

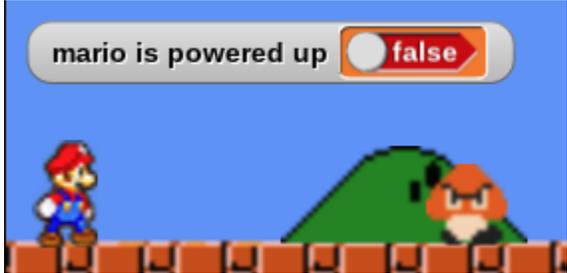
Debugging in Snap!

Something has gone wrong and you don't know what! How can you figure out what it is? Debugging of course!

The first thing you can do is watch your variables.



Select the variable you want to see. It will be shown on the screen.



When your program is running it may not be updated as fast as it changes. So beware. But the good news is that you can pause the program to look at the variables.



The double yellow bars mean pause. It stops your program right where it is. You can look around and then start it again by pressing play.



When paused you can even duplicate sections of code and click them to run them or evaluate them. You can click on running scripts (they have a highlight around them) to stop them. You can click on scripts to start them too.



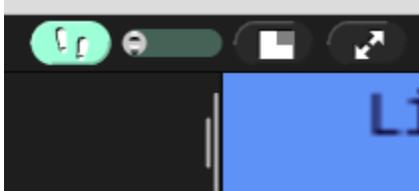
But what if you can't hit that pause button at just the right time? You can add what is called a breakpoint. In Snap! it is a **pause all** block.



You can add it anywhere in your program that you want to know more about. Like at the top of a loop. This is the same as pressing the pause button but so much more precise. You could even put it inside an if statement to further refine when you want it to pause your program.



But what if you want to stop at every block in your program? You can turn on single stepping. When your program pauses. Look for the footsteps button.



Press it to turn turquoise. Then slide the slider to the left. The play button changes to single step.



Each time you press the button you move one step forward. The current step is highlighted in turquoise.



You can now watch how your program works and see the sprites move and variables change.