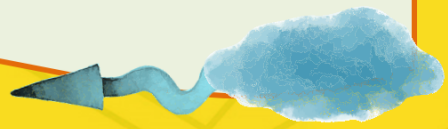
Show Me Some Colors

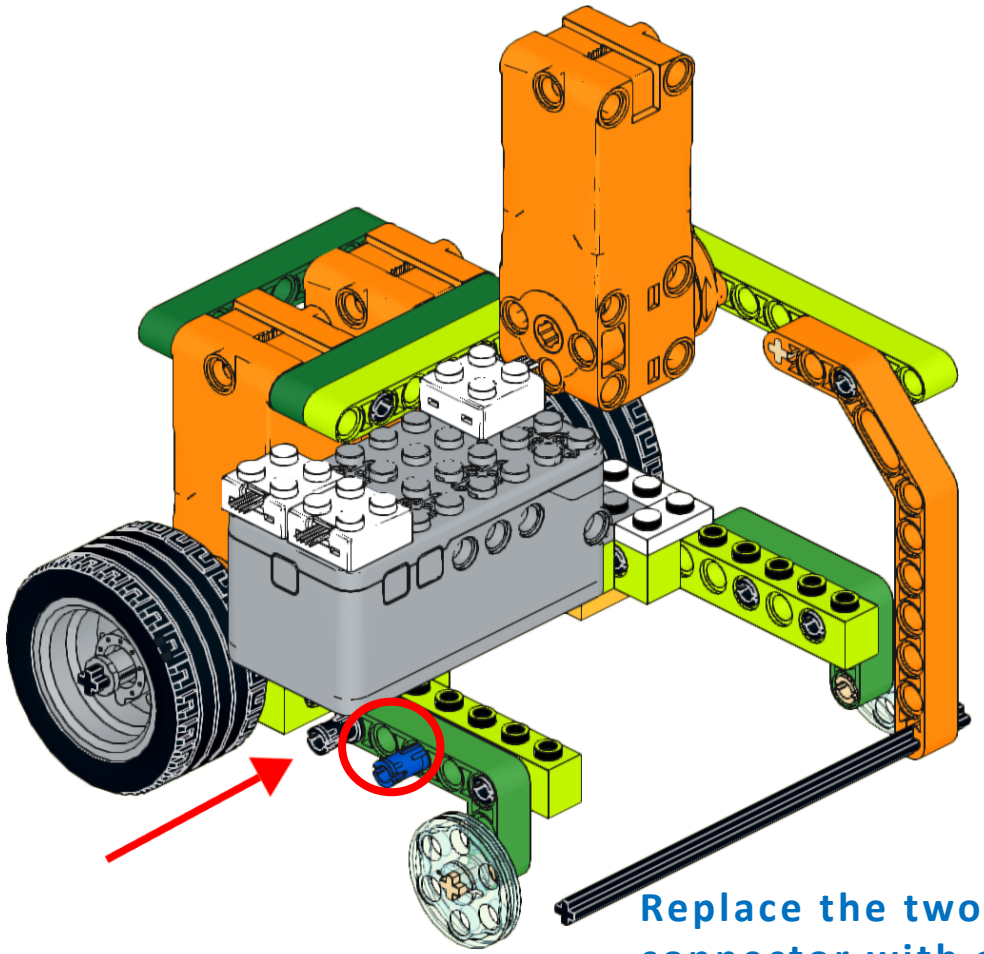
Target

- Learn the basic color detection methods of the color sensor.
- Learn to use the color sensor to detect objects.
- Master the programming pattern for decision-making logic.

