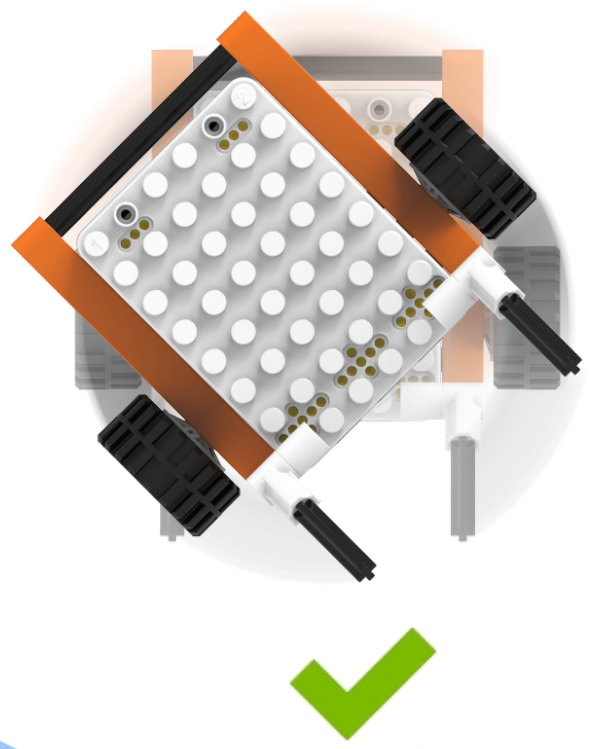
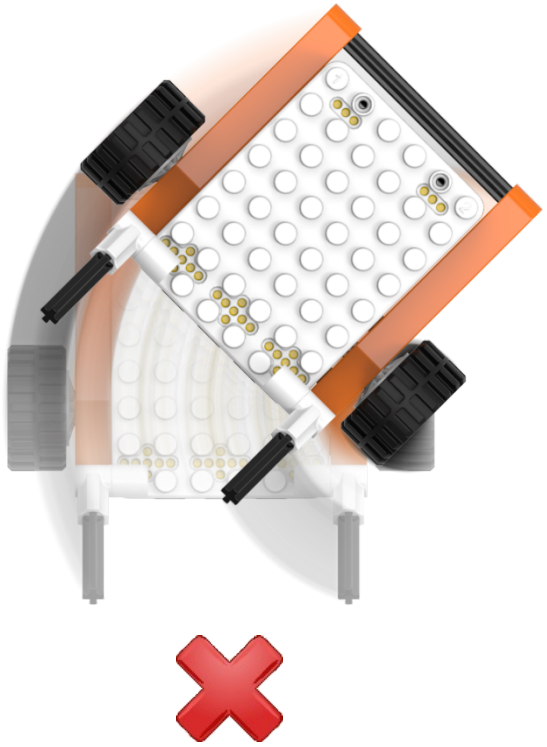
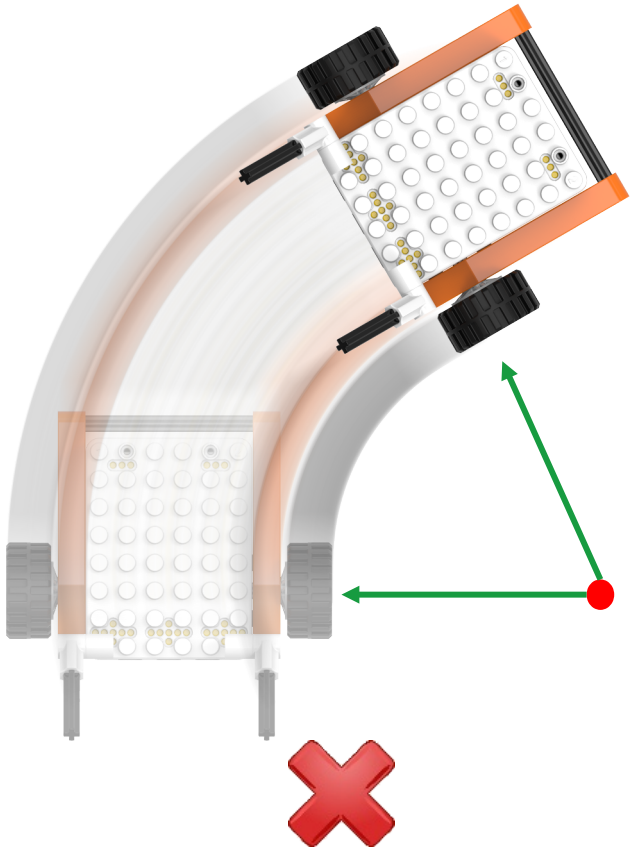
Course Review

1.Module Explanation

When making a U-turn, choose the appropriate turning mode.

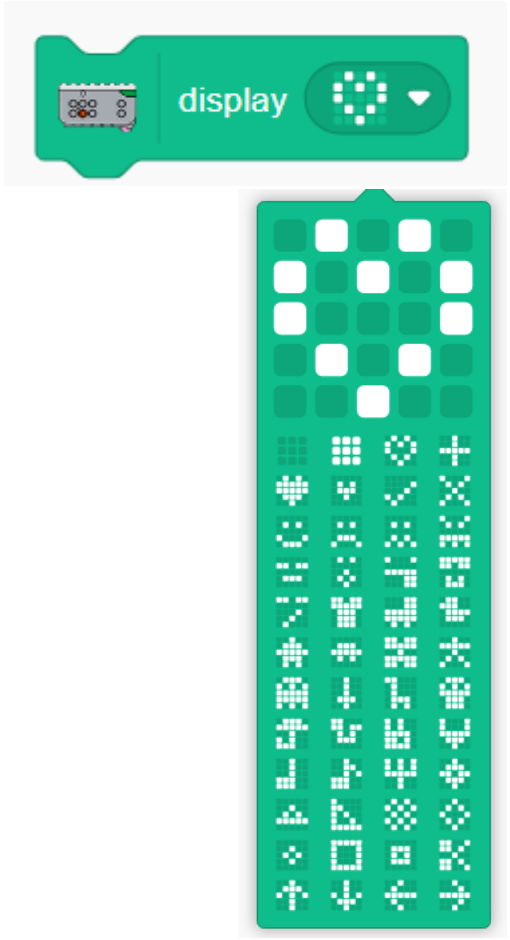




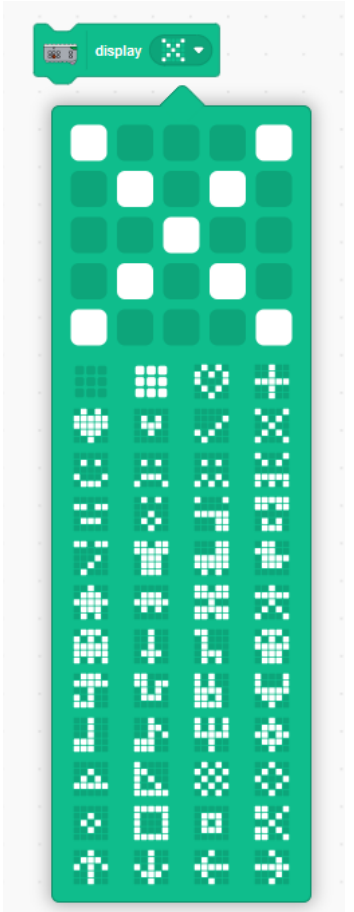


Course Review

2. LED Light Module

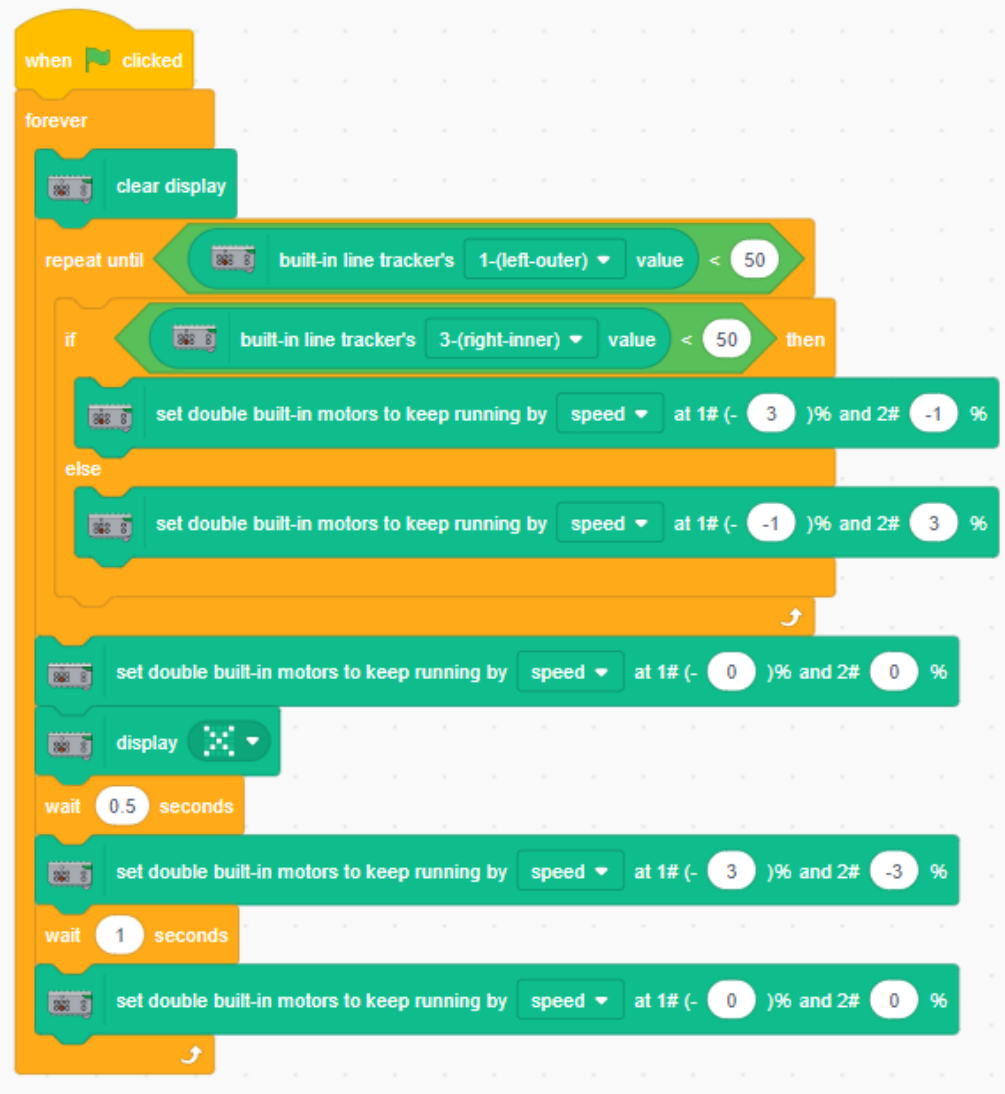


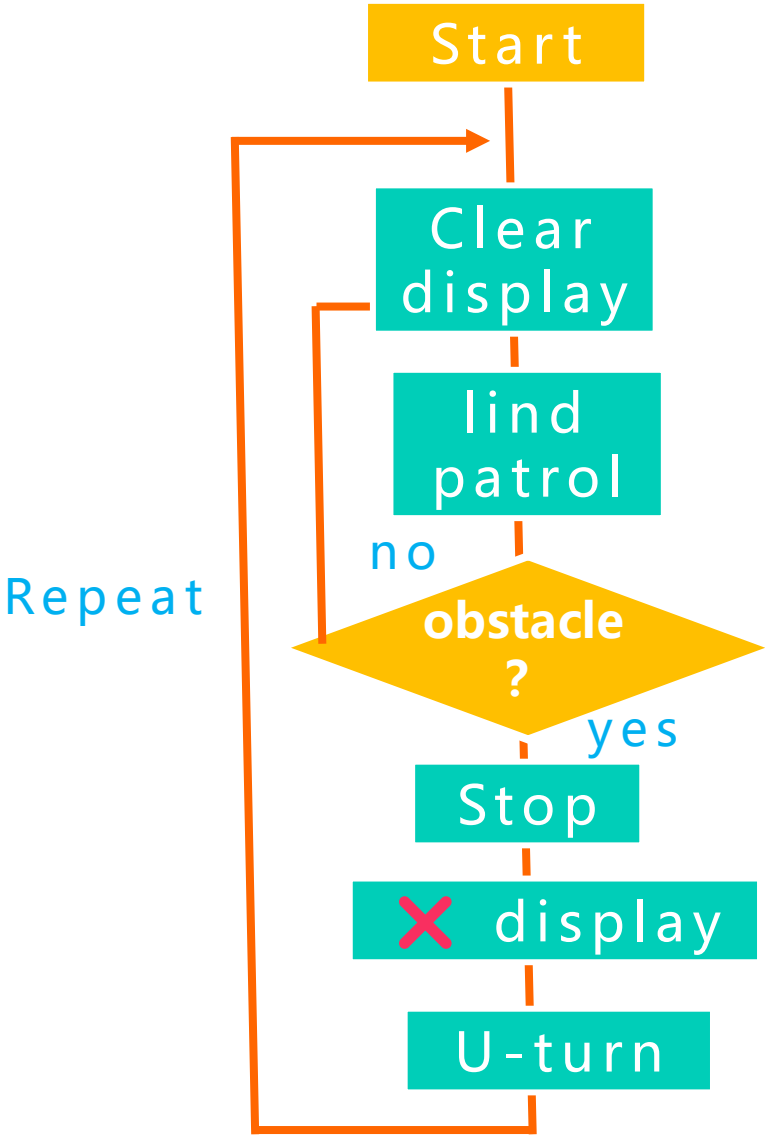
Use the LED display module to draw the pattern you need.



Course Review

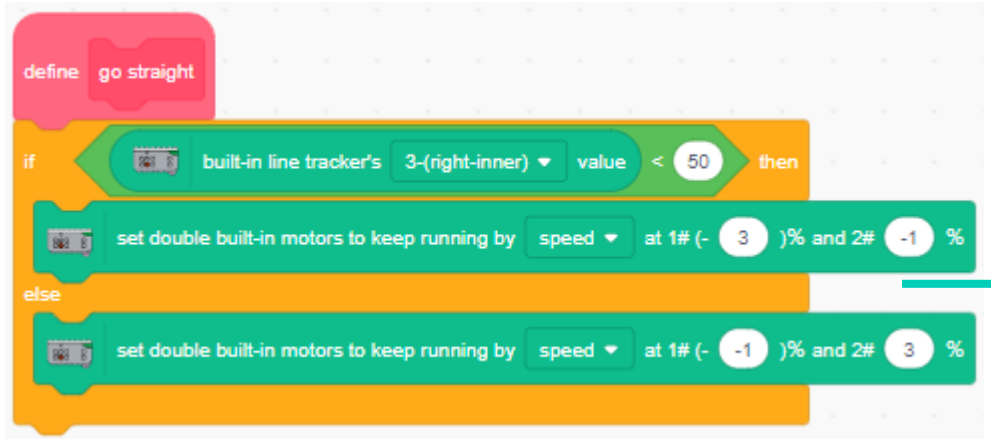
3. Program Analysis

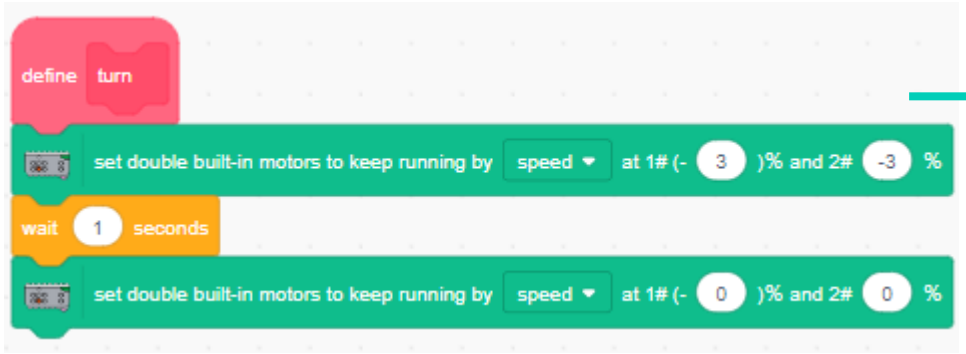


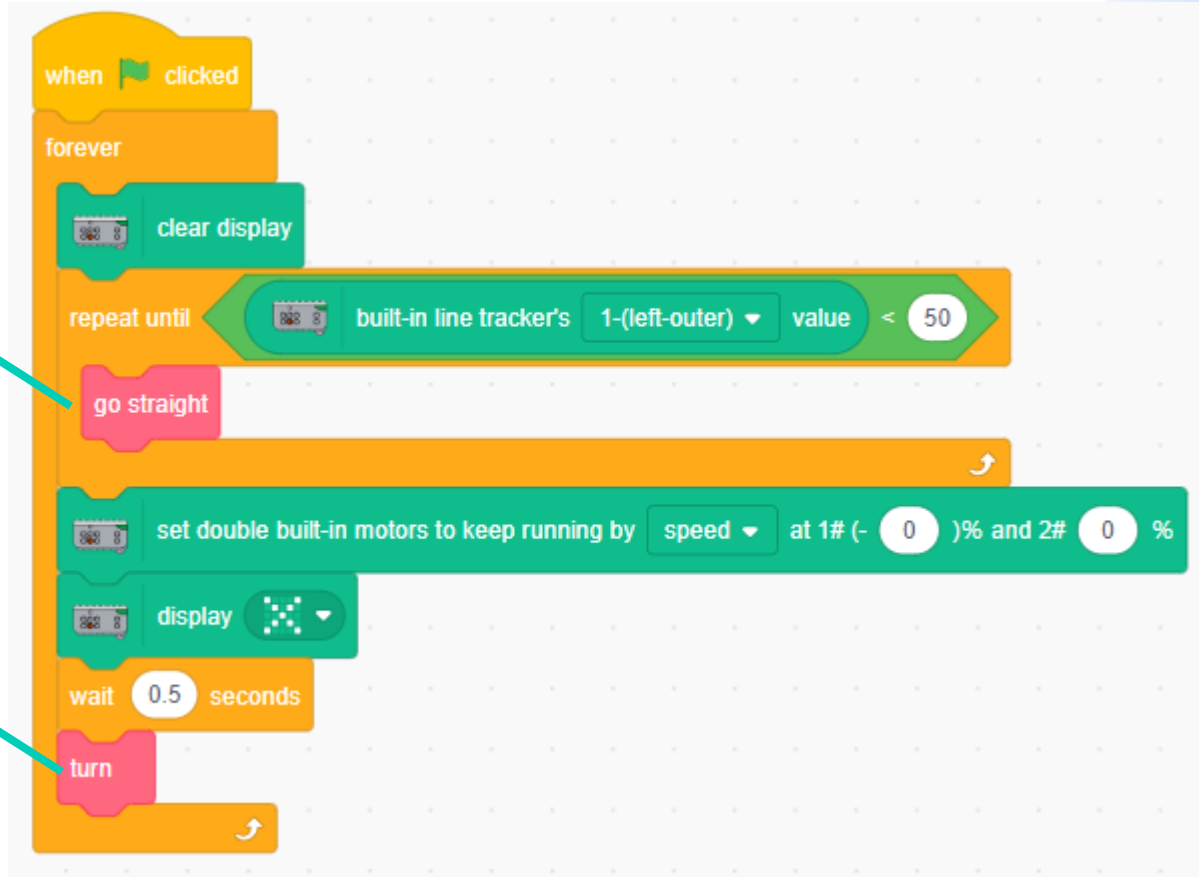


Course Review

4. Make a block







Please use your own kit.

