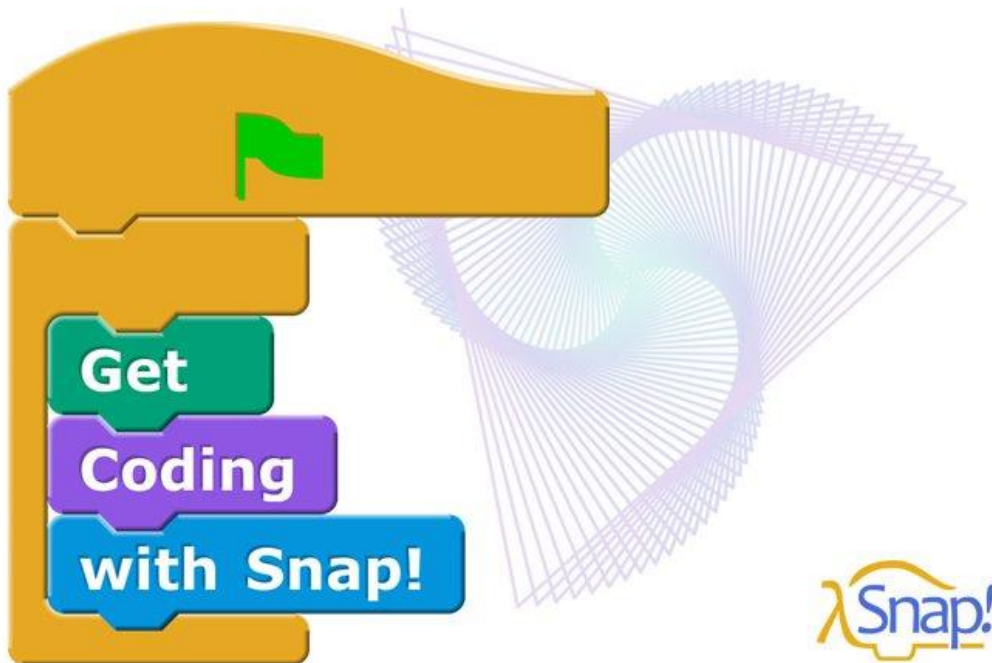


openSAP Get Coding with Snap!

Exercises Week 1 Unit 3

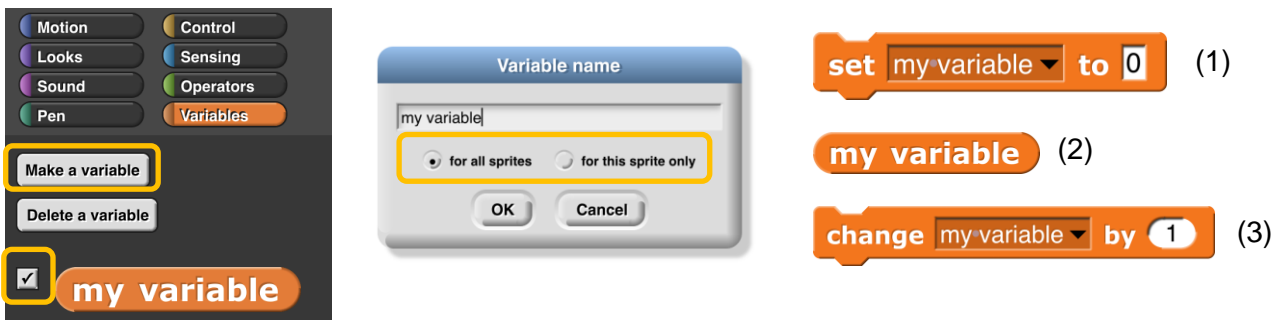


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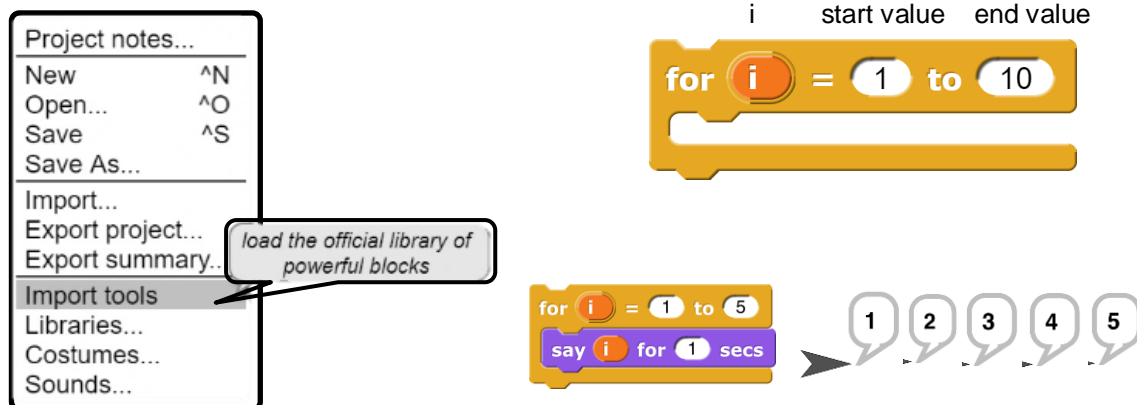
WHAT YOU HAVE LEARNED THIS WEEK

In this unit, you learned about variables. A variable is a placeholder or a container in which you can store values like numbers, texts or even lists or blocks. You can create variables in the “Variables” category with the “Make a variable” feature. You can decide between global variables that are available for all sprites or sprite-local variables (“for this sprite only”) which are only accessible from your current sprite. Then, you can use the variables to save values with the “set variable” block (1) during your program and access them with the variable watcher (2) or change them again with the “change variable” block (3). You can display the current variable value by checking the checkbox next to the variable watcher in the palette.



Also in this unit, you learned how to import additional blocks from the tools library, like the “for”-loop.

You can find all your imported blocks at the bottom of each category in the palette together with your own custom blocks.



The “for”-loop is the second kind of loop, that you got to know in Snap!. When using the “for”-loop, you must enter a start and end value for its internal variable *i*. In each iteration *i* is automatically incremented by 1 until the end value is reached. If *i* is greater than the end value, the loop stops.

Useful Blocks

This block lets you set your variable to a specific value. This value can be anything from a number to a text or even a list or blocks. You need to pick the right variable name from the dropdown menu of the block's first input slot.



This block lets you change your current variable value during your program.



The variable watcher has the variable name on it and reports the current variable value, when you click it. You can use the variable watcher as input for other blocks.



The “for”-loop has an internal variable i and a start and end value. At the beginning, i is set to the start value. In each iteration, i is automatically incremented until it reaches the end value. Then the loop stops.



YOUR TURN

- Create a script that animates many different spirals with the for loop. Besides the internal variable i of your “for”-loop, which you use as an input for the “move”-block you will need a second variable that changes the turning angle of the spiral in each iteration.

Furthermore, the following blocks will help you with your animation:



takes care that all spirals are drawn from the same position



takes care that all spirals start in the same direction



draws the whole spiral at once



deletes the previously drawn spiral before the new one is drawn



makes your animation run forever

**NOTE: THE FOLLOWING PAGE MAY NOT BE DELETED!
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Coding Samples

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