



# Illumination Software Creator

## Tutorial : Hello World

You'll soon be creating your own software applications (for your PC, Mac, mobile device or website), even with no programming experience!

Getting started with Illumination Software Creator (or "Illumination" for short) is easy. Illumination was designed to be simple to understand and approachable for people of all experience levels.

### **What is Illumination Software Creator?**

Have you ever watched a movie where a bright, young “Computer Hacker” would sit down at a computer and, with just 60 seconds left before something explodes, quickly creates a piece of software that saves the day? And, so often, he (or she) does it simply by moving around visual “blocks” on the screen.

Of course, this is just fiction. Making software is hard. Computer Programmers go to school for years, wear thick glasses and sit in dimly lit rooms, well into the night, writing line after line of computer code.

But what if it didn't have to be that way? That's where Illumination Software Creator comes in. The idea is simple: Allow anyone, even people with no computer programming experience, to create their own software applications in a fun, visual way. Like what you see in those movies. A worth-while goal, to be sure. But we wanted to take it even further.

With Illumination you can create an application that will run just about anywhere: Windows, Linux and MacOS X desktop computers, Android phones, iPhones, iPads and Nokia Internet Tablets such as the N900 phone. In addition you can publish your applications to your own website as an interactive Flash application.

The great part? Your application will work exactly the same everywhere. All from the exact same, completely visual, Illumination project. Pretty cool, eh?

And it is super simple. By the end of this (rather short) tutorial, you'll know the basics of what it takes to build software with Illumination Software Creator.

What's more, even if you are a professional computer programmer, Illumination has much to offer. Since Illumination generates the full source code (in either Python or ActionScript) for your project, it is easy to use Illumination to create rapid prototypes which you can extend later. Likewise it is a great tool for learning both languages!

### **Step 1) Installing Illumination**

Windows Users:

1. Download Illumination for Windows from the "Download" section of <http://www.radicalbreeze.com> and run "iscsetup.exe".
2. Click on the "Requirements" tab on radicalbreeze.com and follow the instructions to be able to fully run the applications you create with Illumination.

Linux Users:

1. Download the package for your particular flavor of Linux from the "Download" section.

MacOS X Users:

1. Download Illumination for MacOS X from the "Download" section.
2. Click on the "Requirements" tab on radicalbreeze.com and follow the instructions to be able to fully run the applications you create with Illumination.

Illumination Software Creator itself has very few requirements. The only real requirements you need to be aware of are for the applications you build yourself:

Python/Desktop Applications require that the "Python/GTK" software be installed on your computer in order to run properly. These files can all be found from [www.radicalbreeze.com](http://www.radicalbreeze.com).

Adobe Flex/Flash Web Applications require that you have the Adobe Flex SDK installed in order to build your Flash website. Building iPhone and iPad Applications require a Macintosh with a current version of Xcode installed. And Android Applications require the Android SDK.

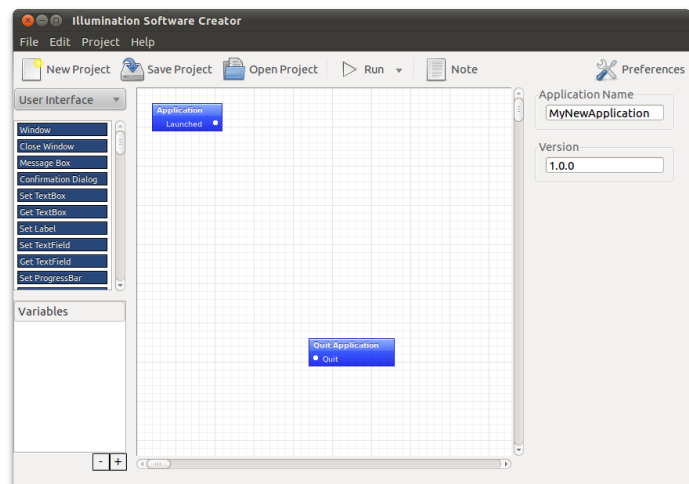
More information on all of this can also be found in the "Requirements" section of [www.radicalbreeze.com](http://www.radicalbreeze.com).

## Step 2) Your First Project

When you first launch Illumination you are greeted with an empty project with two "Blocks" in it.

A "Block" within Illumination represents something you would like your software to do.

For example, the two starting blocks are "Application" and "Quit Application". These represent your application "Launching" and "Quitting" (two things every piece of software does).