Do not put any parts in your mouth.

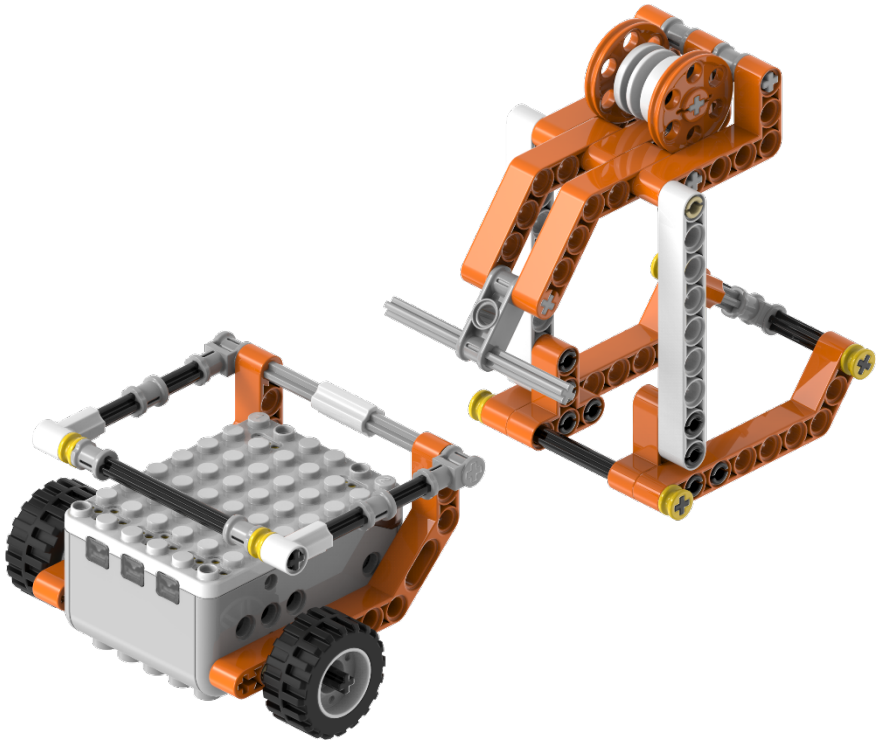
Please clean up after use.

Please raise your hand if you have any questions.

INTRODUCTION

Scenarios

In the previous lesson, we learned how to make the robot car patrol. In this lesson, we will have the robot car follow the black line while also carrying cargo.



Dear kids:

How can the robot car detect cargo in front of it?

How can the robot store the cargo?

Let's embark on our journey of exploration together with the "Patrol Car"!

暗物智能
DARKMATTER AI

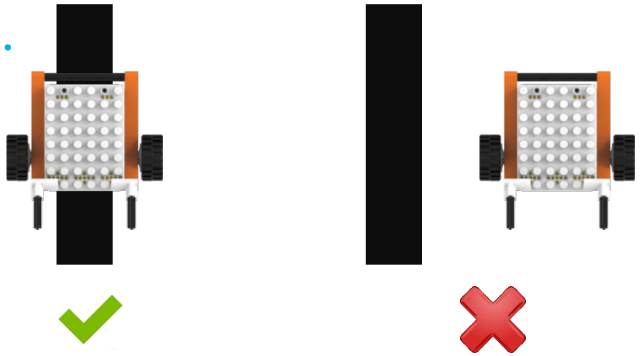
Carrying Competition

AI Courses

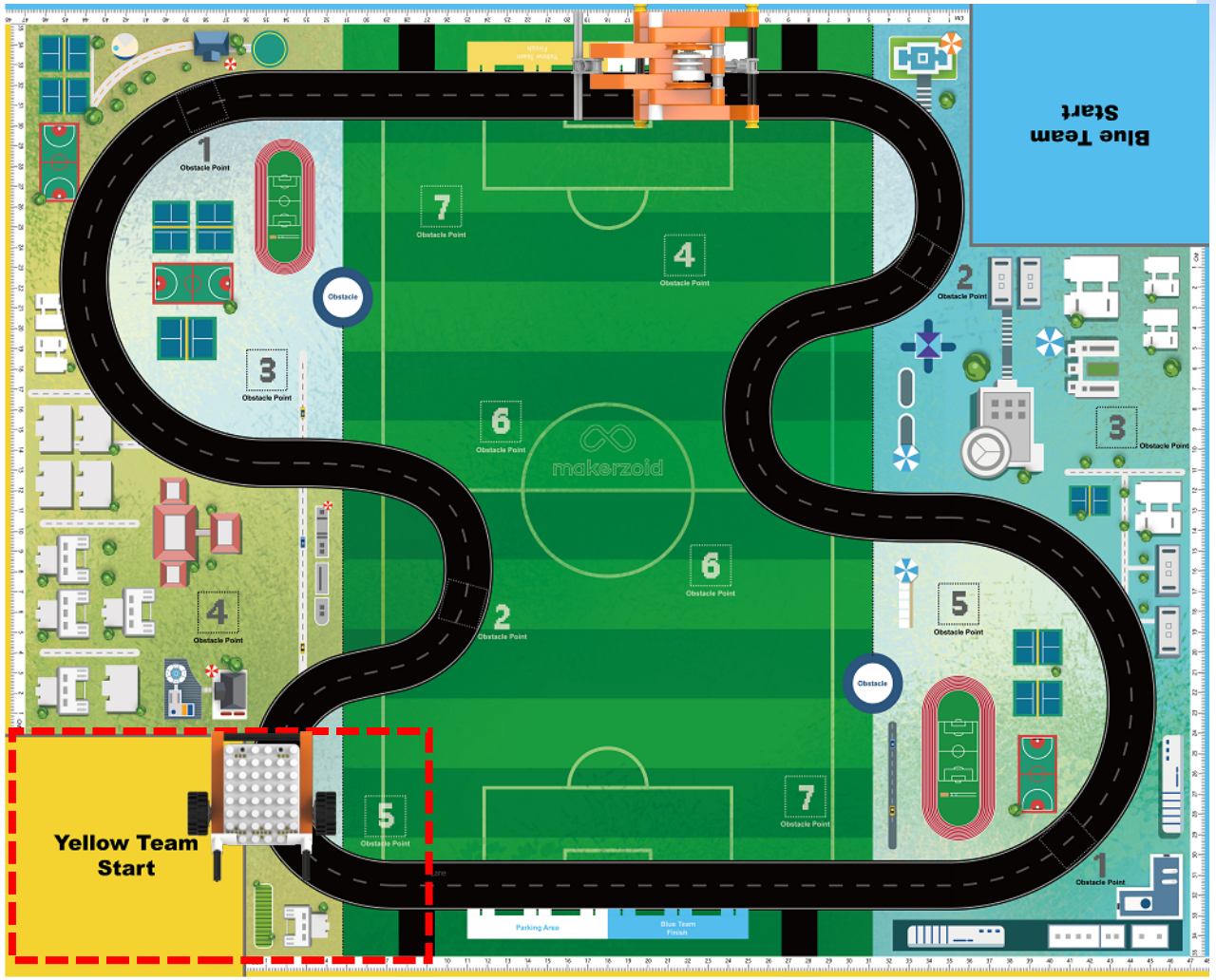
Scenarios

Competition rules:

1. The contestant's robot car starts from the starting point and automatically follows the black line to the loading point. The car picks up the cargo and transports it back to the starting point.
2. The robot car must not deviate from the black line, and it can be manually adjusted in the dashed area (starting point).
3. Let's see whose robot car can transport the most cargo within 2 minutes.



Finish Point



Start Point

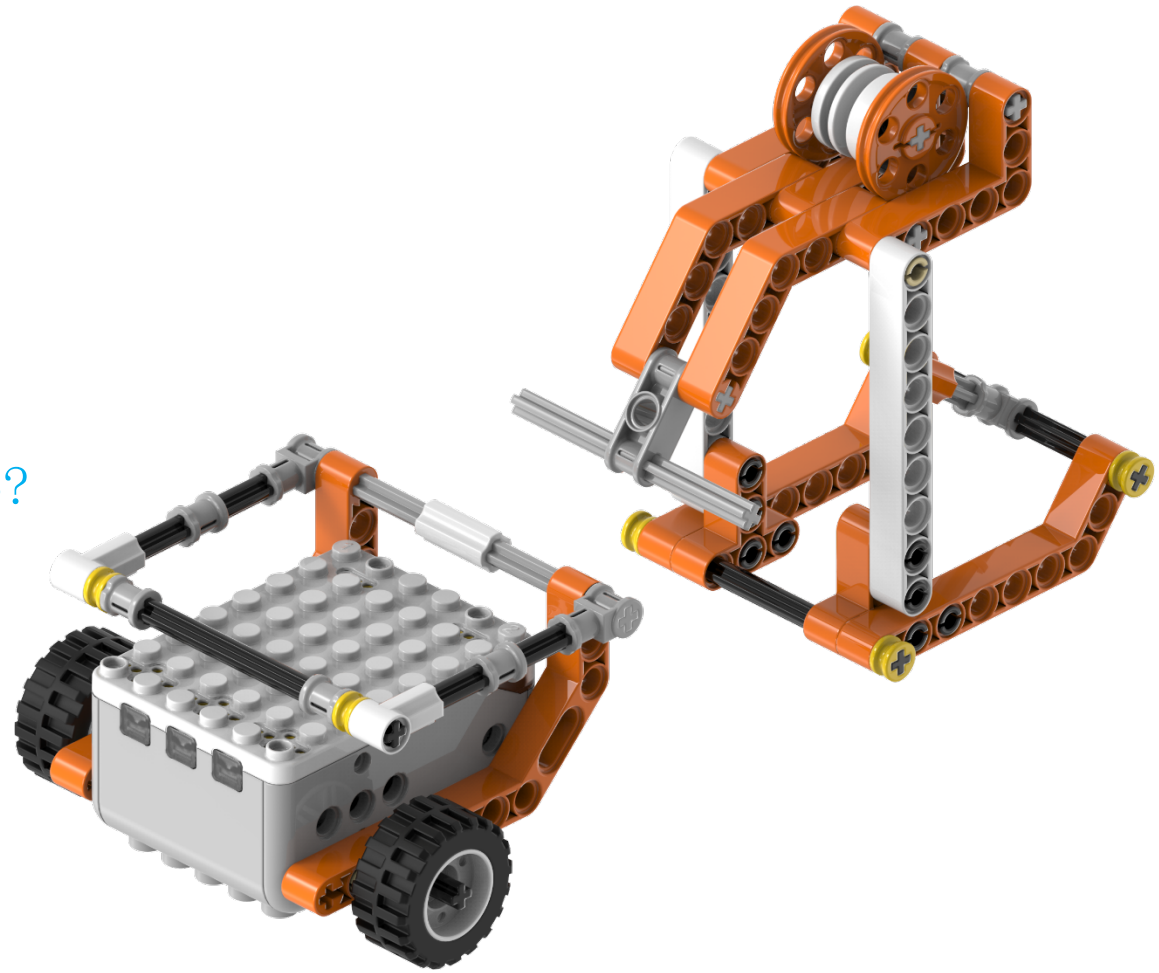
Scenarios

Question :

Kids, do you know:

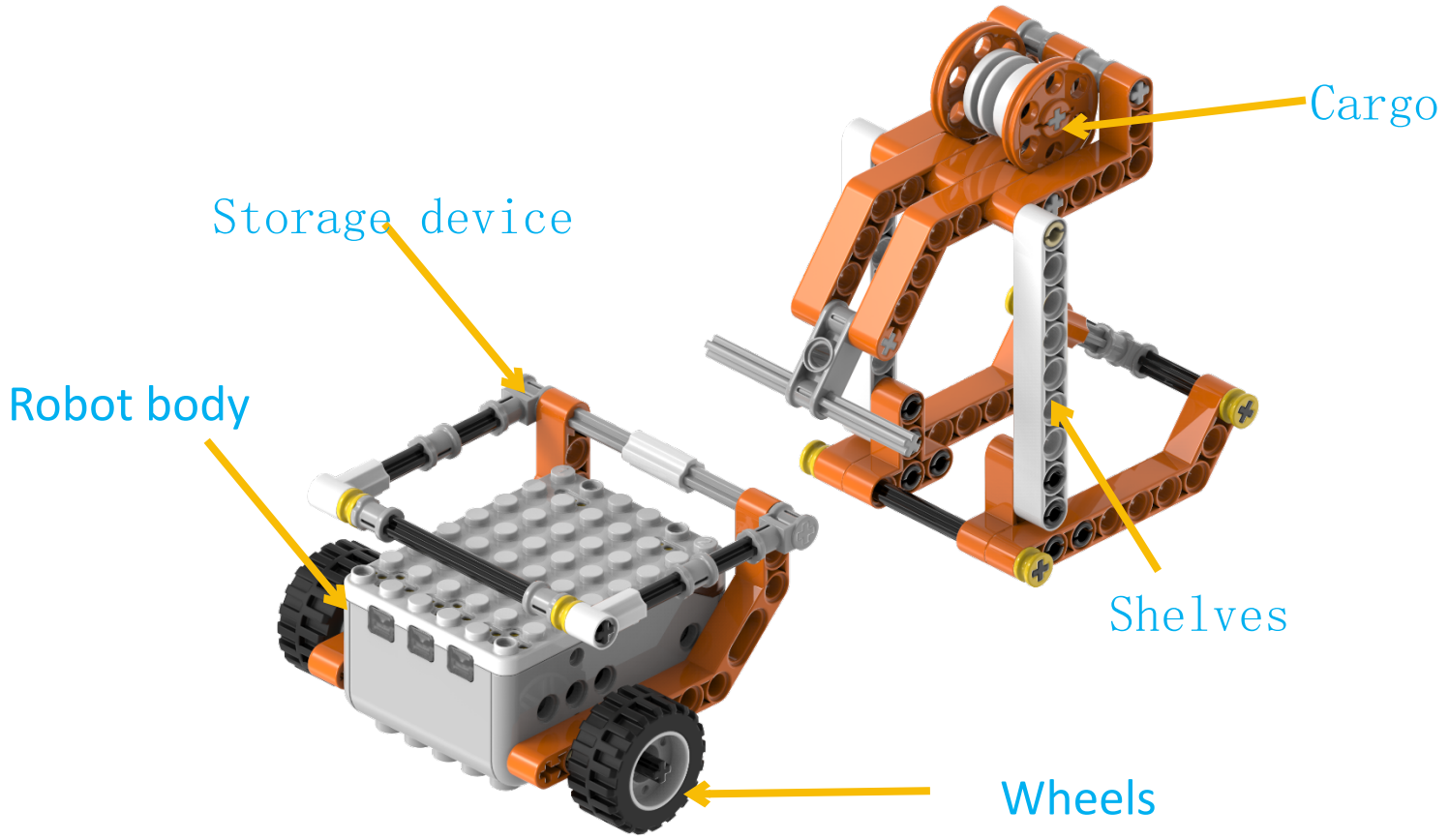
1. How can the robot car detect the cargo in front of it?

2. How can the robot store the cargo?



Scenarios

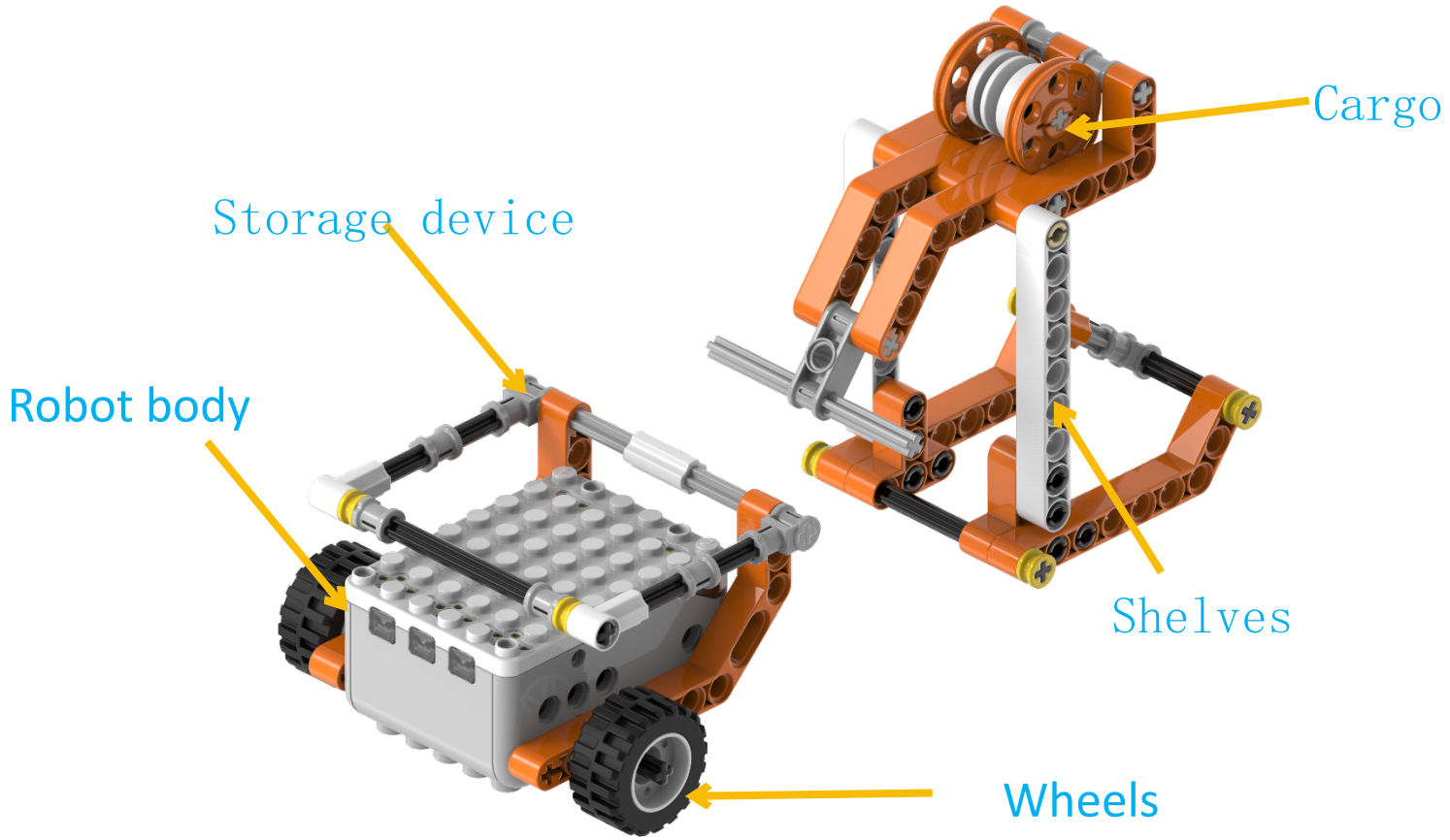
Today, everyone is a junior engineer. Let's work together to complete the gesture control course!