01 Assembly

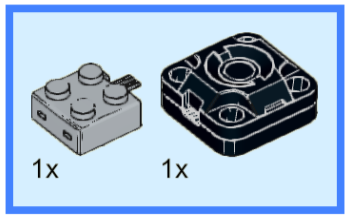


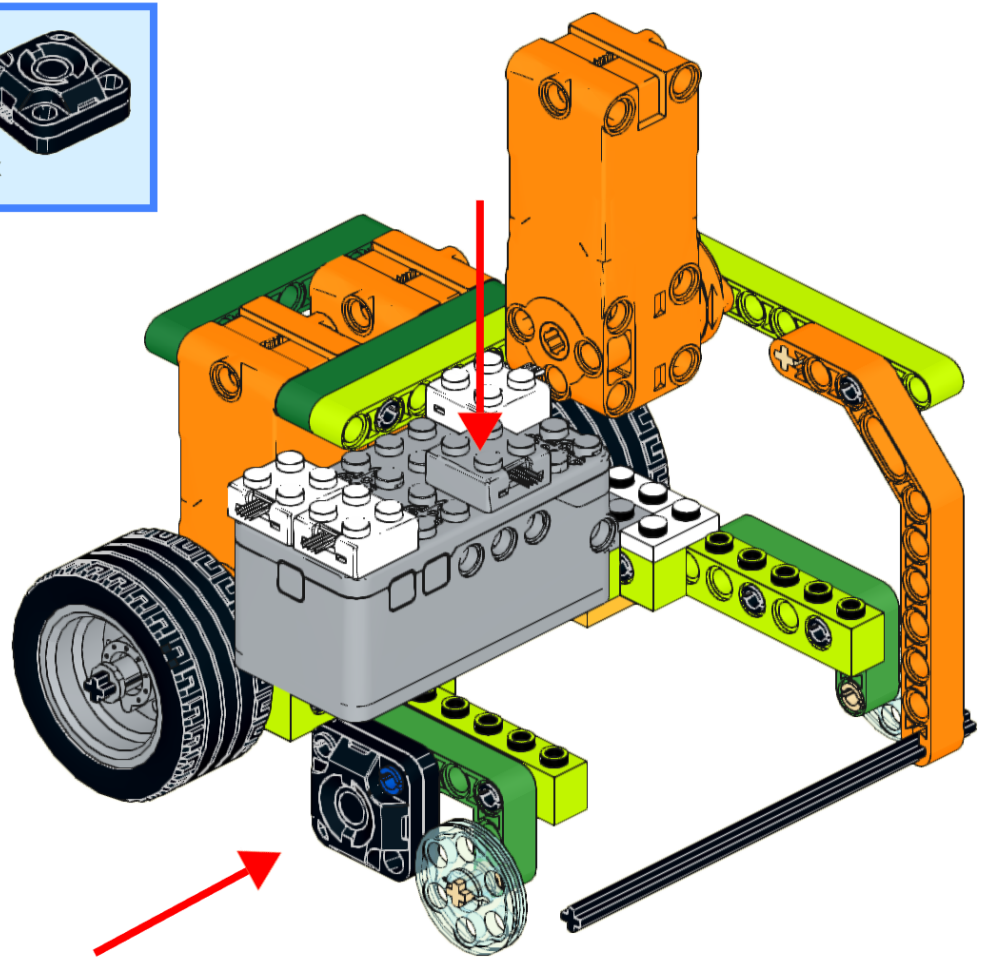
Assembly



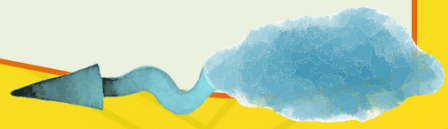
Replace the two-pin connector with a three-pin connector.

