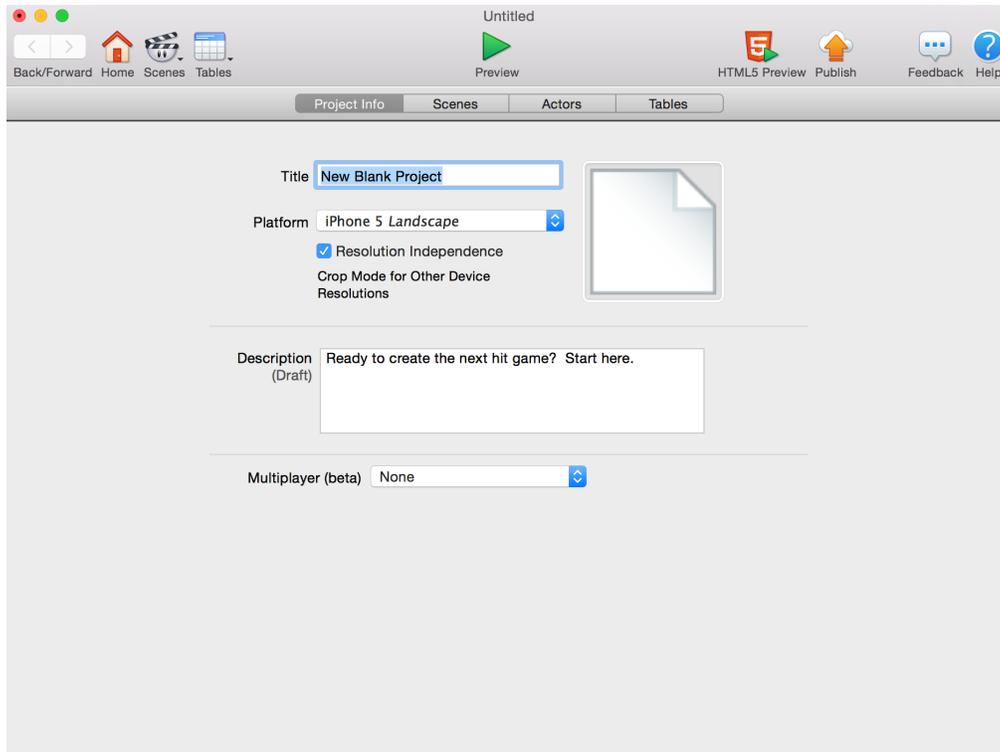
If you choose to release your game on the Android platform, you need to purchase a Google developer license for \$25 and your game is available for download within hours of submission. You might even decide to release your game on both platforms.

GameSalad is an excellent introduction to game development. Some academic curriculums have even started using GameSalad as a way to interest young students in computer programming and game development. Whatever your reason for using GameSalad, be confident knowing that you are using one of the most powerful game development engines available and the best part is you don't need any programming experience to start creating an exciting new game right now.

GameSalad Dashboard

After starting Creator, the Dashboard will be the first screen you will see. From here, you can log into your account, access your portfolio of previously published projects, examine sample project templates, and start your very own project.

Once you are a little more familiar with the Creator's options and functionality, I recommend taking a look at some of the project templates that can be found in the "New" tab. For now let's jump right into a new project by double clicking "My Great Project". You are now officially using the Creator, and below is the first screen you'll be presented with.



Don't worry – all of the text fields can be left 'as is' for now. The main decision you need to make at this point is which platform you'd like to develop for. This can be changed later, but it will affect the starting resolution of your project. If you know which devices you want to develop for, your platform selection will save you time and effort in the long run.