ASSEMBLY

The Final Model

Robot body assembly



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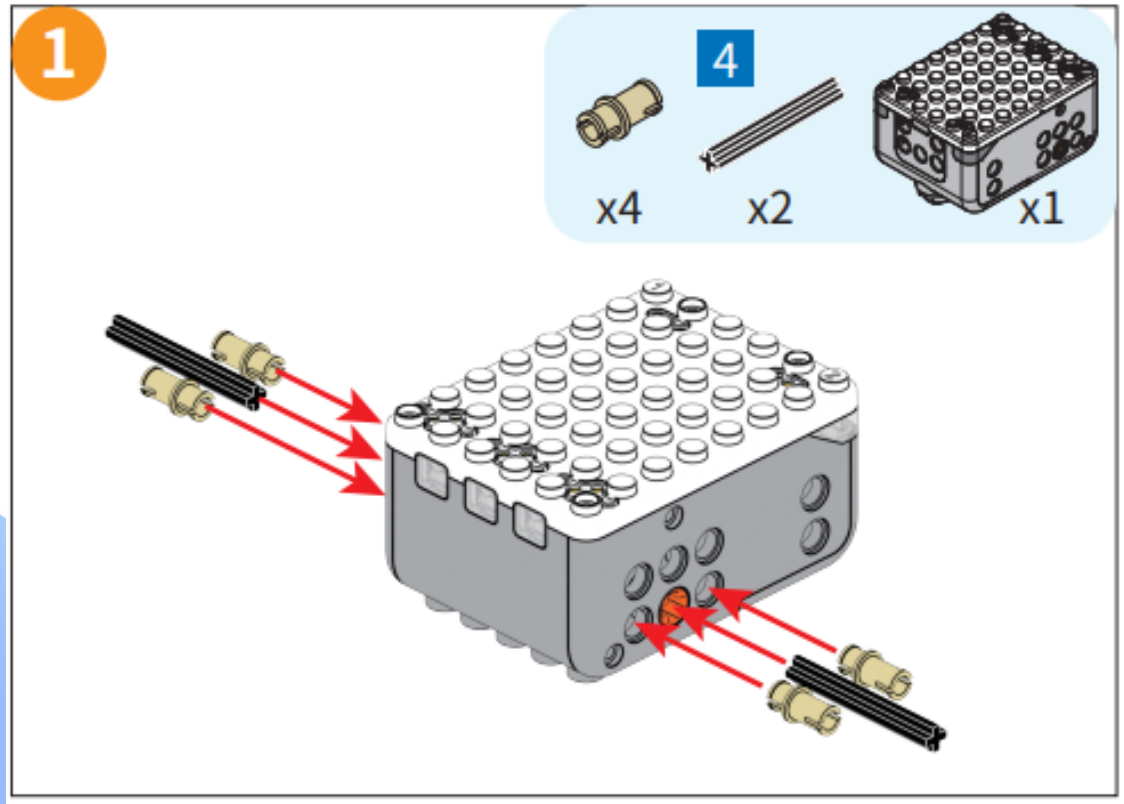
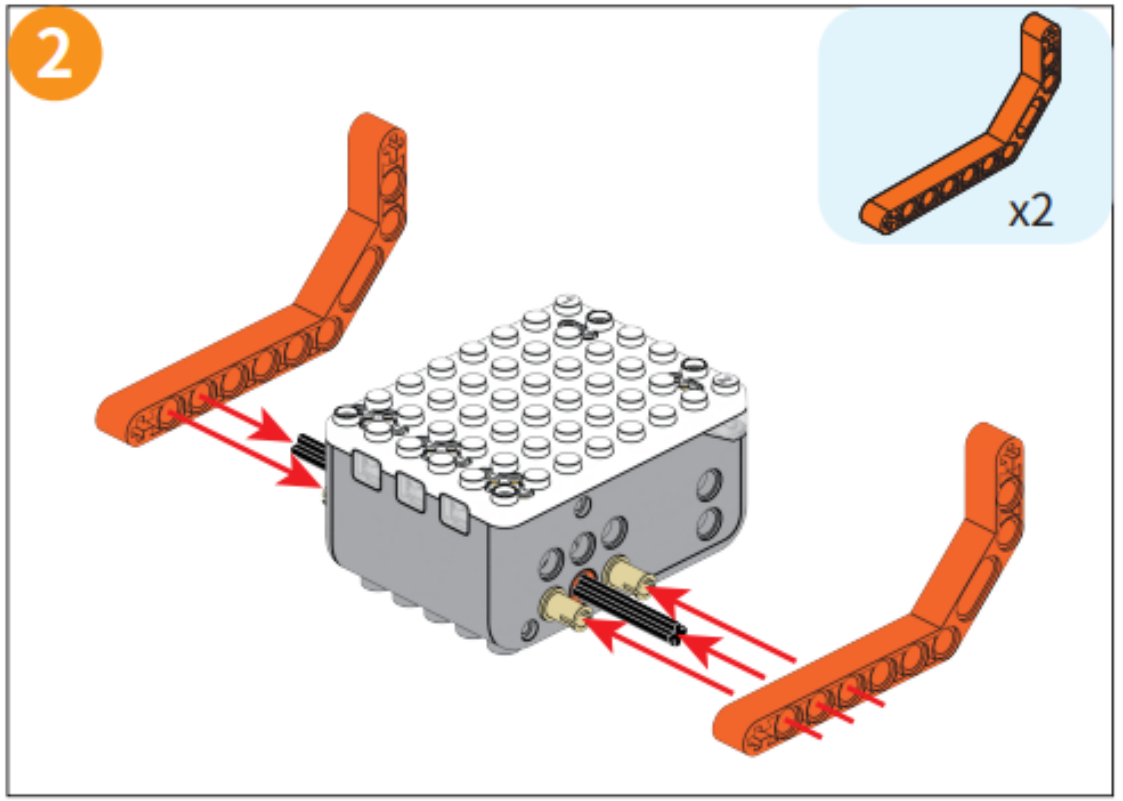
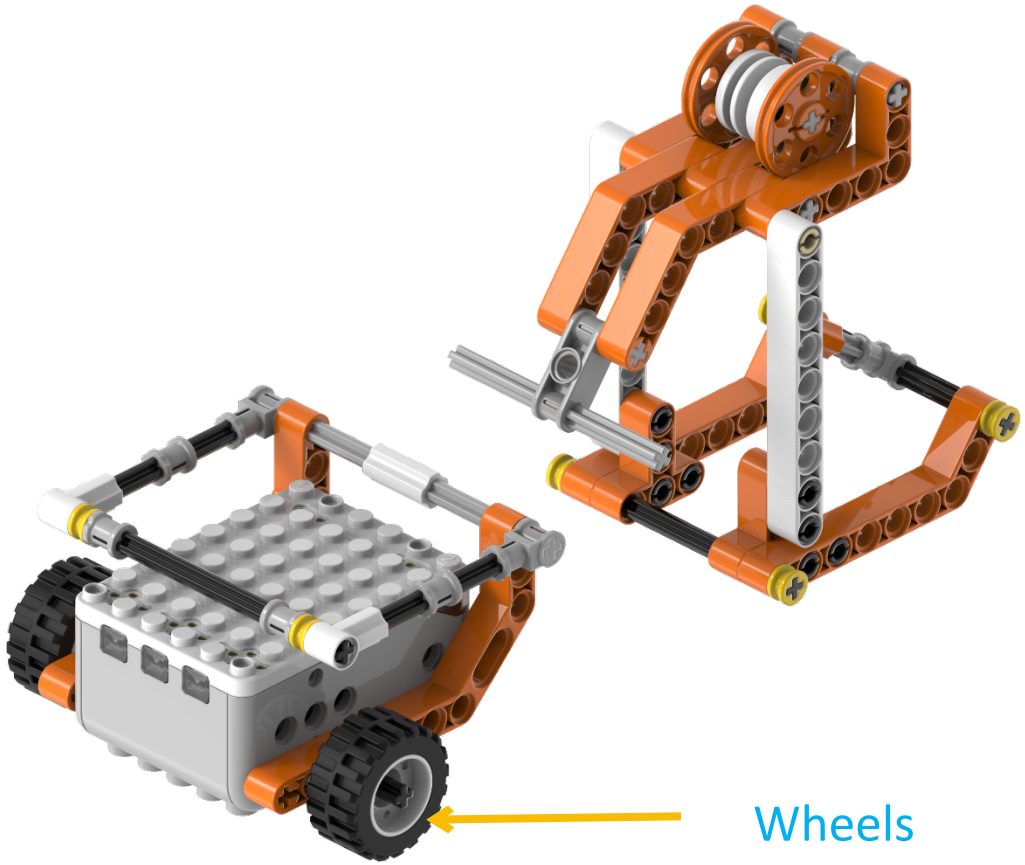




Assembly

Wheels assembly



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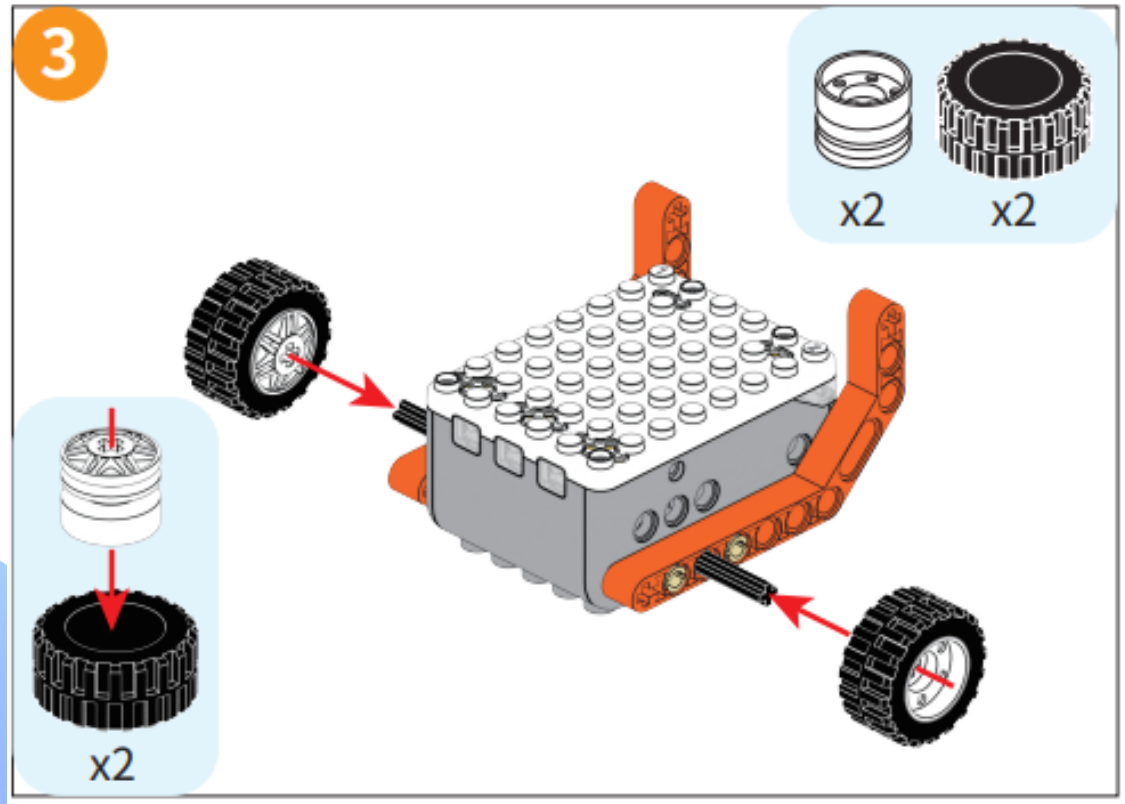
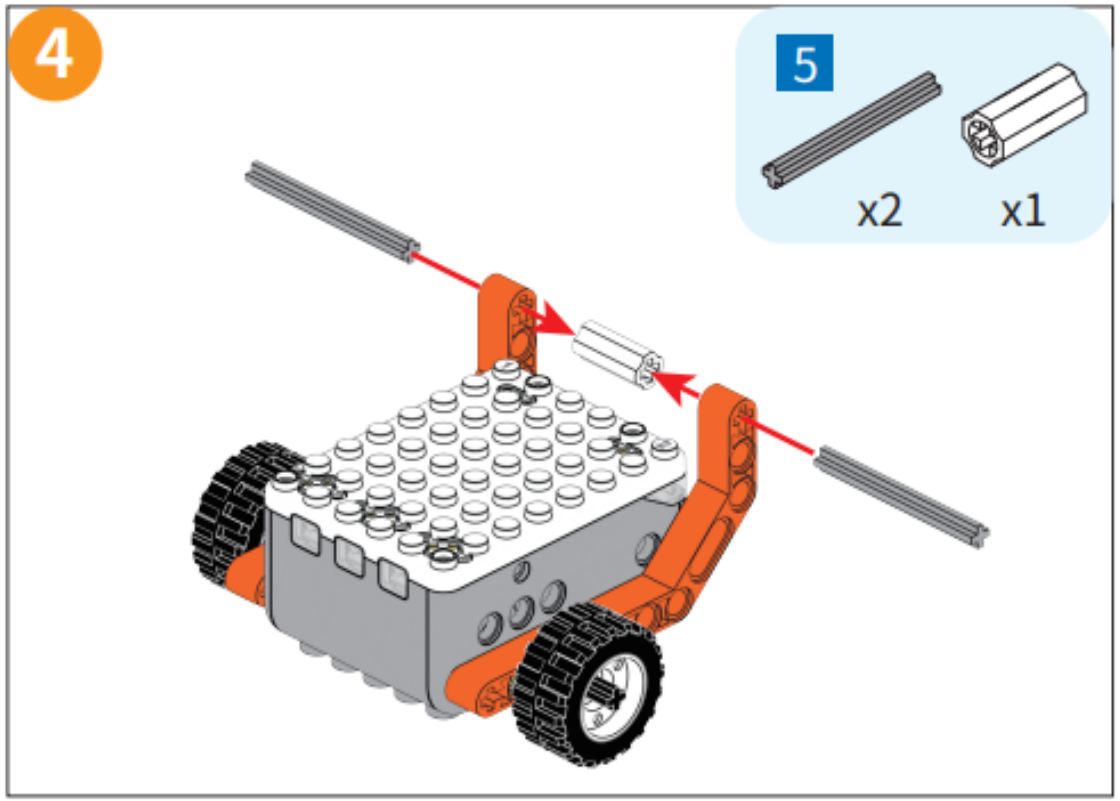
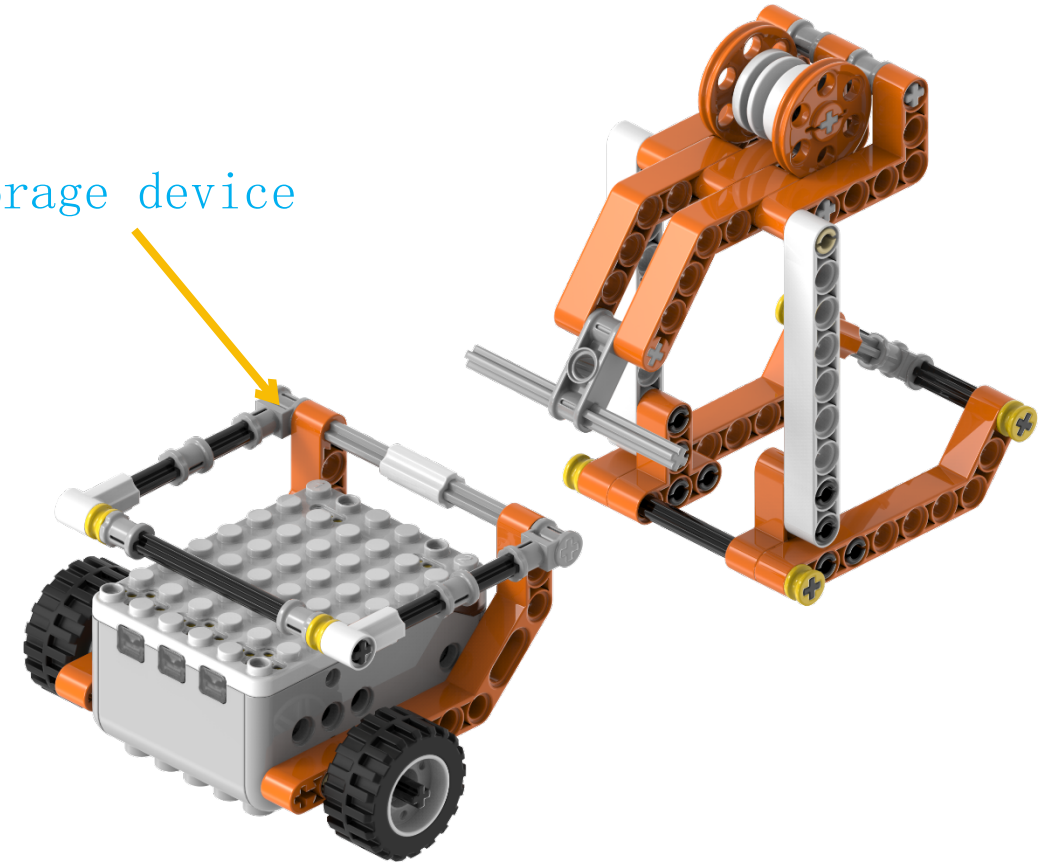




