

What is a program?

A program is a series of instructions or steps for the computer to carry out. Each individual step is known as a statement. A statement can do many things in Flash. You can use a statement to perform a bit of math, store a number in order to retrieve it later, move something around on the screen, and even fancy things like add blur or a drop shadow to a movie. The important thing to remember about writing a program is that you have to be very specific. Flash does not automatically know what you mean, so you have to outline each individual step, so that you tell the computer exactly what you want it to do.

Variables

When writing a program, many times you will need to remember a number or value to use later. For example, you may need to keep track of how many lives the character has left, or how much time the player has to complete a task. To do this, you create a variable. A variable is a place where you can store any value you want. It can be a number, an integer, a string of characters, anything. To create a variable:

```
var myVariable;
```

You can also initialize it to a value by adding an equal sign and a value after it:

```
var myVariable = 17;
```

You can give a variable any name you want, as long as it doesn't have any spaces or punctuation marks. The name can be anything you want, but it will be easier for you if you give it a name that describes what it holds. If you create a variable to remember how many lives a player has, lives makes more sense as a name than variable1, or george, or any other name.

Variables are special because when the computer sees them written in the program, the computer will substitute the value stored in the variable. So you can write:

```
lives = lives + 1;
```

to add an extra life to a character. The computer takes the value of lives, adds 1 to it, and then stores that new sum as the total. When creating a variable, it is good practice to specify what type of data it will hold. You don't have to do this, but it will make your program easier to understand, and also prevent you from accidentally storing the wrong kind of information in it. Variables can store many things, including integers, numbers, strings of characters, and even movie clips. You specify the data type like this:

```
var myVariable:int;  
var myVariable:Number;  
var myVariable:String;  
var myVariable:MovieClip;
```