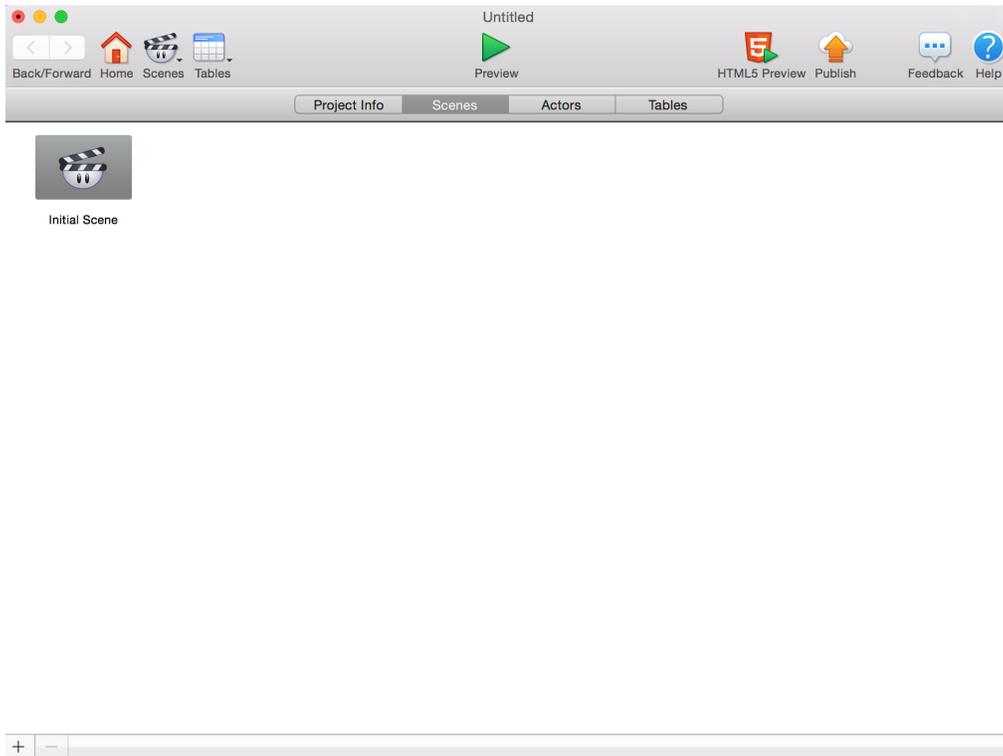
For the time being, let's leave the Platform defaulted to 'iPhone Landscape' and move on to the Scenes tab, located just under the green Preview button at the top of Creator.

Scenes Tab

Currently, there is just a single empty scene that only contains some default scene attributes (more on these later). You can create more scenes by clicking the '+' icon in the bottom-left corner, and rename existing scenes by clicking the name ("Initial Scene" in the screenshot below).

Scenes are the primary way of dividing up your project. Different scenes are able to have unique configurations, including Scene Attributes (such as size, gravity, and X/Y wrap) and Actor placement.