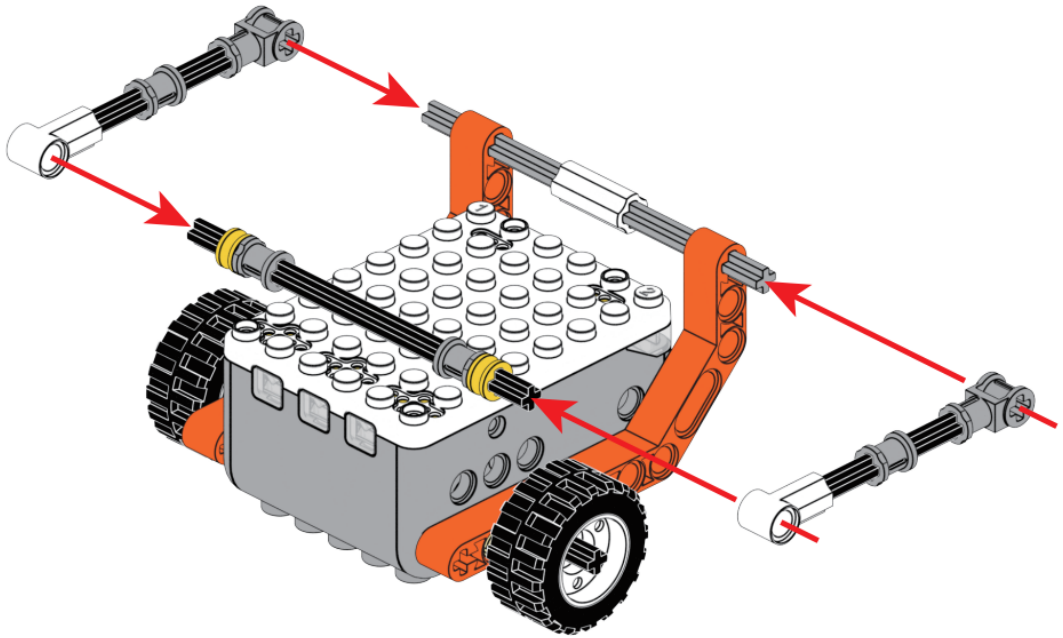
Assembly

Storage device assembly



Assembly

7



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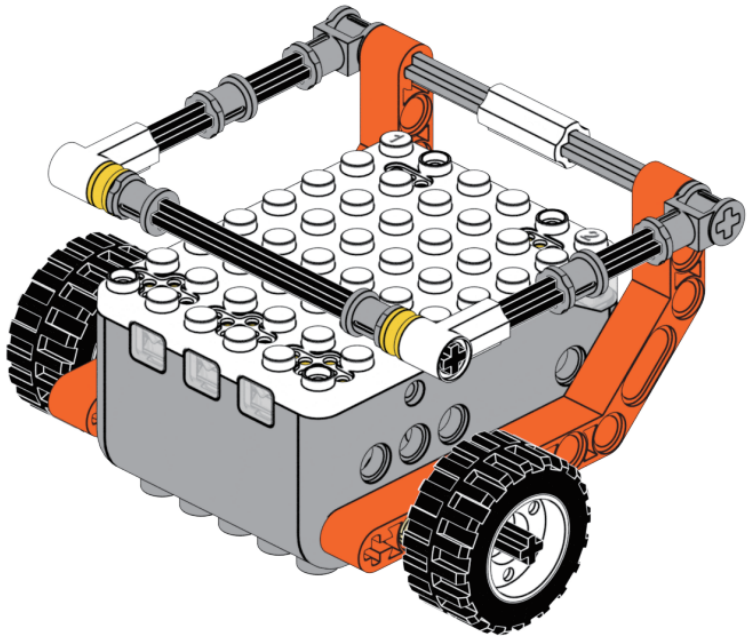
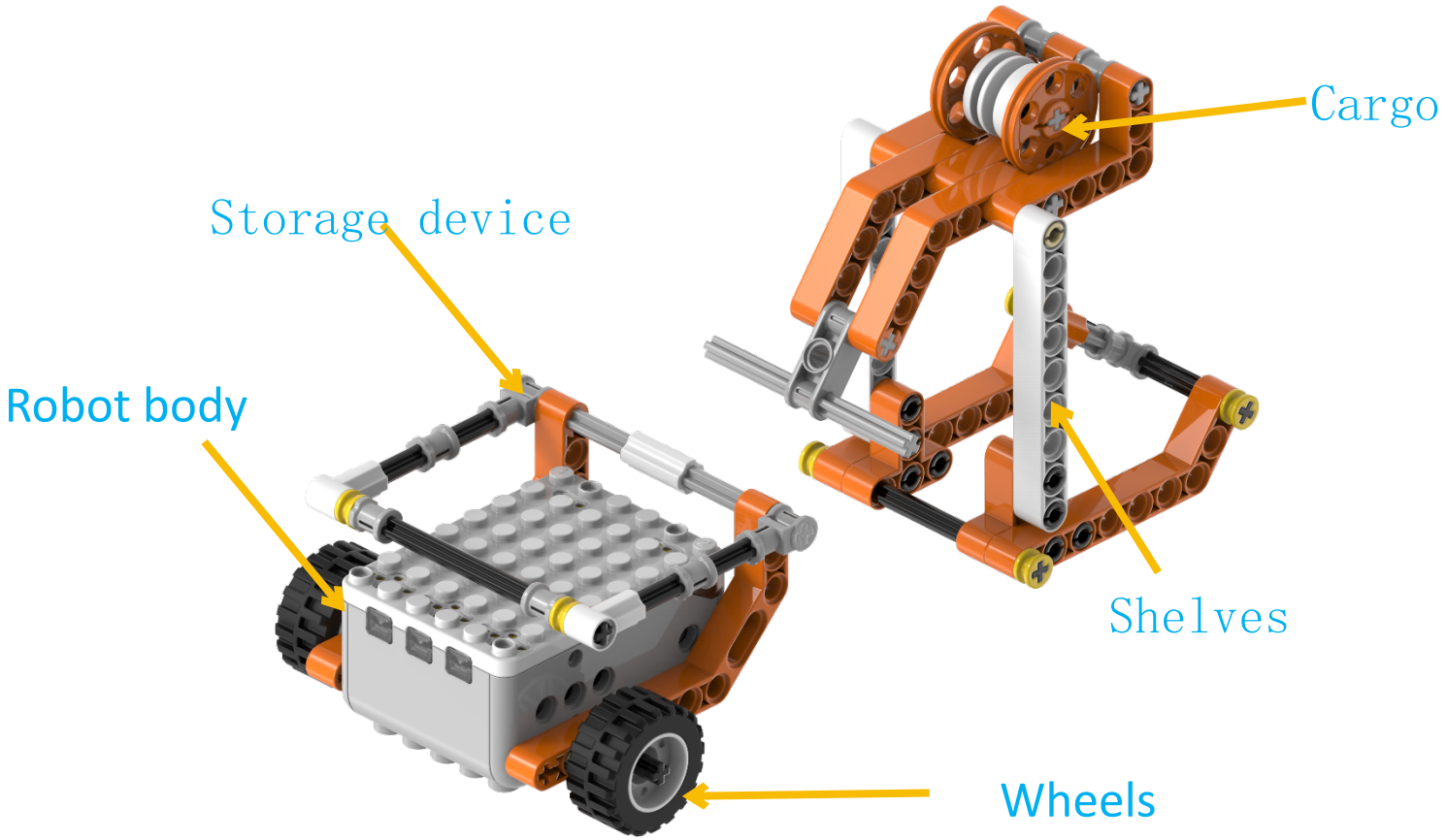


Assembly

Shelves and cargo assembly



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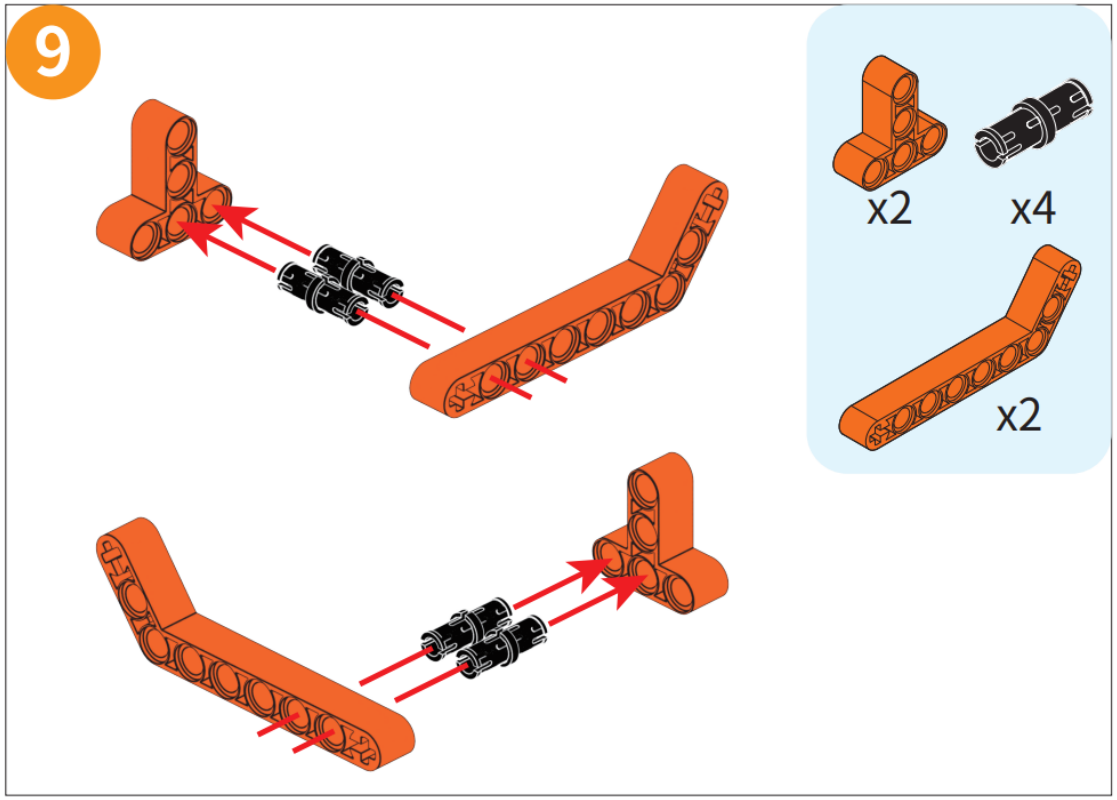

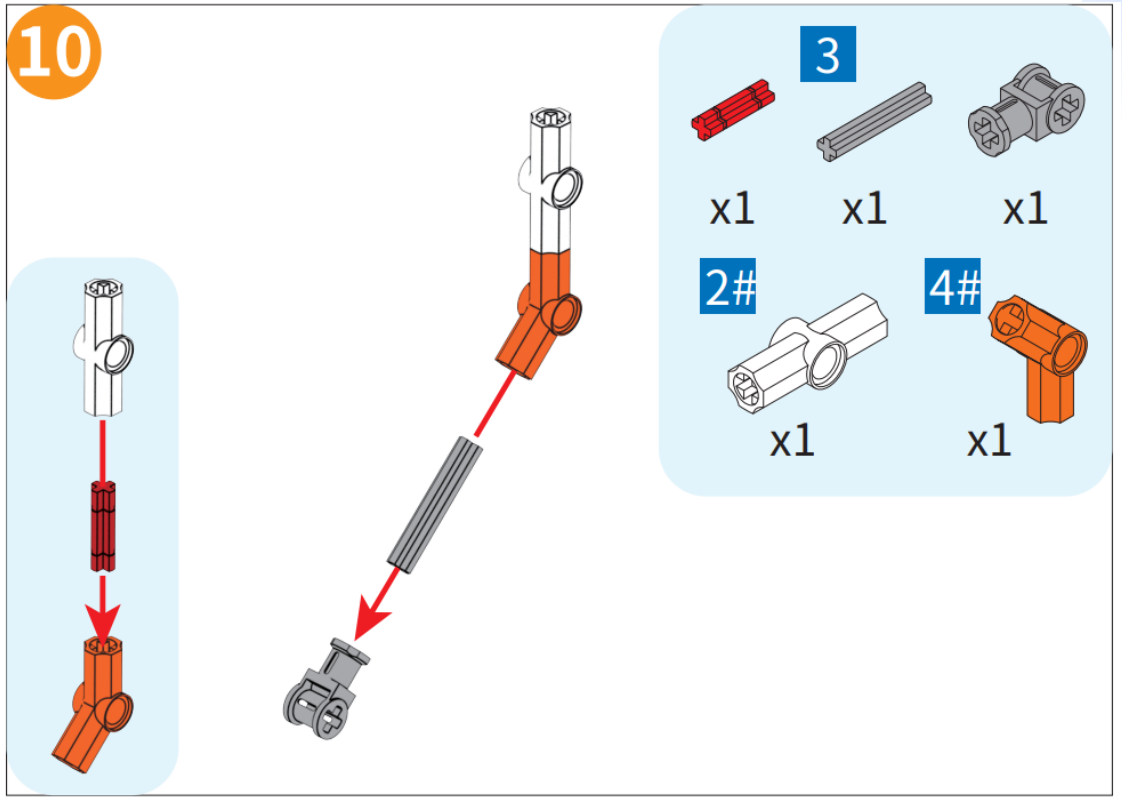

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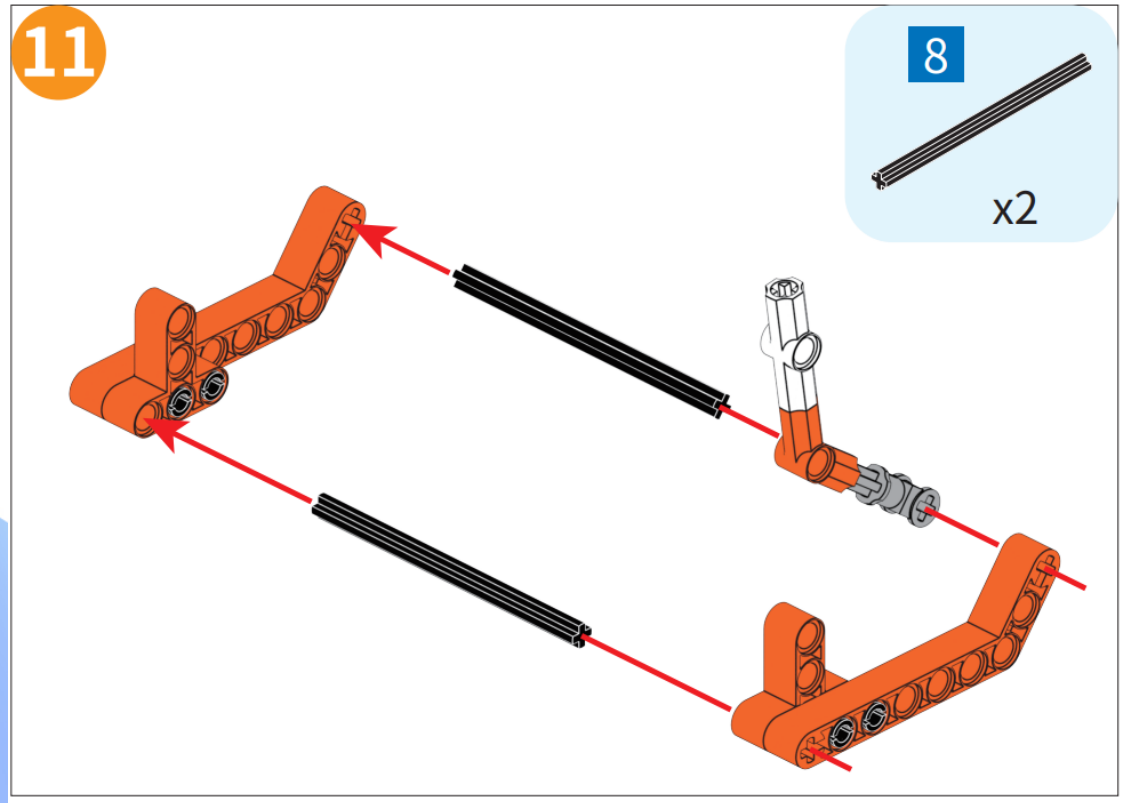

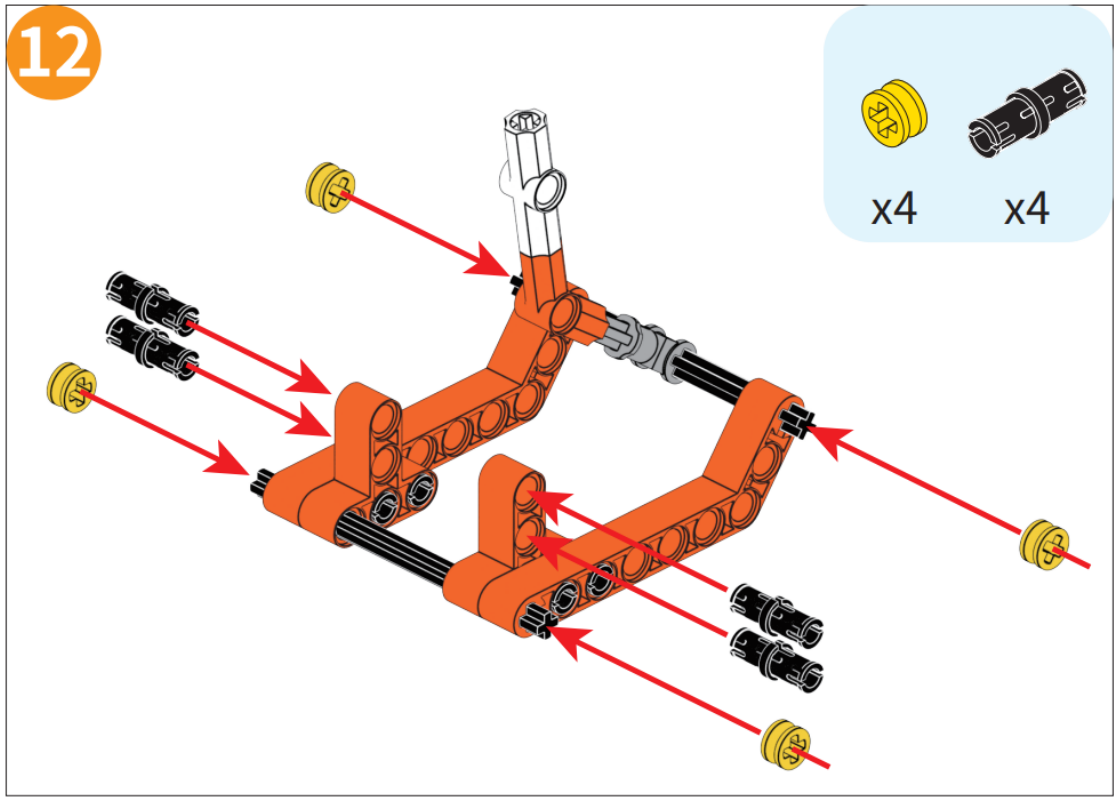

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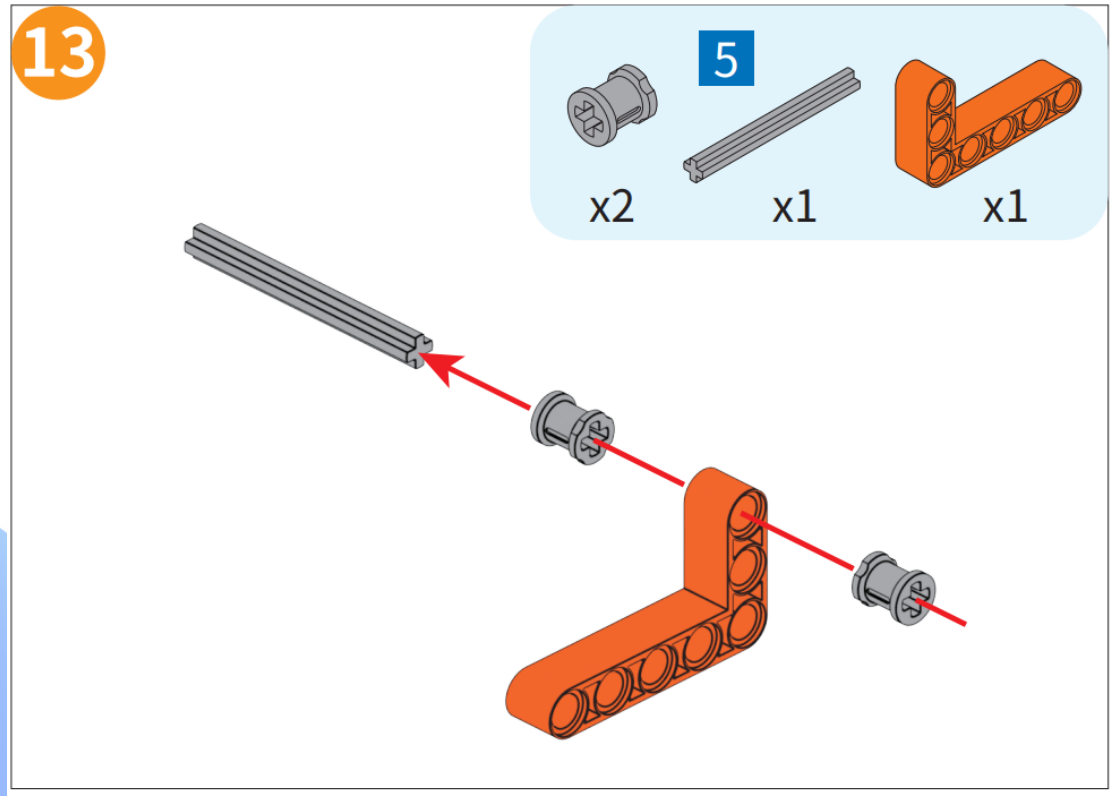

