Hopscotch Variables

25min

Variable: A placeholder for a piece of information (or value) that can change. This variable can be used repeatedly throughout a program.

Suppose we wanted to make an image with fifty identical, red squares.

To do so you'd have to create this instruction set fifty times!

Even worse, if you decided you wanted fifty blue squares instead, you'd have to change each and every rule (in Hopscotch).

We can store that red square rule in a variable, let's call it (or define it) "red-square"

The name "red-square" becomes a shortcut for the blocks inside the variable, and we can use that shortcut over and over in a program.

I we want to change the color of the squares to blue, we only need to change the color blue in the variable function.

To explore how to use values within variables, we'll program our character, a text object (your name) to make a square using a loop (from our first Hopscotch challenge last week).

- We'll assign a value (which is constant, this way we can use it more than once) as "X".
- Set our value to display a number, "1."
- Let's use the value we created to set our text object as that value ("X"). Our text object is now displaying the number 1 as it performs the sequence of instructions to make a square.
- To have our value continuously count up, input 'Increase value' to be a part of our square instructions. Set it to increase our value "X" by 1.
- Now, when we play our square instructions, each time your object turns to make the corner of the square, that number value increases by 1!

- If you had your loop repeat 100 times or forever (endless loop), the object will increase its value by 1 until it reached 100 or it would keep counting up to infinity!

Supplemental link to this exercise https://www.youtube.com/watch?v=Ar_aYu-_WHI, but not exactly, so take this instructional video to understand the process of our exercise.