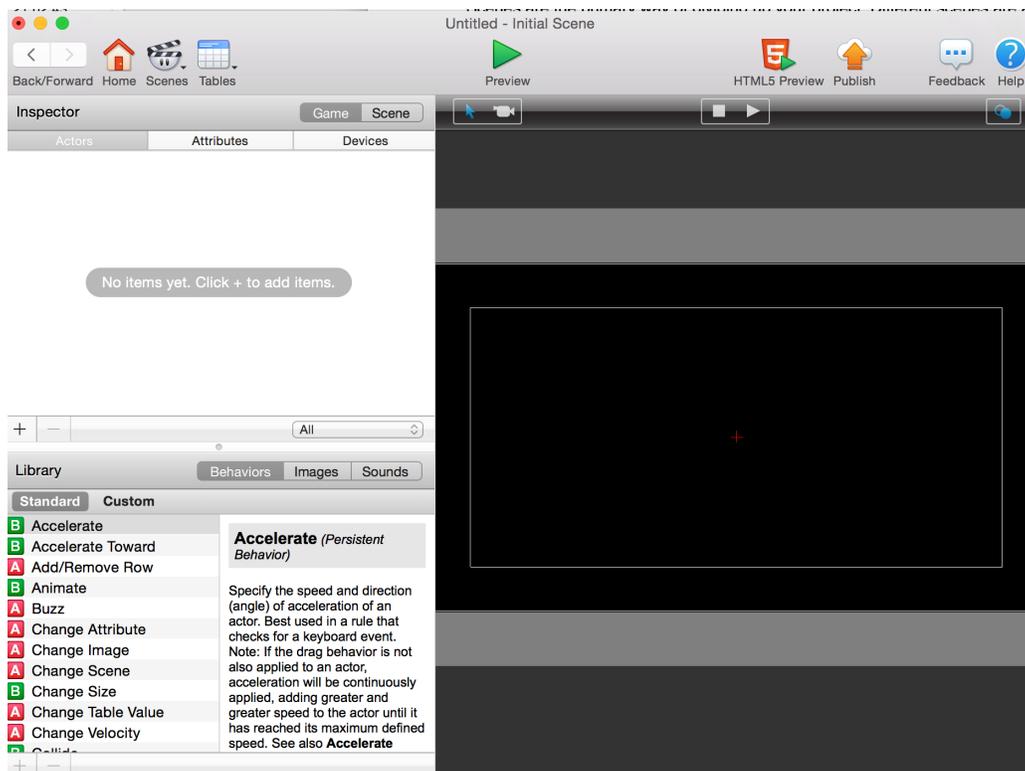
Changing between scenes is not something that happens automatically with GameSalad, but is instead triggered by a Behavior (appropriately named 'Change Scene'). We'll come back to Behaviors later in the walkthrough.



Scene Editor

Let's take a look at the scene editor by double clicking on "Initial Scene".

Now you're presented with lots of new options and information all at once. Don't panic! The basics are fairly straightforward, and that's what we'll be focusing on here.

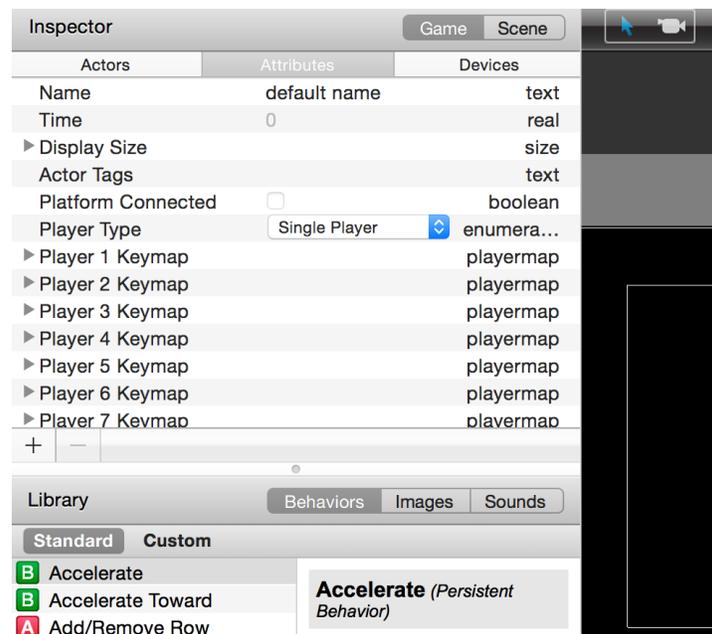


In the bottom-left you'll see the Behaviors Library, containing lists of all standard, custom, and in some cases, Pro or version-specific behaviors. You'll also notice two other tabs named "Images" and "Sounds", which will allow you to access your art and sound assets. While the image and sound libraries starts off empty, you can easily import your own files into Creator as long as they are the appropriate file type – again, using the '+' icon.

Tip: Image files should be in PNG format, although many other formats will convert automatically. Acceptable sound formats include .ogg, .m4a, and .wav.