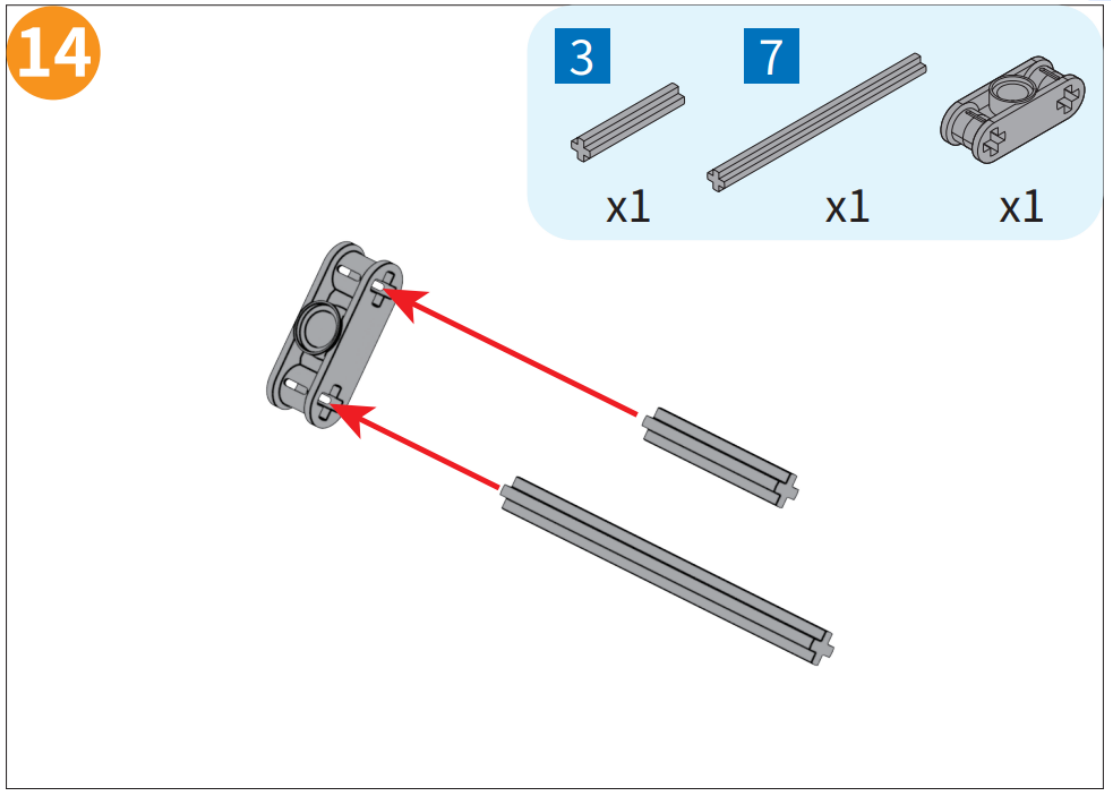

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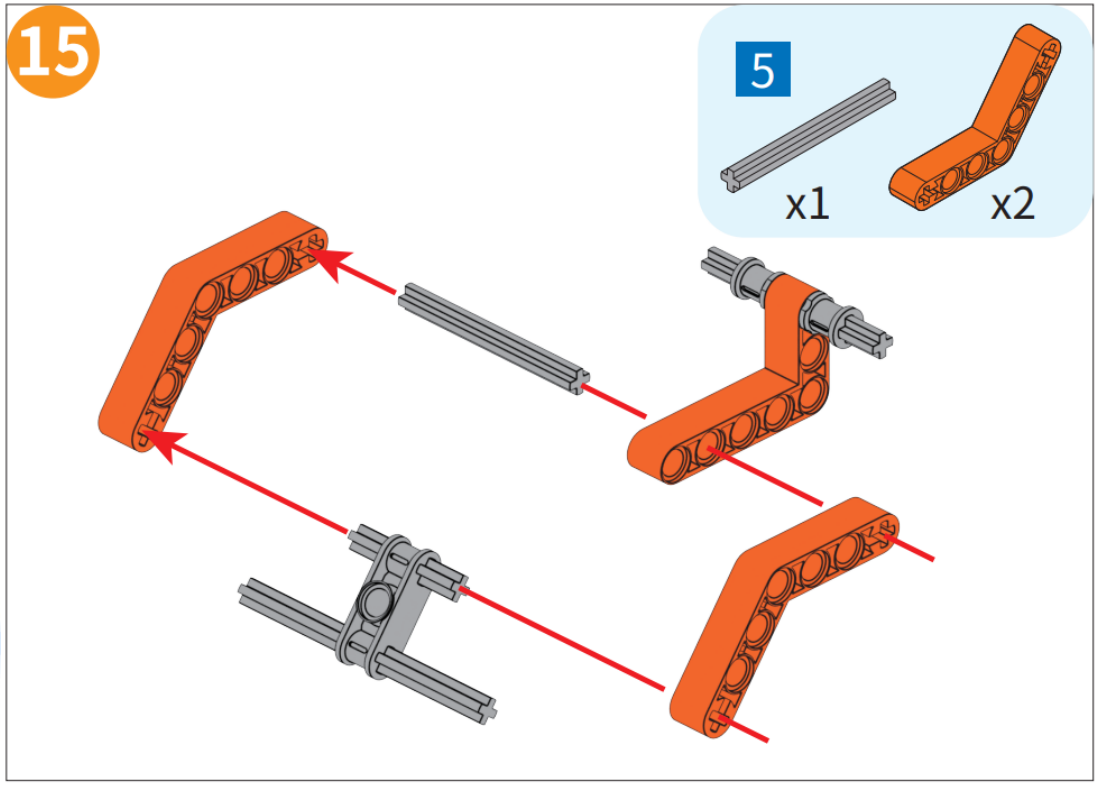

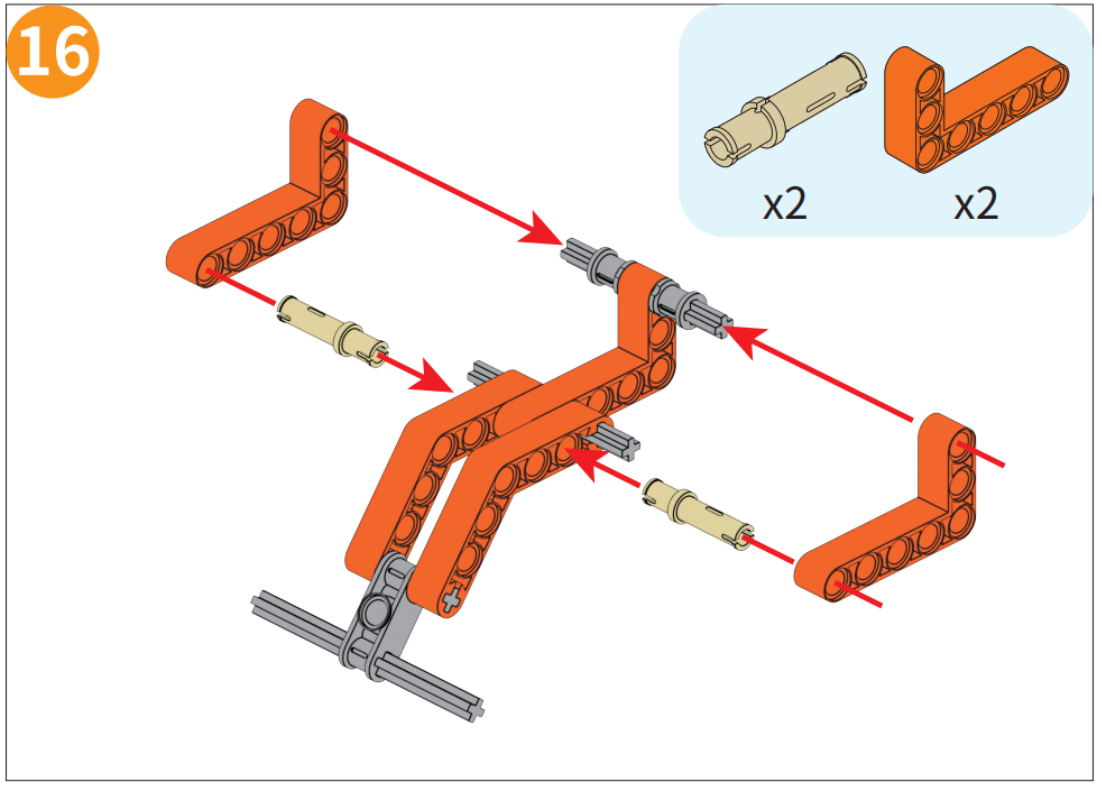

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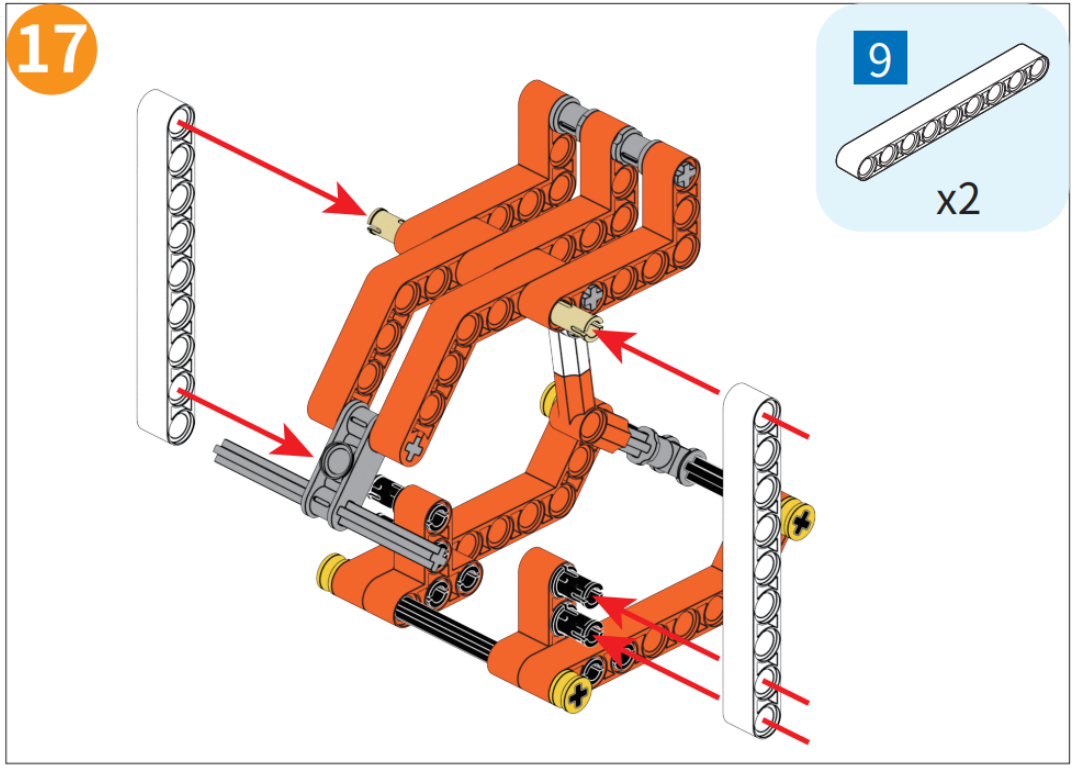

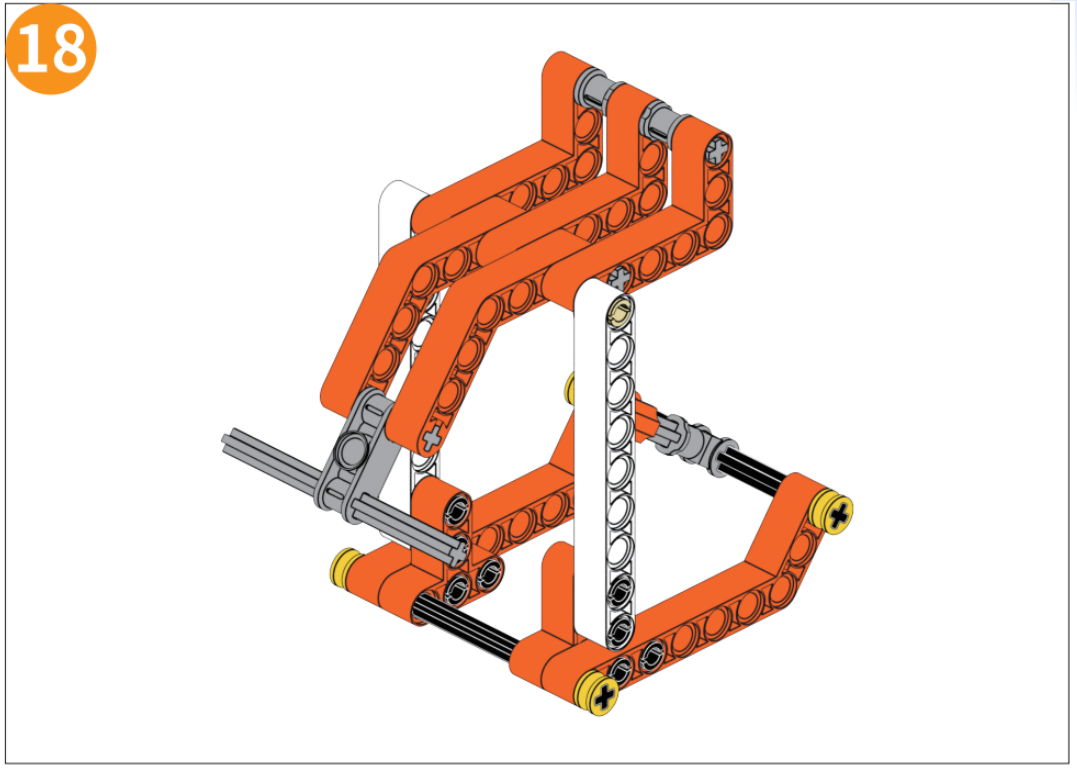

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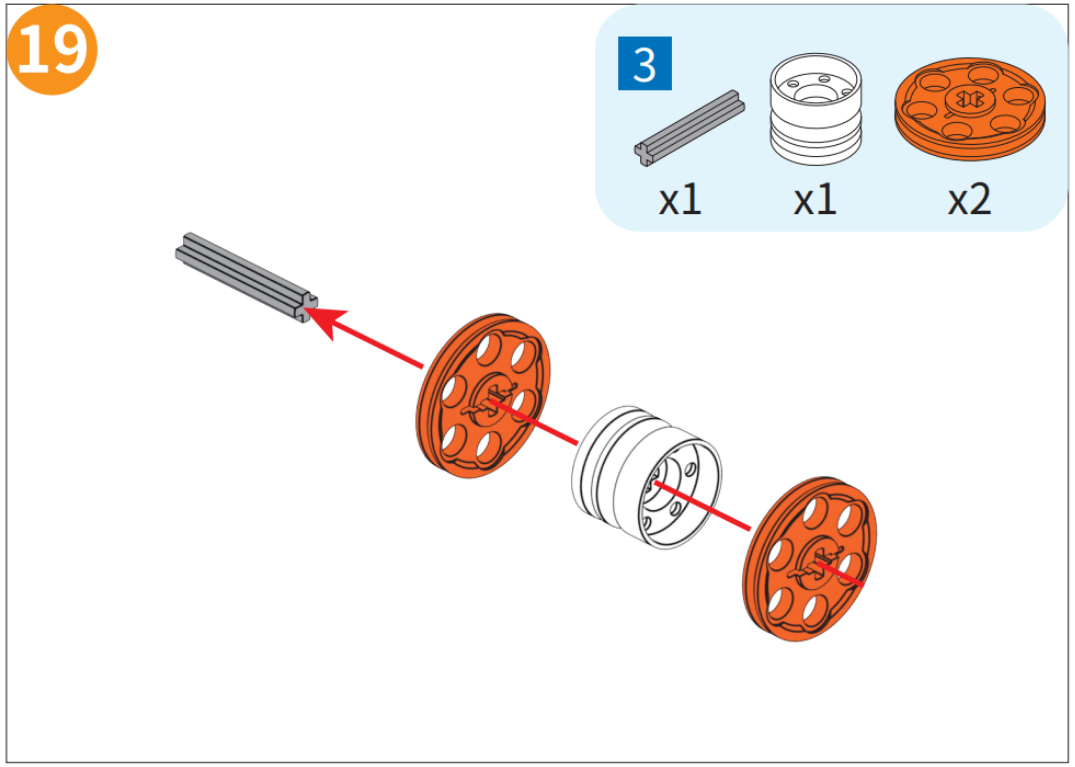
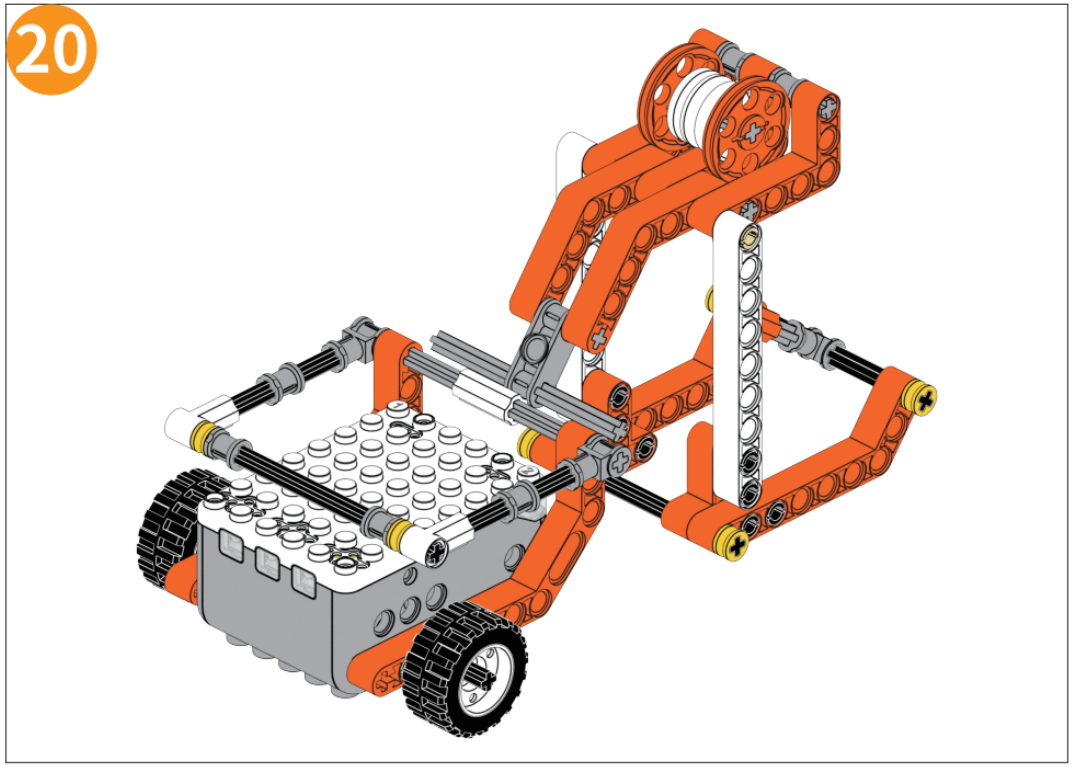