Assembly





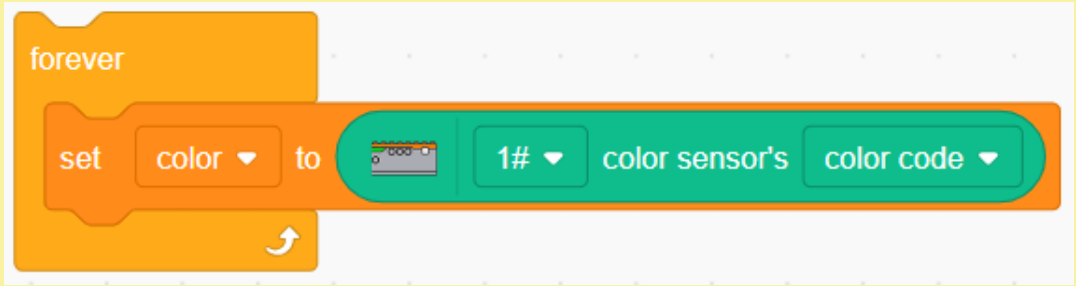
02 Task



Coding Technique 1

Using variables and checking sensor values

Do you remember how to create a variable?



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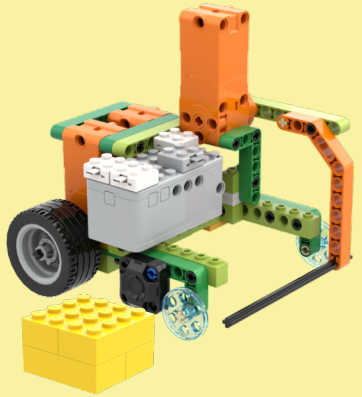
Pay attention to the difference between detecting an object and not detecting one.



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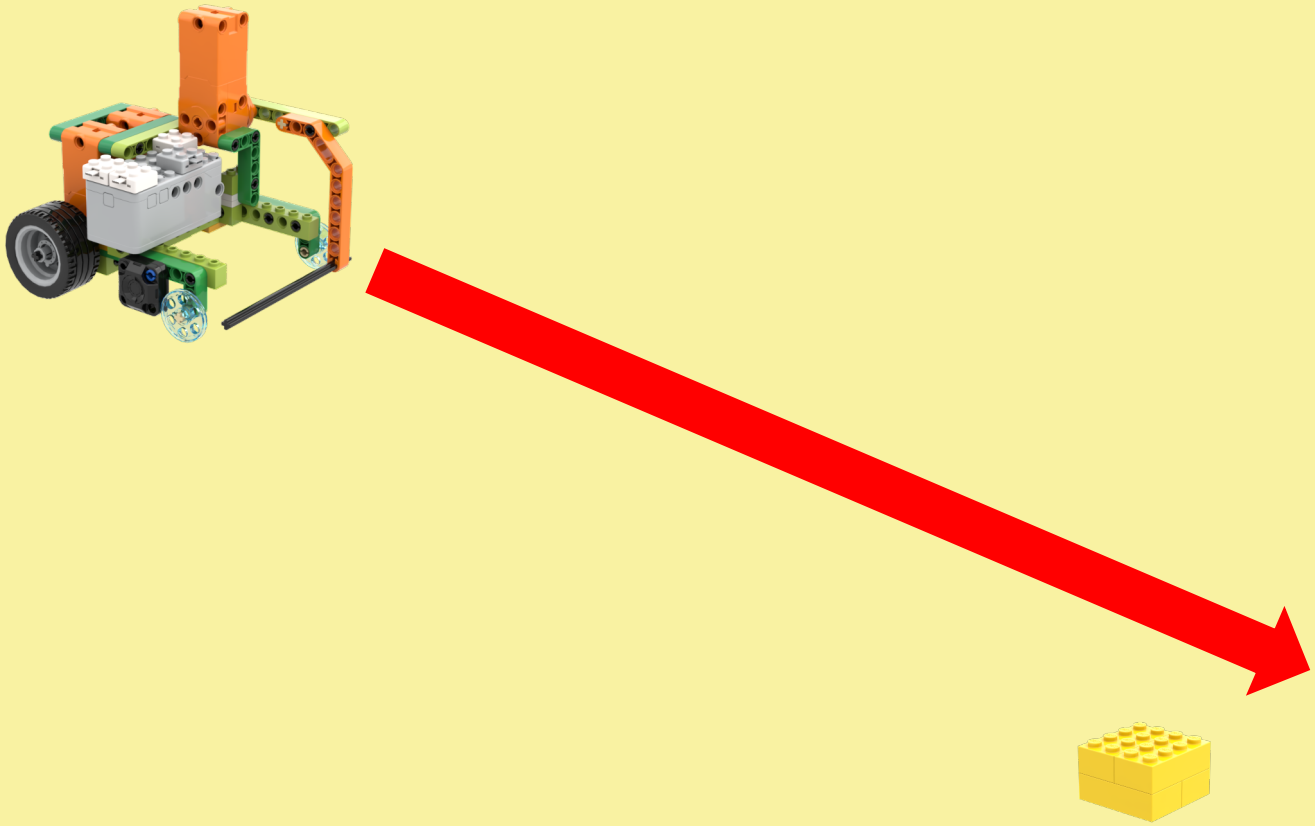
Task