In the upper-left corner, you will find the Game Inspector, which currently defaults to the Actors tab. Actors are the primary agents in all projects, and you'll find every actor that exists in your current project in the Actors tab (not just those used in this scene). This is also where you will be able to create new actors and edit existing actors. When a prototype actor is dragged into the scene it creates an instance actor, which is essentially a copy of the prototype actor. New instance actors include all of the prototype actor's logic and most of its attributes. Instance actors start out as "locked" to the original prototype. While the instance actor is locked, any change (with a few minor exceptions) to the prototype actor will also affect each instance actor. In this way you can create a dozen instance actors all tied to the same prototype. Instead of having to go through the time consuming task of editing all twelve in the exact same way, you can simply edit the one prototype.

The last area of the scene editor to be familiar with is the Attributes tab. Attributes are one of the most powerful aspects of Creator, and are essentially value placeholders. They are divided into three main categories: Scene Attributes, Game Attributes, and Actor Attributes (also known as Self Attributes). Each of these are found in a different place in Creator, but for the moment I'd like to specifically highlight Game Attributes, whose tab can be found just to the right of Actors tab.



If you hit the '+' icon while in the Attributes tab, Creator will prompt you to pick a type for your new Game Attribute: boolean, text, integer, real, angle, or index (the differences between these are covered in the Attributes section on page 31). While you'll be using some of these types more frequently than others, each of them are incredibly powerful due to the fact that actors can reference, change, and react to these values.

Attributes are variables for your project. They are how actors in your project will know when to spawn new enemies, how much life or ammo the hero has left, cause the game to show the Game Over screen, tell the player they have obtained a new high-score, and much more.

This is a good time to create our first actor, which will allow us to cover the next aspect of Creator: Rules and Behaviors. Navigate back over to the Actors tab, and click the '+' icon to make a new prototype actor, then double click on the new actor.

Tip: Note that at this point in time the newly created actor doesn't exist in any scene. Of course, technically speaking, it's impossible for a prototype actor to exist in a scene at all (since all actors in a scene are instance actors), but in this case I'm referring to any instance actors created from the prototype. We would have to take the additional step of dragging the prototype actor into the scene, which would create a new locked instance actor.

Actor Editor

The Actor Editor is where most of the heavy lifting is done in Creator. From here you'll be able to configure the rules and behaviors that determine how your project operates.

Our newly created actor already has some default attributes, but no rules or behaviors yet. Let's fix that by pressing the "Create Rule" button in the upper-right corner (just below the blue Help icon).

You now have an brand new rule in front of you – ready to be turned into a feature for your game. Before we start adding behaviors, let's examine the individual components that make up a rule. The conditions section (at the top with the drop-down menus) lets the rule know "When should I trigger?"

A rule can be triggered based on user input (keyboard or mouse click, touch screen press, accelerometer tilt), by an event (the actor colliding with another actor, the game or device clock hitting a certain time), or when a game or actor attribute is (or is no longer) a specific value.

Once triggered, a rule will look to the behaviors section (the grey area) to know "What should I do once triggered?", and will then attempt to execute on all behaviors included there, in the order they are listed.

Tip: It is important to acknowledge that rules and behaviors fire off in a top-down order. This means that if you put two Change Scene Behaviors in the same Rule, the second Change Scene Behavior will never get a chance to execute, even if the Rule itself is valid and properly triggering.

The third and final portion of a rule is 'Otherwise', which is collapsed and hidden by default. This section lets the rule know "What should I be doing when I'm not triggered?". This can be tricky

to use properly, so for now I recommend focusing on the first two portions until you are more comfortable using Creator.

At this point, the sky is the limit. Rules are capable of making any number of adjustments to your game. Animations can fire off, actors ordered to move around the scene, music or sounds played, additional actors spawned, the player's perspective can be shifted, or the value of any number of attributes can be changed. Then those attributes might cause other rules to trigger and so on, until – before you know it – you've made a game.

Now that we've established some of the fundamental aspects of GameSalad Creator, you can start working on your own project.