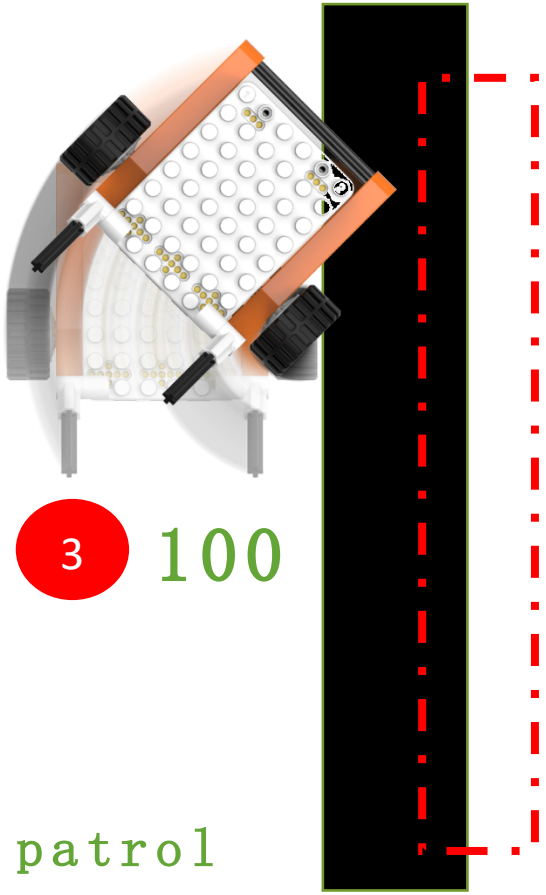
PROGRAMMING

Introductions

Module Explanation

Introductions

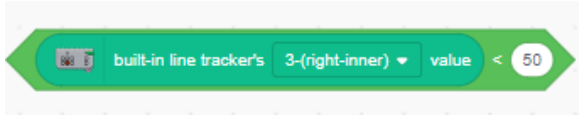
Program Explanation

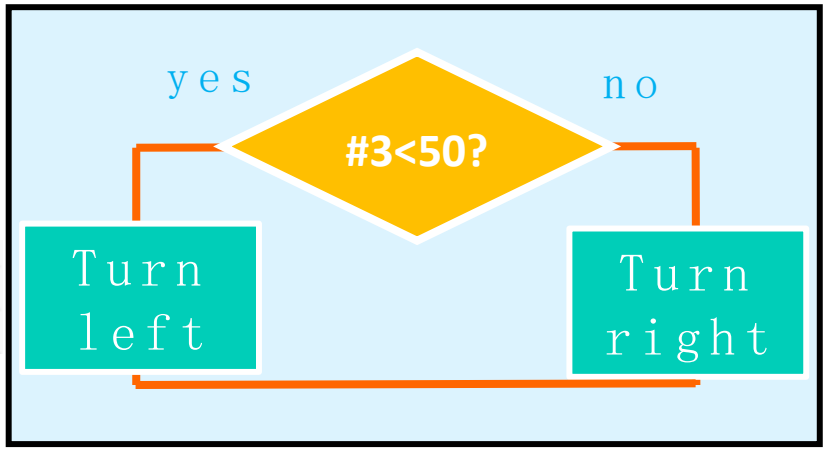


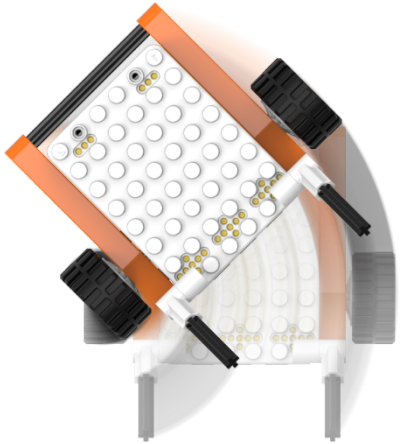
3 100

Right line patrol

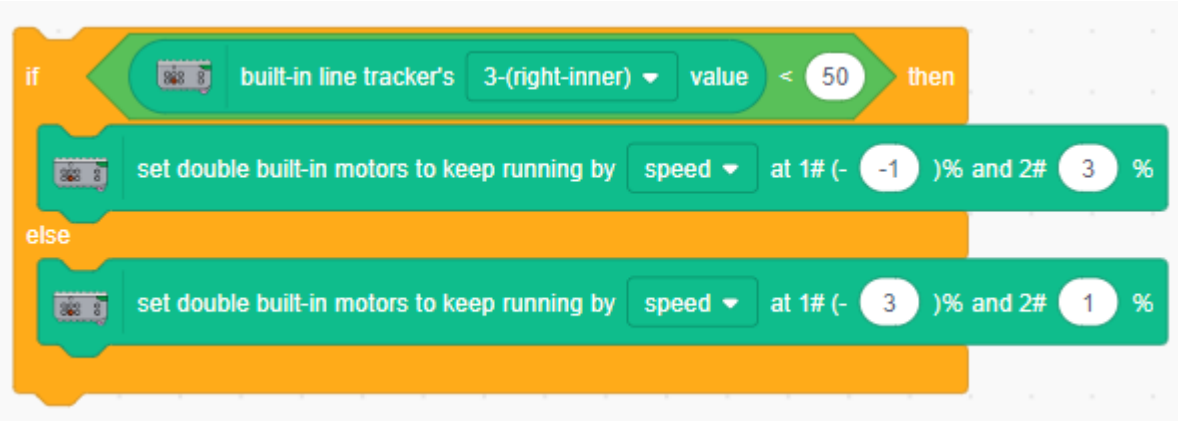
average value= (100+0) /2 = 50





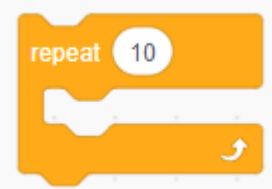


3 0

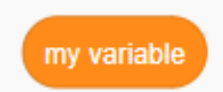


Introductions

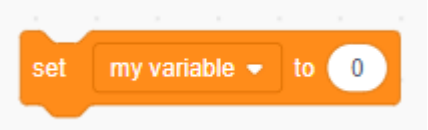
Program Explanation



Make the subroutine loop a certain number of times.



A variable is a quantity that changes during the course of a program.



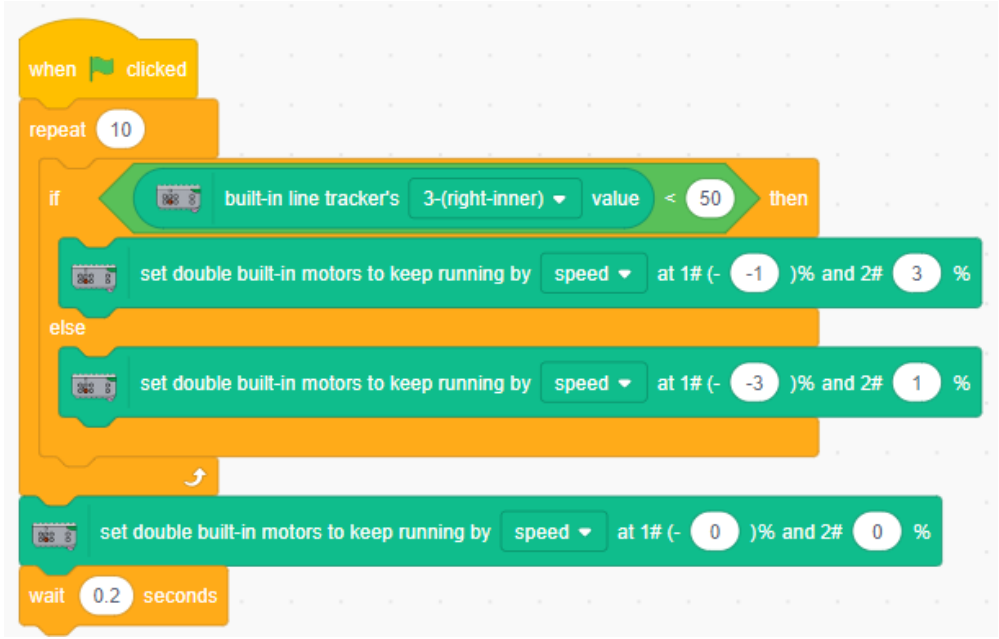
A variable can be assigned or set.

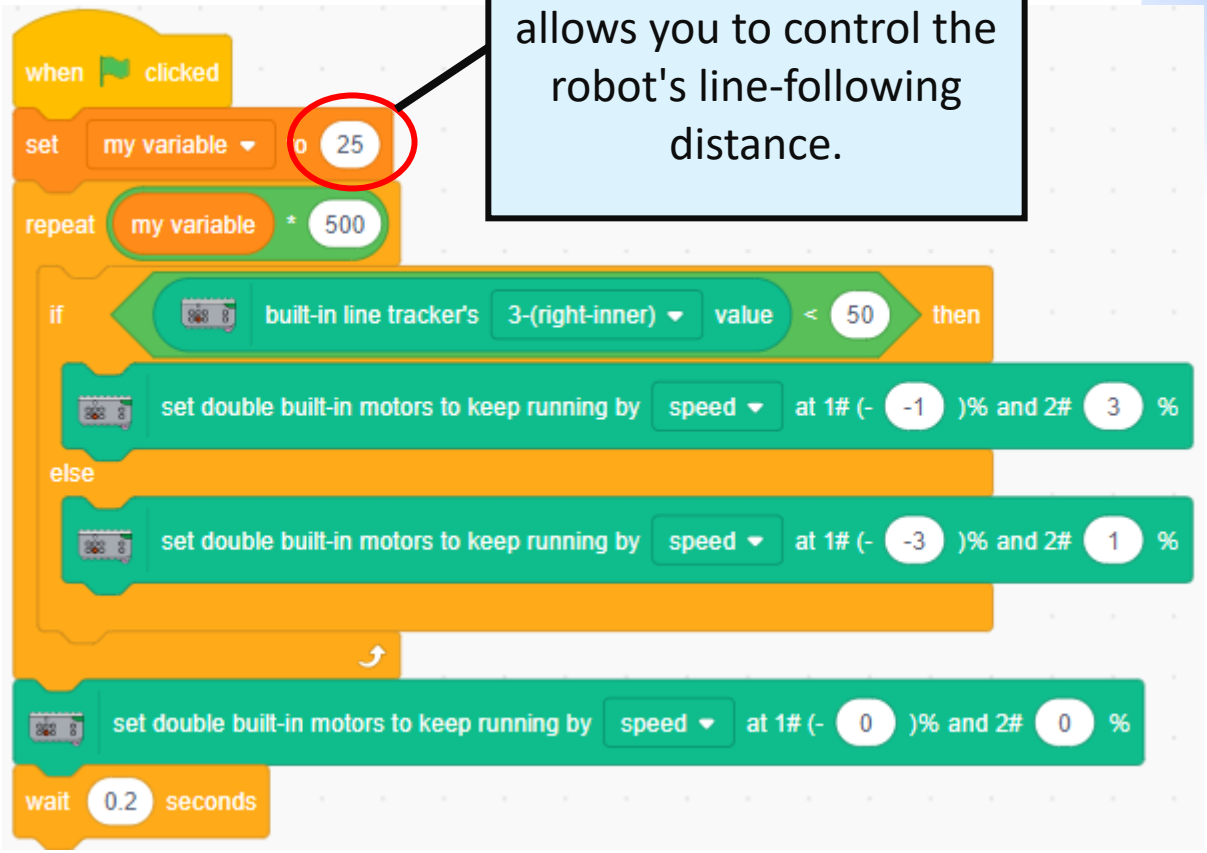
Multiply two sets of data and output the result.

Introductions

Program Explanation

Make the robot follow a line for a certain distance.



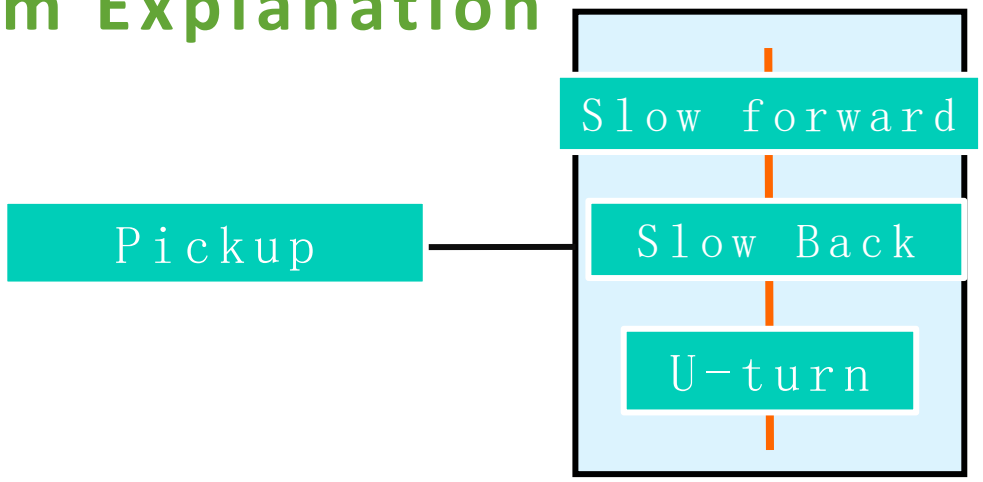


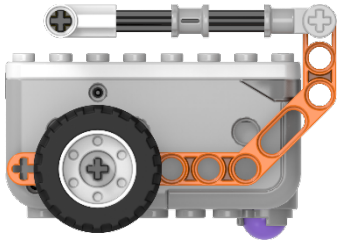
Adjusting this value allows you to control the robot's line-following distance.

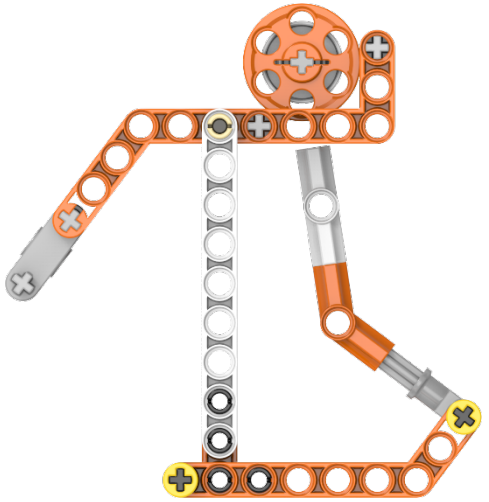
Running the program offline showed that the robot barely moved. After testing, we found that 500 iterations allow the robot to move a certain distance, so we will use 500 as a unit.

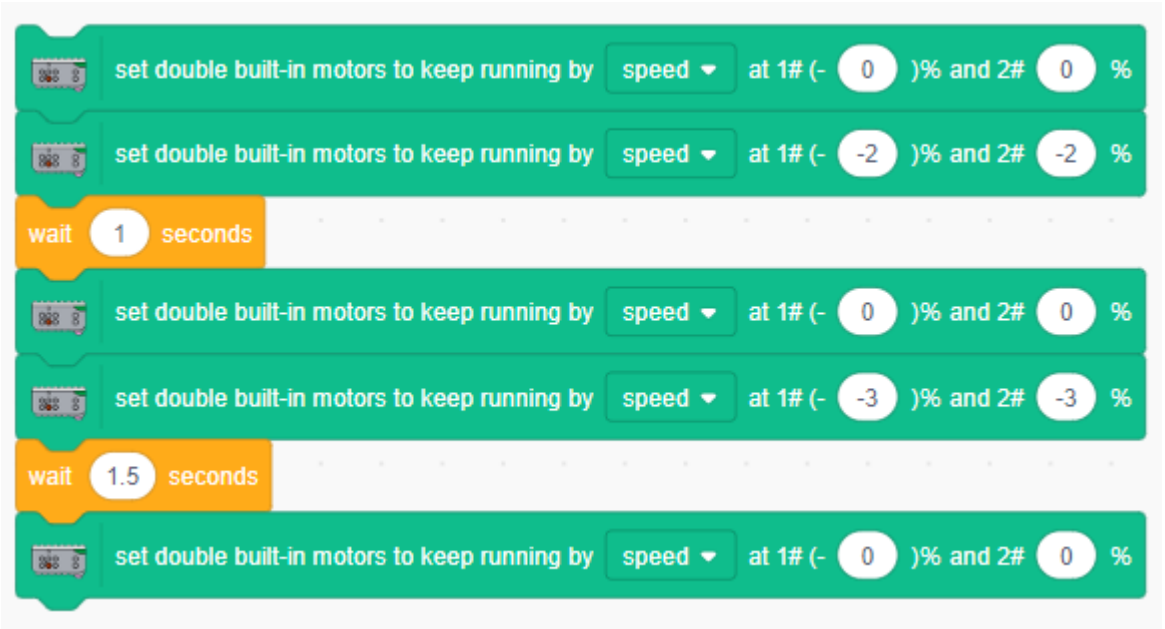
Introductions

Program Explanation





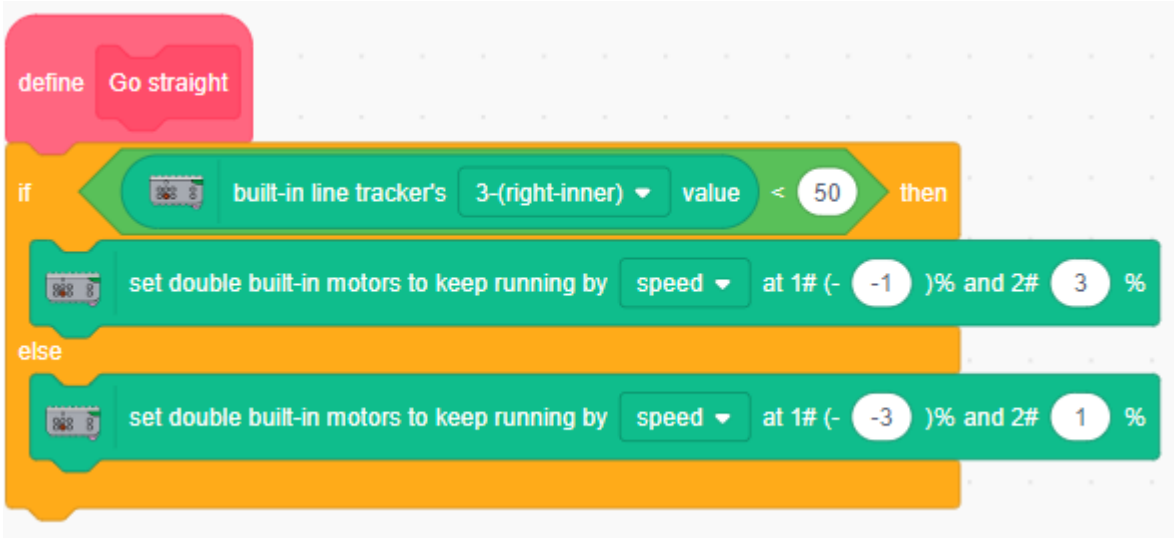


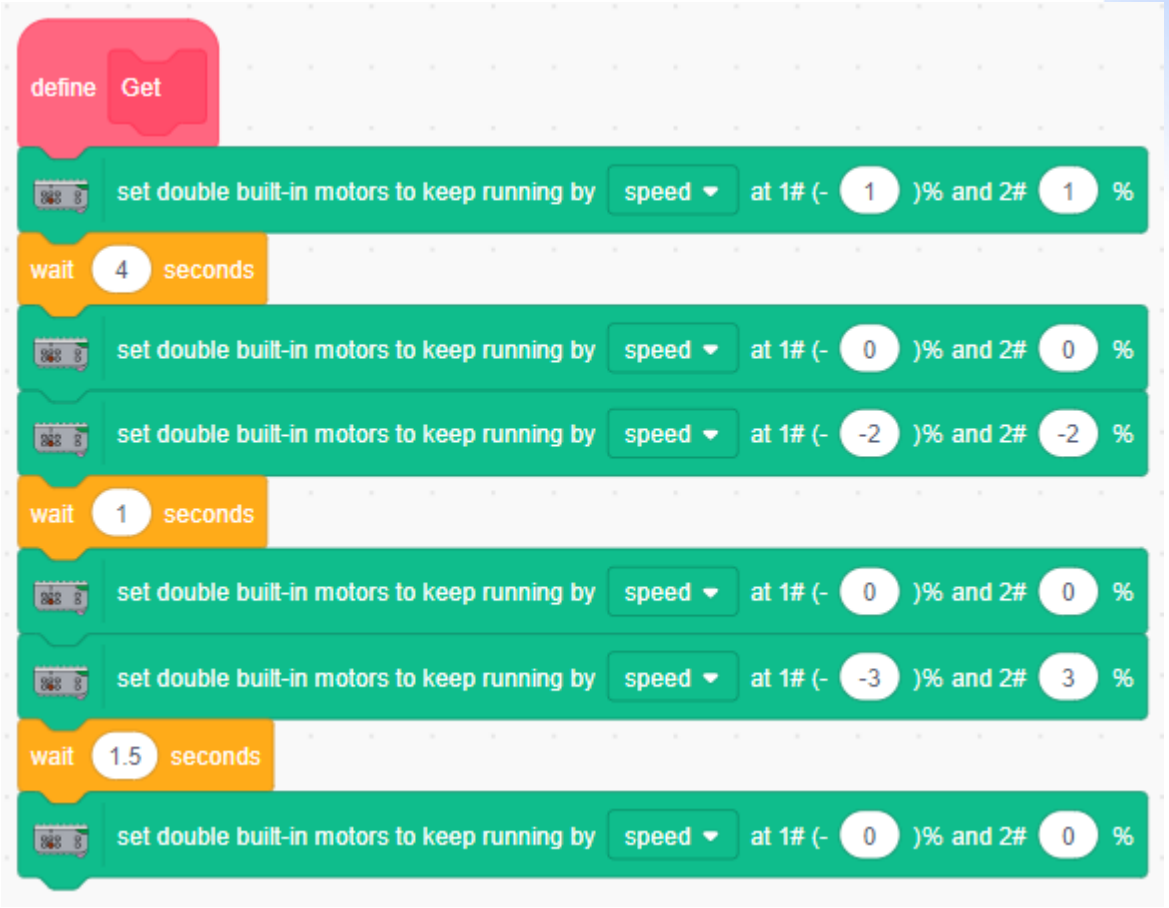


Introductions

Module Explanation

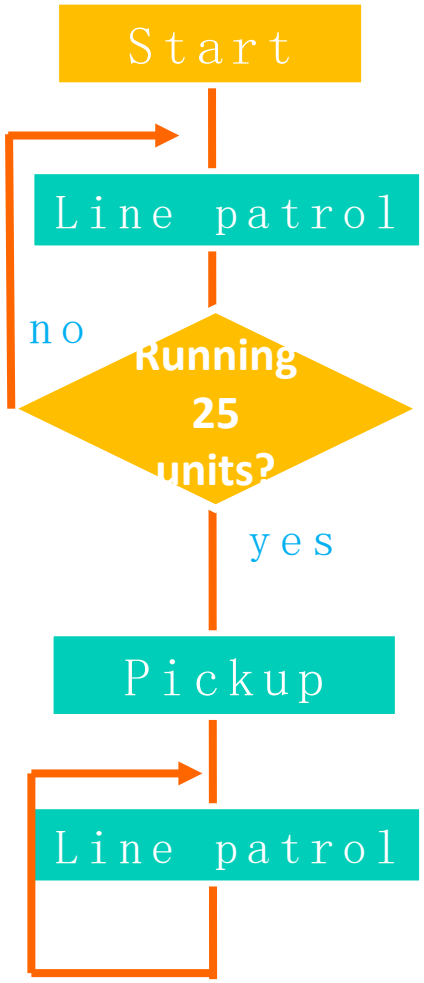
Simplify the program by using custom blocks.