Task 1： When outdoors, detect colors from the side. Stop and display the corresponding color light when detected.

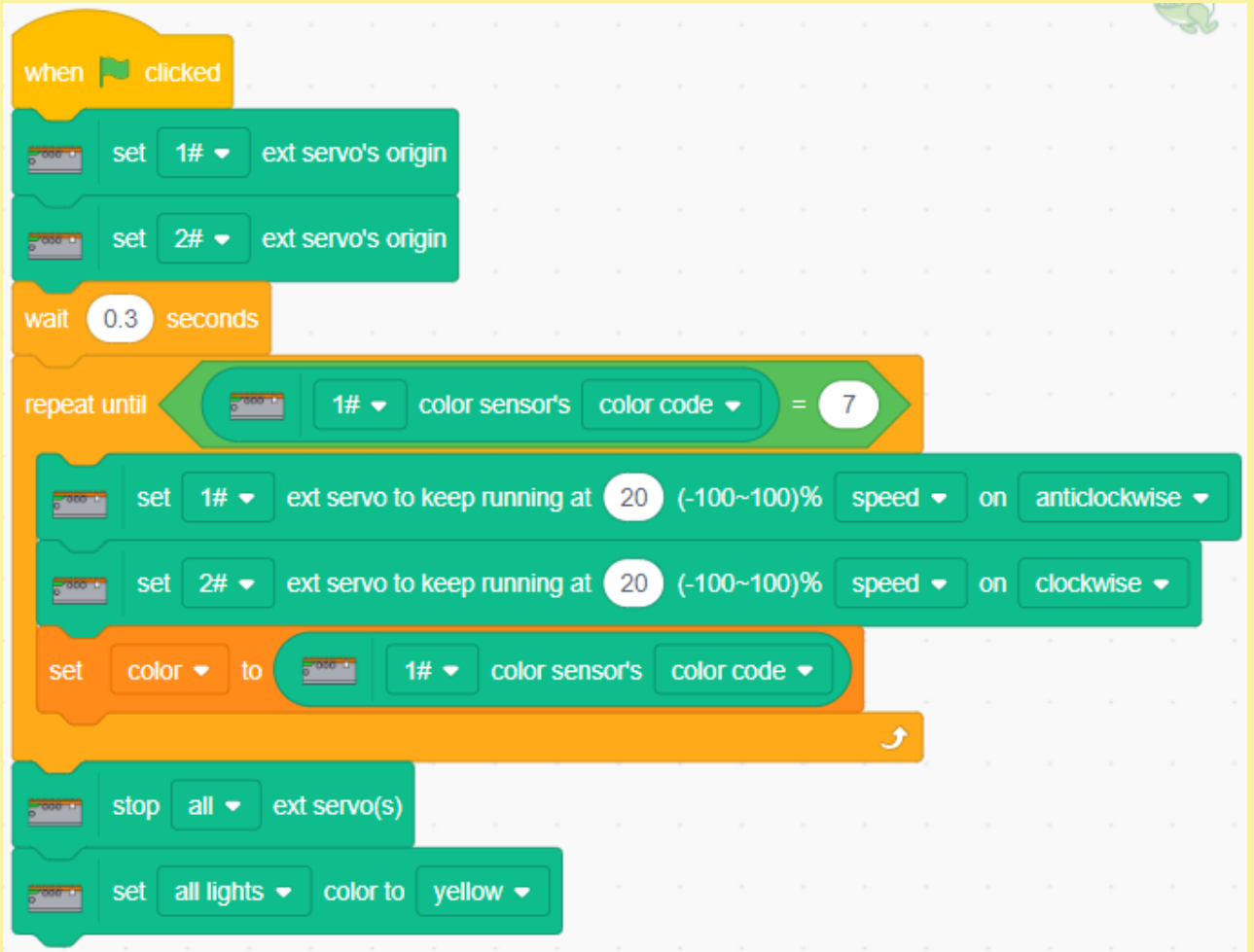


Task

Referrable Program

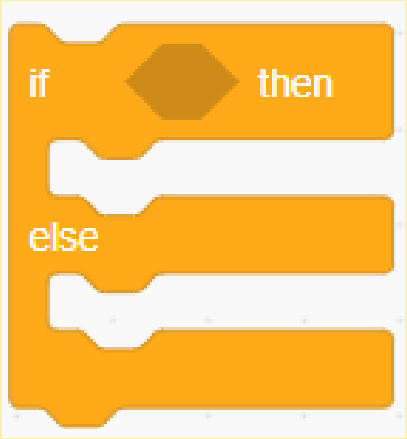
The use of the "repeat until" control block is to ensure the synchronized display of sensor values.