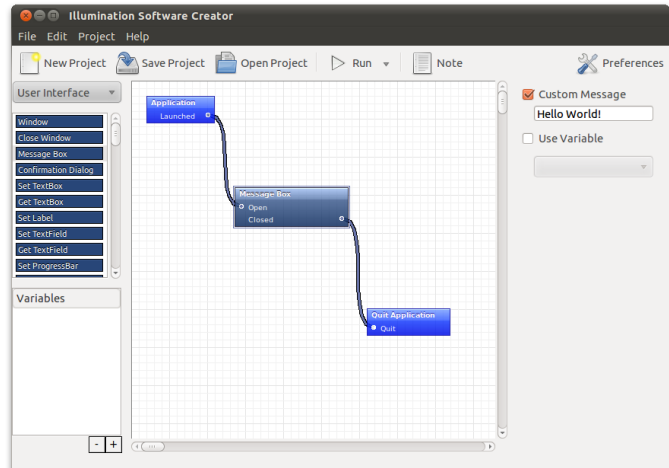
You'll note that within each block are inputs and outputs (designated by small white circles). An input has a white circle on the left hand side, an output has a circle on the right hand side. In on the left, out on the right.

If you click your mouse on an output circle (right hand side) you can drag a "link" to any input (left hand side) on any other block. In this way you can tell your software which order to perform each block in. (If you create a link that you want to remove, simply right click on the block the link originates from and choose "Remove Link".)

### Step 3) Adding a Message Box

Every computer programmer creates a "Hello World" program when they are first learning how to create software. And Illumination is no different! (Okay, maybe a little different... Illumination is much easier...)

On the left hand side of Illumination you'll notice a colored list. These are blocks that you can use however you like by simply dragging them with your mouse onto the project grid (the main area in the center of Illumination).



For this example, go ahead and drag the item that reads "Message Box" to the project area.

Then drag a link from the "Launched" output of your Application block to the "Open" input of your Message Box block.

This tells your application "When you launch, open the Message Box".

From there drag a link from the "Closed" output of your Message Box to the "Quit" input of your "Quit Application" block.

This tells your application "When the Message Box is closed, quit the application".

Nice and easy, right? You can think of it almost like water flowing from one container to the next, connected together by pipes (in this case, the "links").

Now, what message would you like your Message Box to display?

Simply click on the Message Box block, check "Custom Message" from the area on the right, and enter any message you would like to display. (A standard Hello World! message is always great to start with!)

You now have a fully functioning application! Save your project somewhere (anywhere you like will be fine) and click Run (or select "Run Project" or "Build Project..." from the "Project" menu).

### Step 4) Variables

A "Variable" is a simple idea. It is nothing more than "A thing that holds some information".

Think of variable's like the fields in your address book. There are fields for "Name", "Phone Number", "Address", etc.. Each field holds a different type of information. These are variable's.

In Illumination there are three types of variable's:

1. Text – Stores a line of text. A name. A sentence. That sort of thing.
2. Number – Stores a number.
3. Text File – Stores the location of a text file (a file on your computer you can save text to).

Easy, right?

Within Illumination, all variables are listed in the bottom left hand corner (aka "The Variable List"). To add a new variable simply click on the "+" below the variable list.

From there you can enter the name you wish to give that variable (which is purely for your own use... you can name your variables anything that will help you remember what they are for). In this example I named mine "MyMessage", but you can call it anything you like.

Then you choose what type of variable it is: In this case, choose Text.

The final step in adding a new variable is to set its default value and click OK. In this case, I went with Hello World!

Once you've done this your new variable will show up in the Variable List.

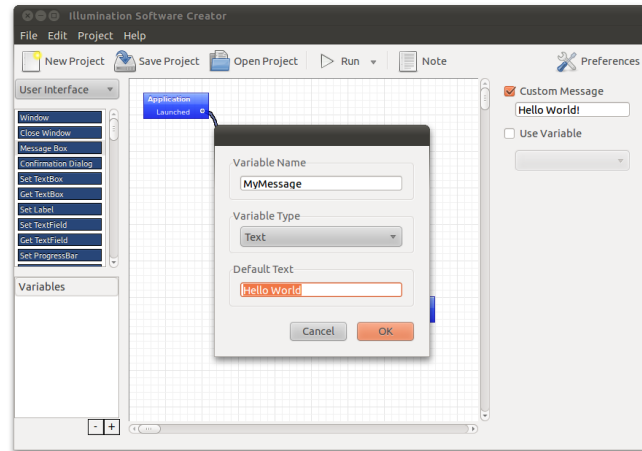
Now you can re-select your Message Box block in your project (the one you created in Step 3) and check "Use Variable" from the area on the right (to tell the Message Box to display the text contained in a variable) and select your newly created variable from the drop down list right below the "Use Variable" checkbox.

Save your project and run it again. This time it will display the message from your Text variable! And if, at any time, you would like to change anything about your variable, all you need to do is double click on the variable in the Variable List.

## Step 5) Experiment!

With this basic understanding you have already created your own simple software!

Now you can feel free to look through the many different types of blocks available (click on the block



types drop down list in the upper left to choose from "User Interface", "Text", "Numbers", etc. to see different types of blocks you can use to build your own applications).

Then you can look at some of the Example Projects available at [www.radicalbreeze.com](http://www.radicalbreeze.com) to get an idea of a small sampling of what is possible with Illumination Software Creator.

If you have questions, ideas... or simply want to talk with other Illumination users, head on over the the official Illumination Software Creator Support Forum at <http://www.radicalbreeze.com/forum>.