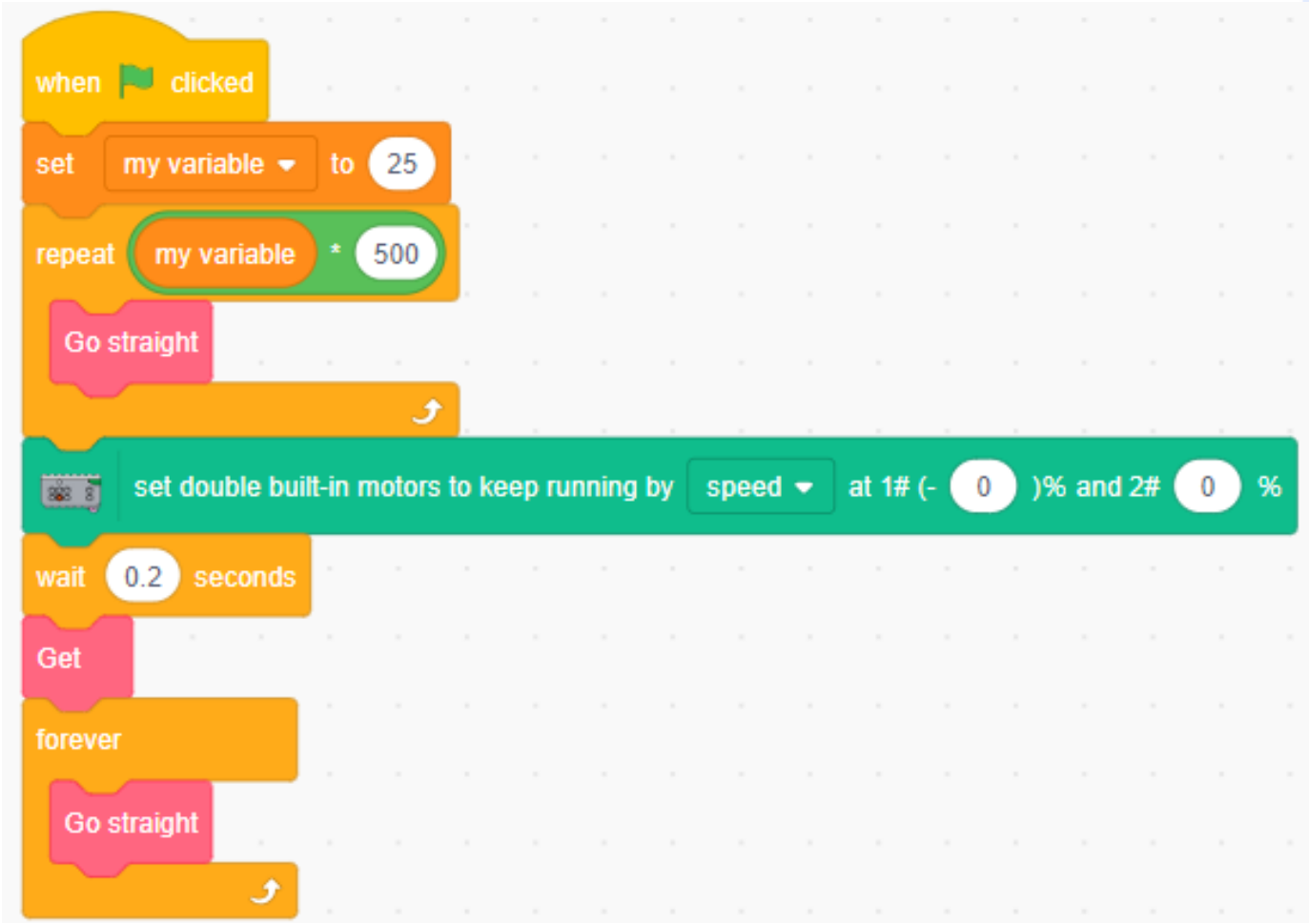




Introductions

Module Explanation

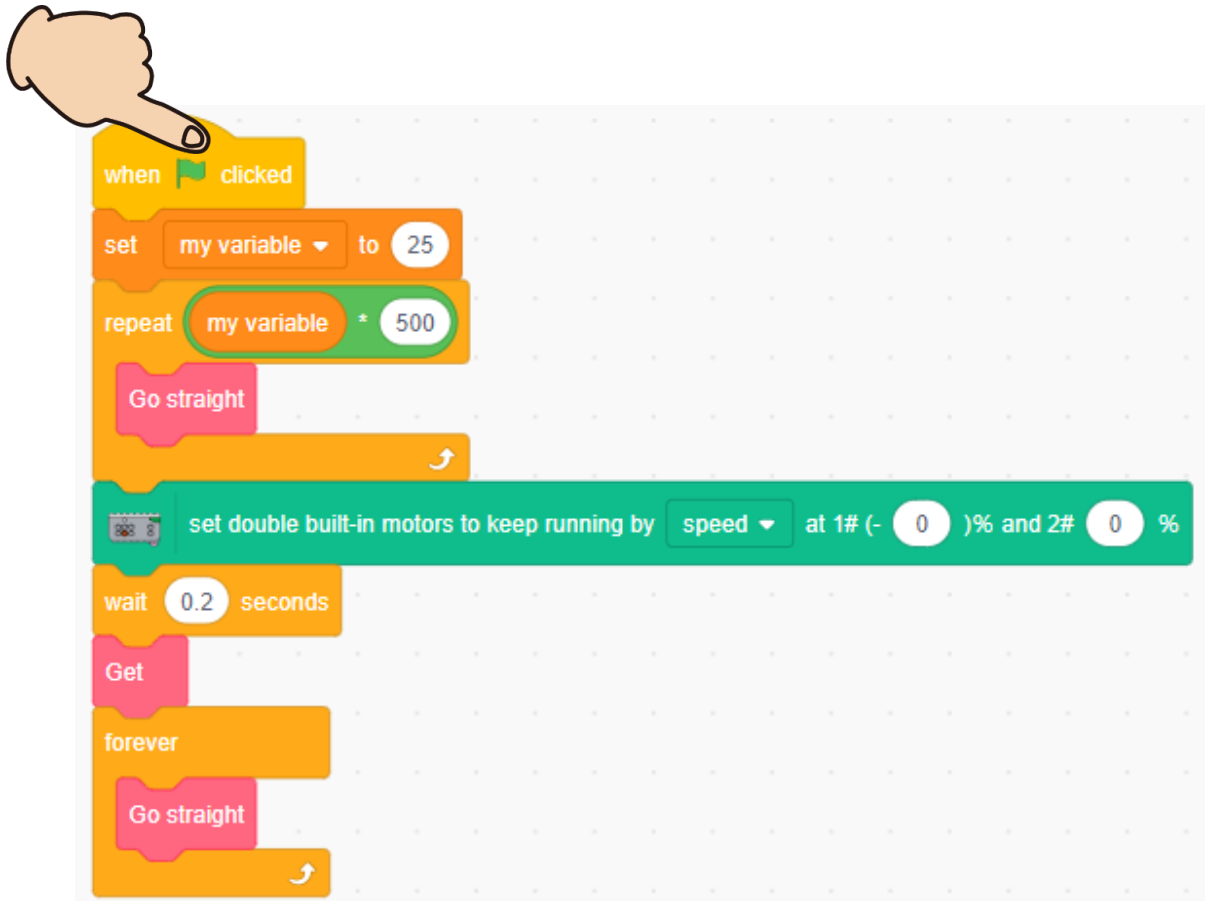


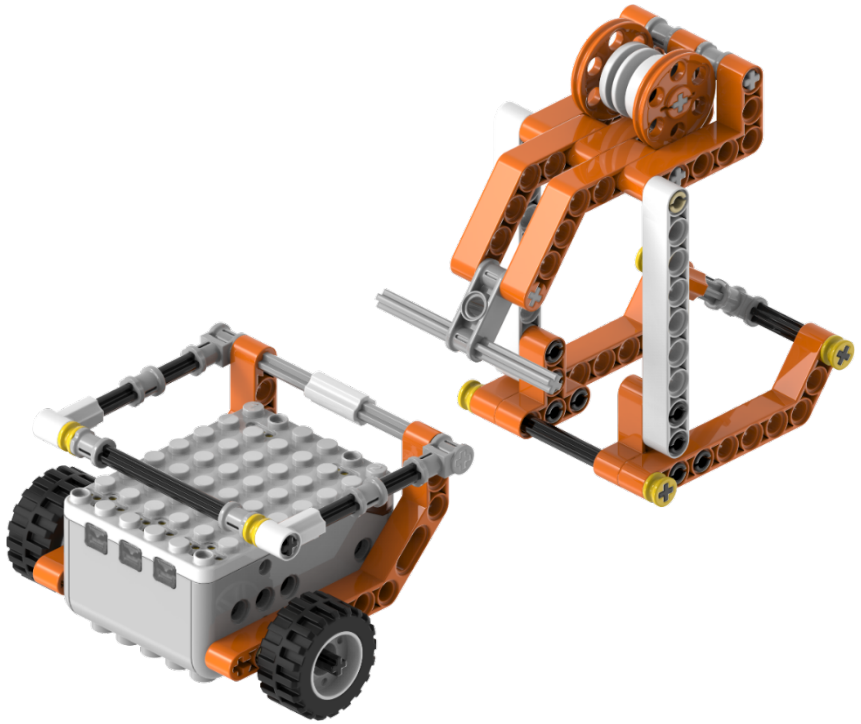


Play and Try

Let's play:

Click the Start button to see if the robot can get the goods back.

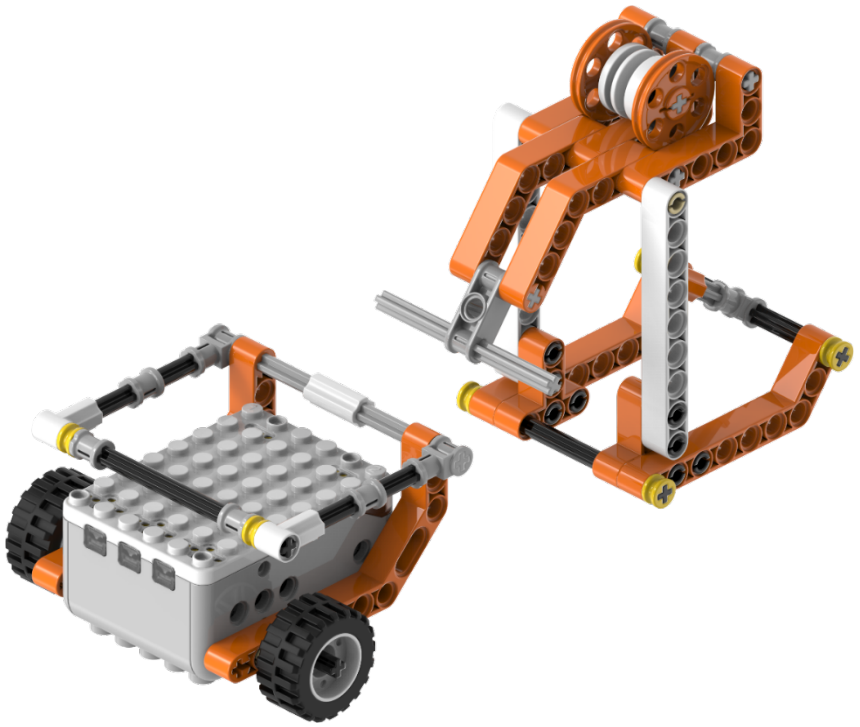




Play and Try

Let's compete:

Contestants, get ready! Let's see whose car can transport the goods back to the starting point the fastest!



Kids, is there a way to make the robot even stronger?

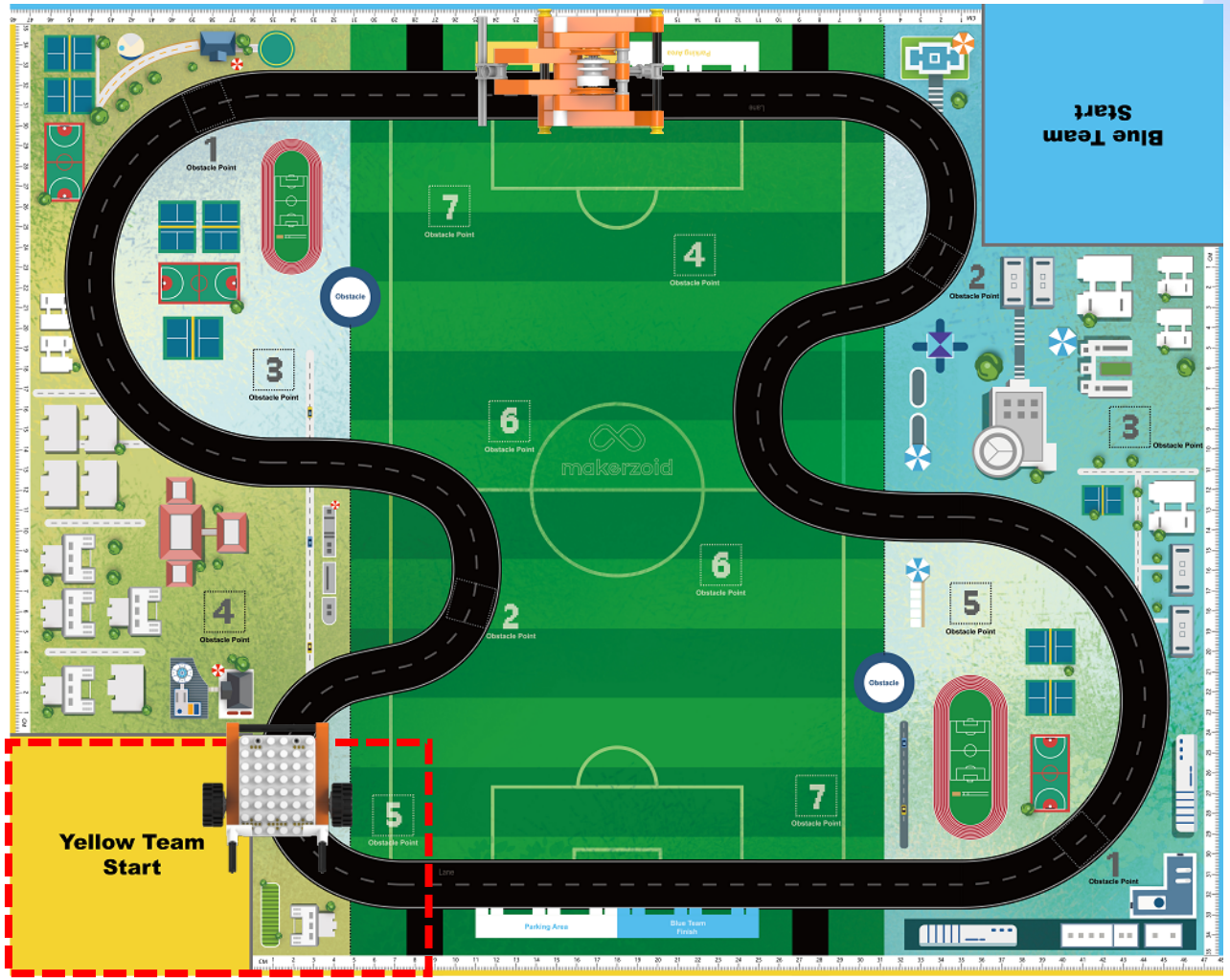
CREATION

Create

1. How can we make the robot repeat its task?

The robot cannot be adjusted manually anymore.