A simpler way is to use the "wait until" control block

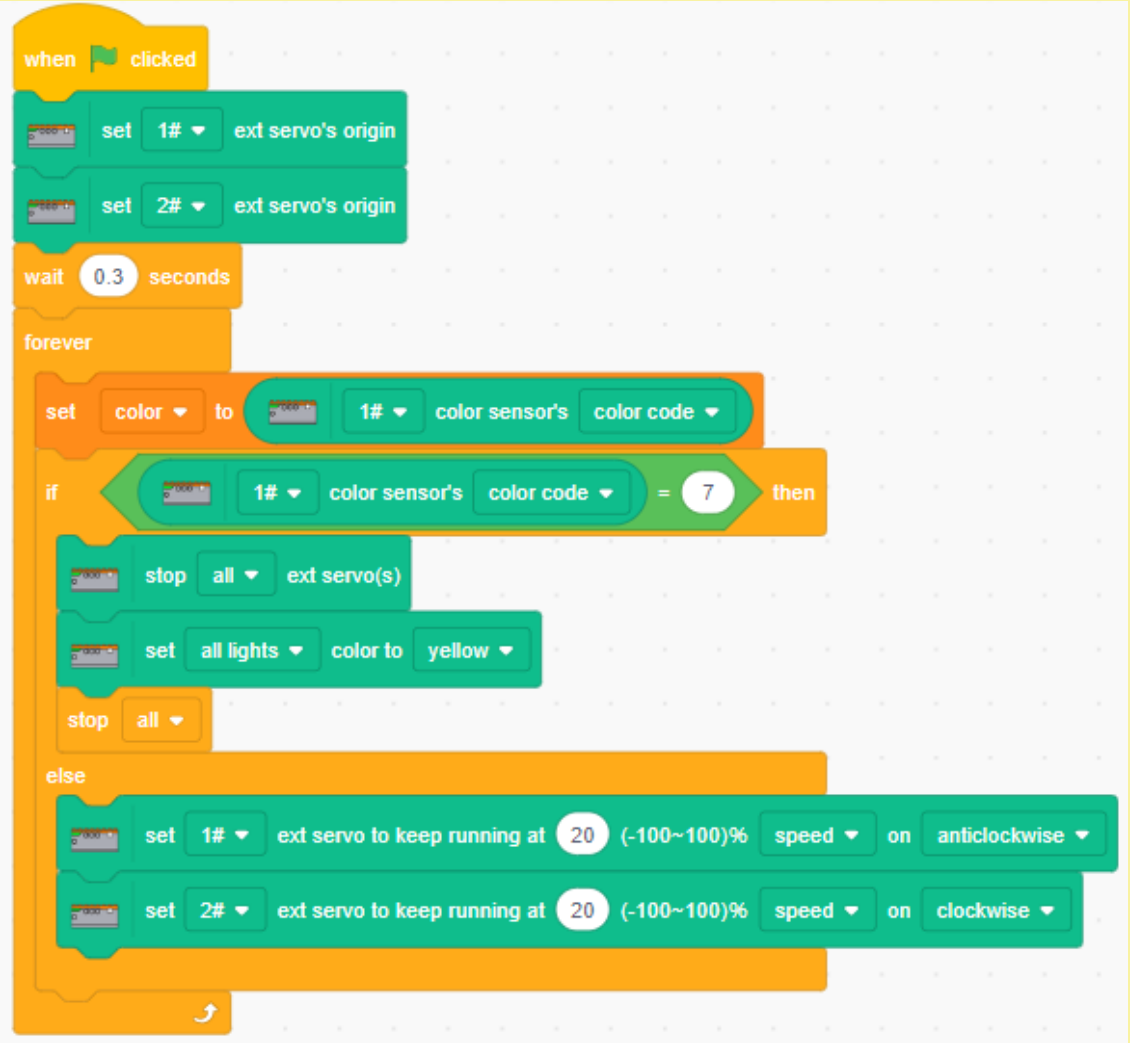


Coding Technique 2

Let’ s try using the decision-making (or "if-else") block for programming.



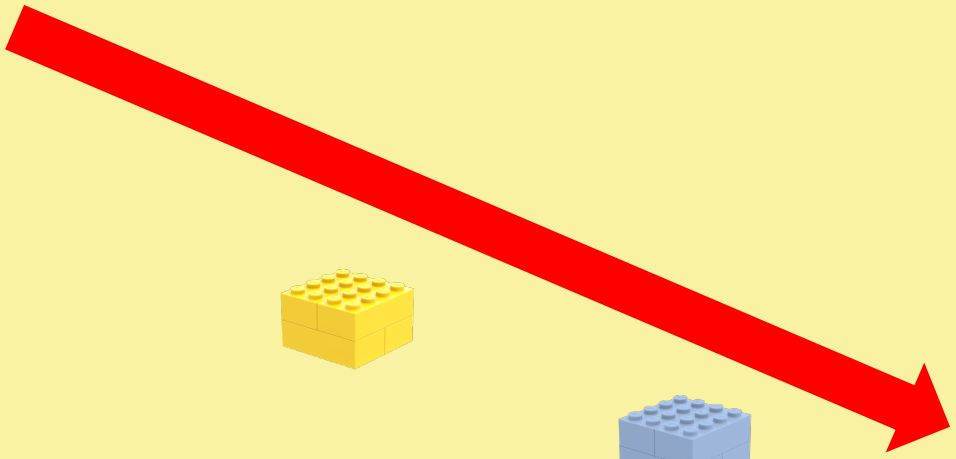
Combining decision-making blocks with loops allows for clear state determination.



Task

Task 2: Random Color Blocks

Prepare yellow and blue color blocks. Randomly select one and place it on the side of the robot's path. The robot should light up the corresponding color light based on the color detected.



Task

Referrable Program

In the loop, make three checks: blue, yellow, and no color.

Perform actions based on the corresponding checks

Task

Additional Task: Can you use the "if" decision-making block to handle checks for other colors?