Finish Point

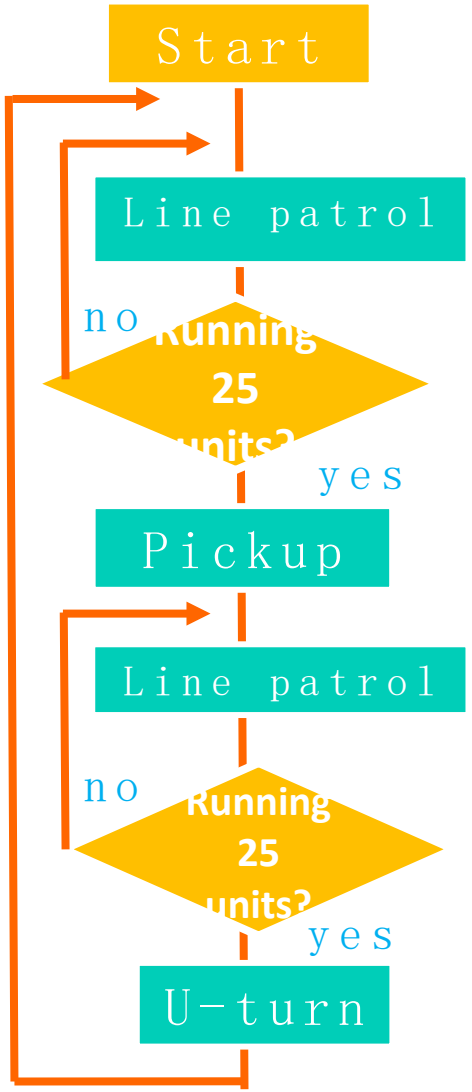


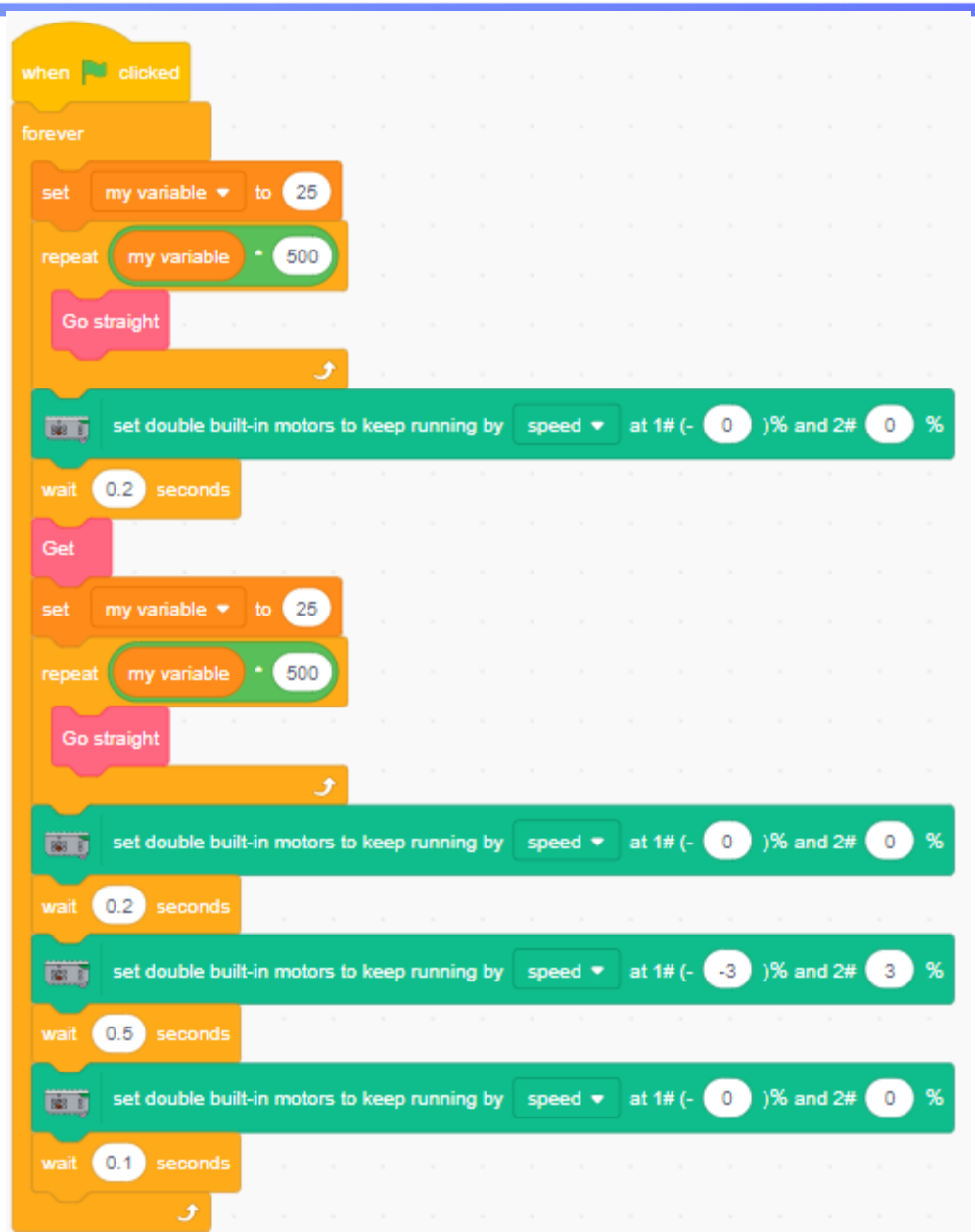
Start Point

Introductions

Module Explanation

Repeat



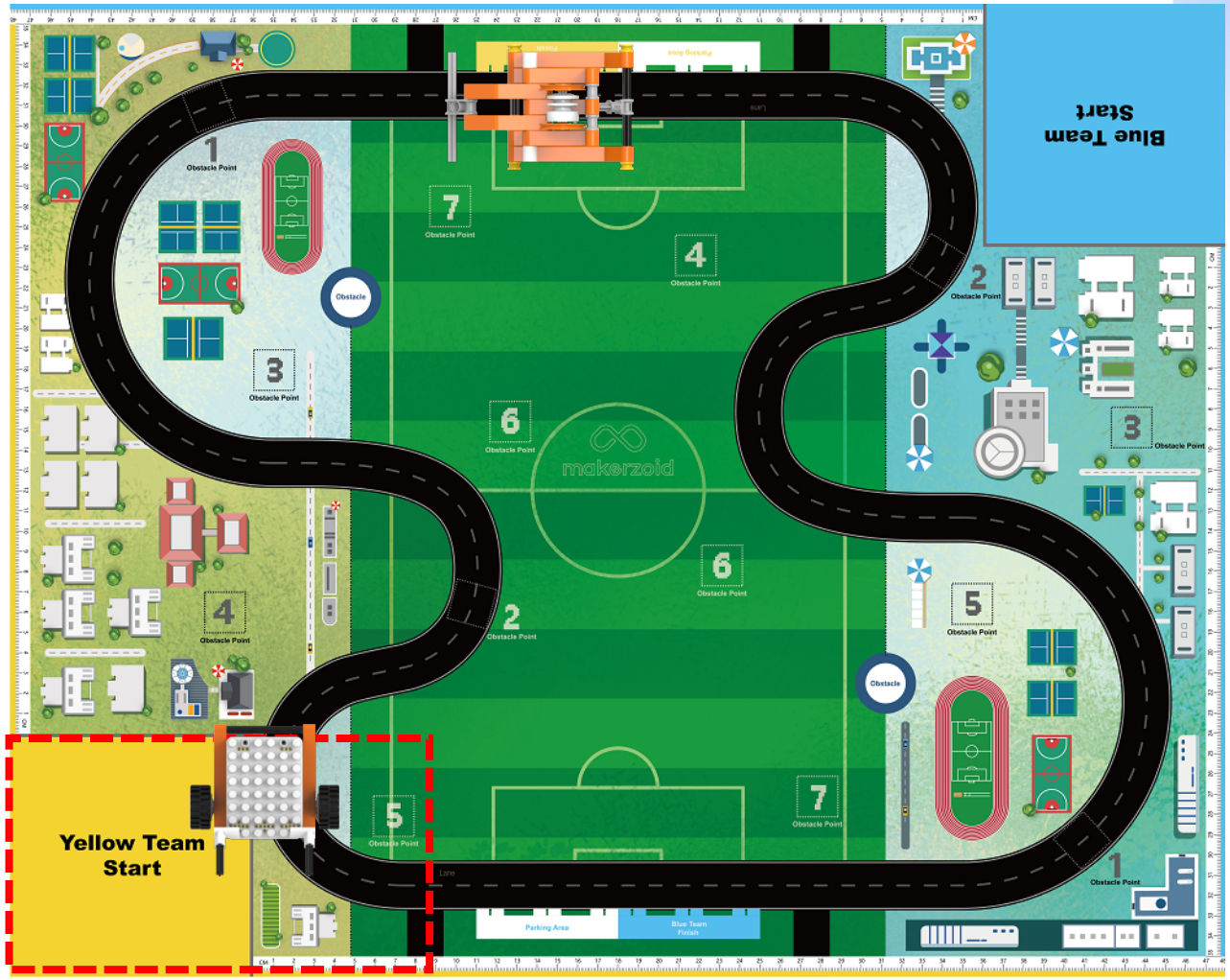


Create

1. How can we make the robot repeat a task?

Try to make the robot complete the task automatically.

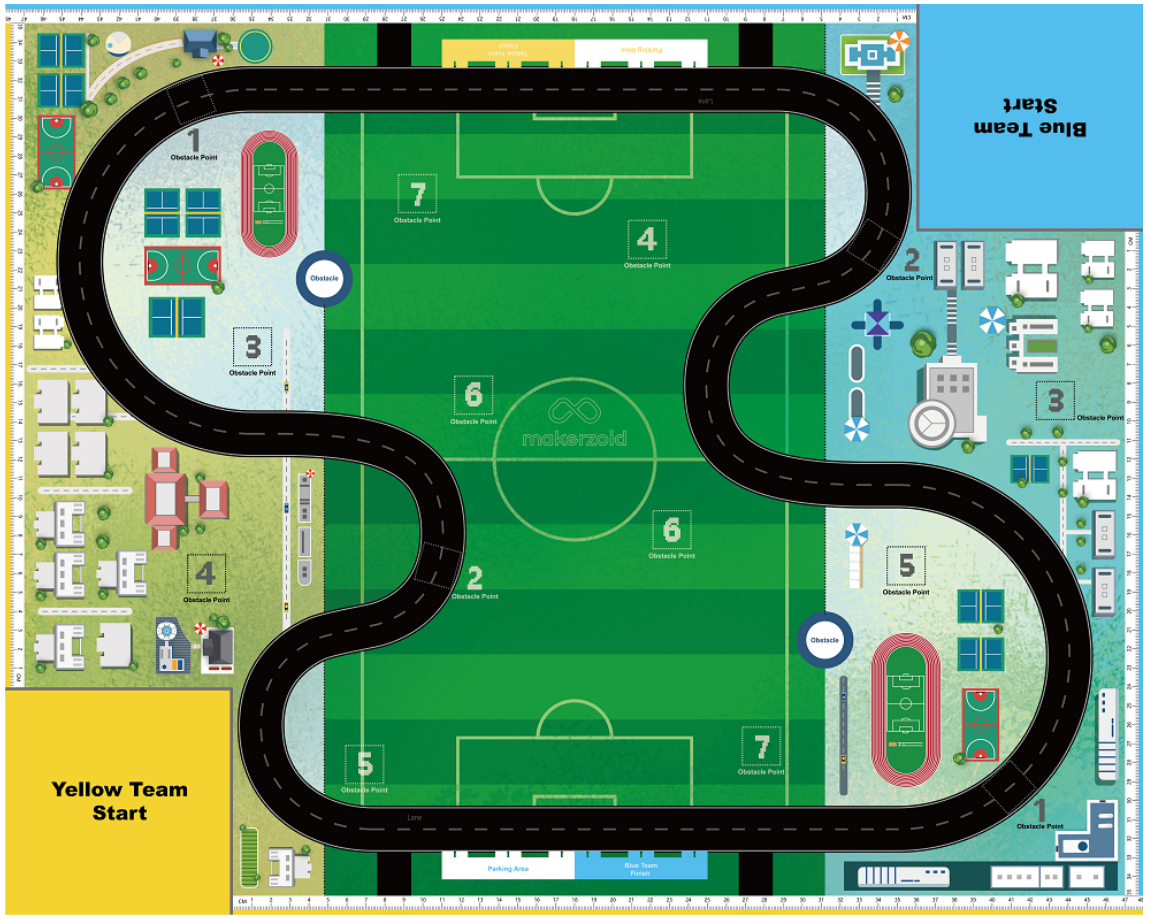
Finish Point



Start Point

Create

2. Chasing competition



Introductions

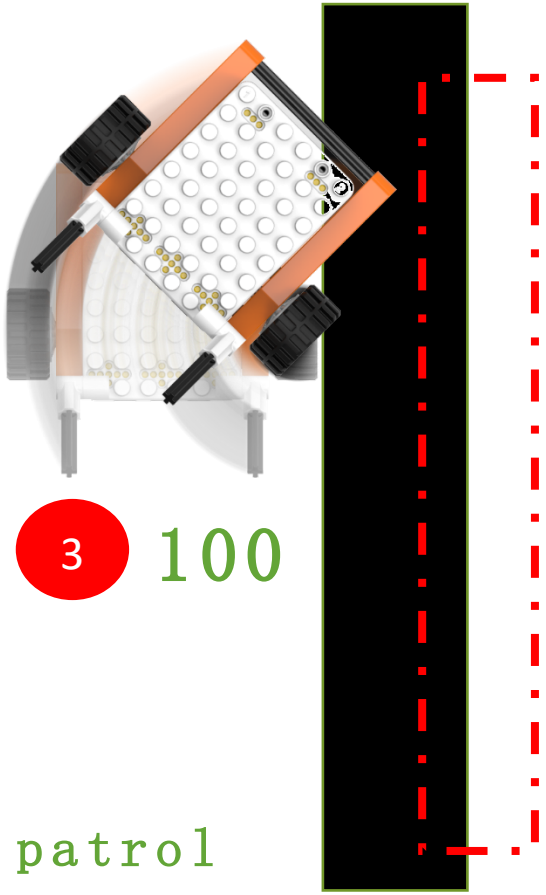
Module Explanation

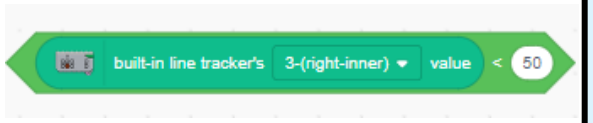
Sometimes a part of the program may need to be used multiple times, which can cause excessive repetition of program units. We can simplify the program by using custom blocks.

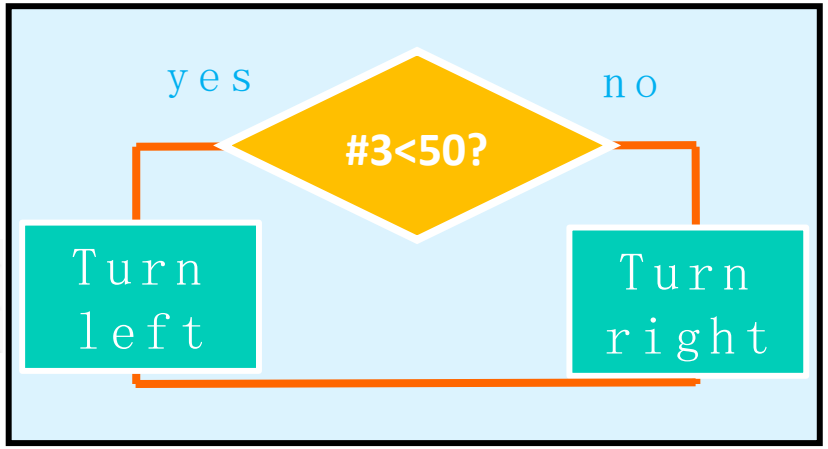
SUMMARY

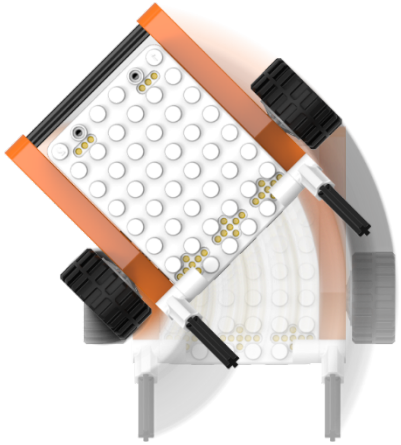
Summary

1.Right line patrol





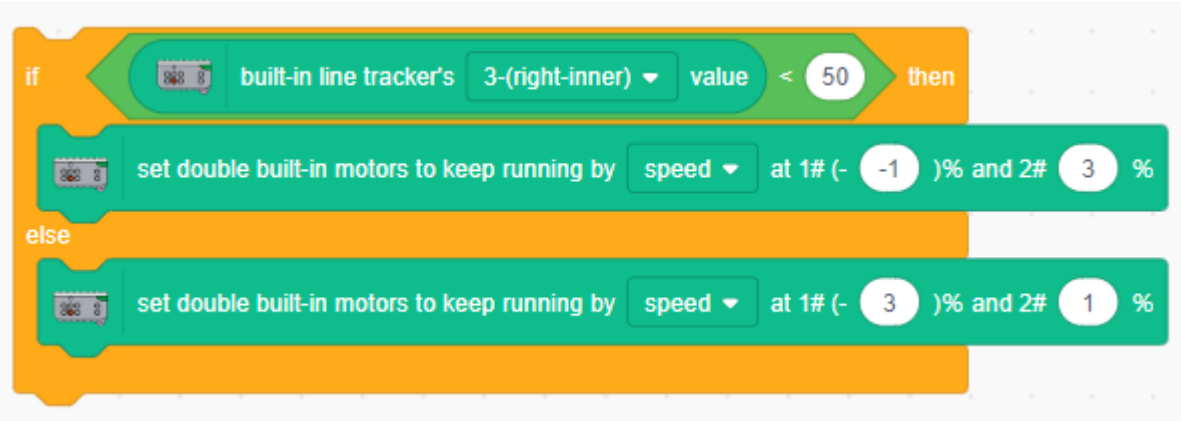




3 0

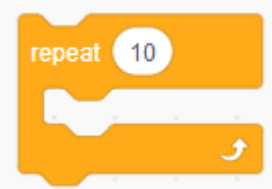
Right line patrol

average value= (100+0) /2 = 50

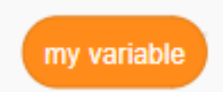


Summary

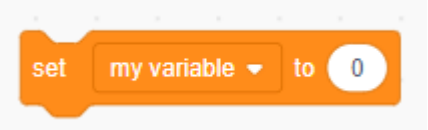
2. Module Explanation



Make the subroutine loop a certain number of times.



A variable is a quantity that changes during the course of a program.



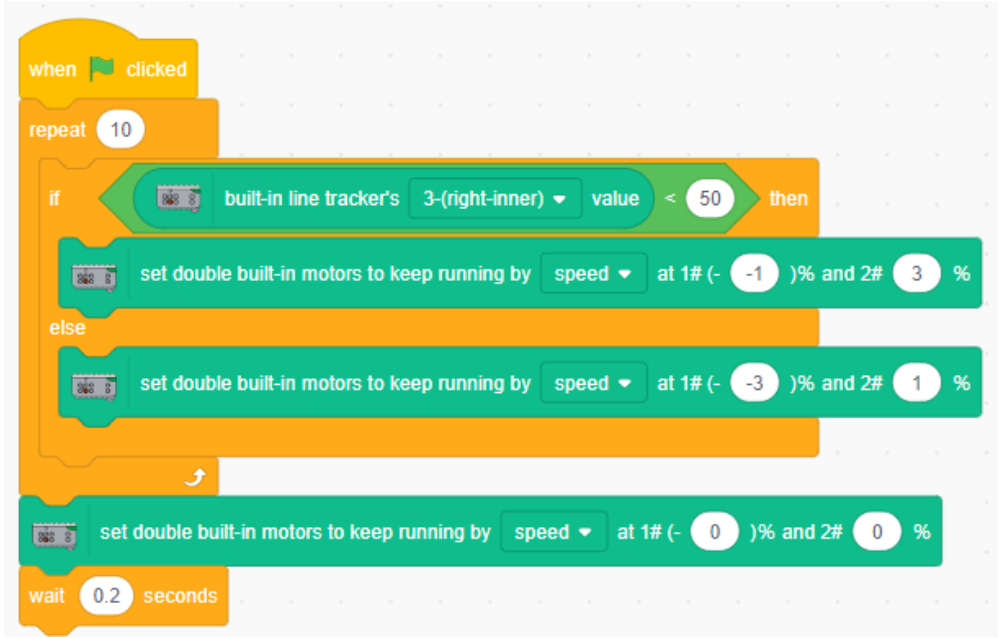
A variable can be assigned or set.

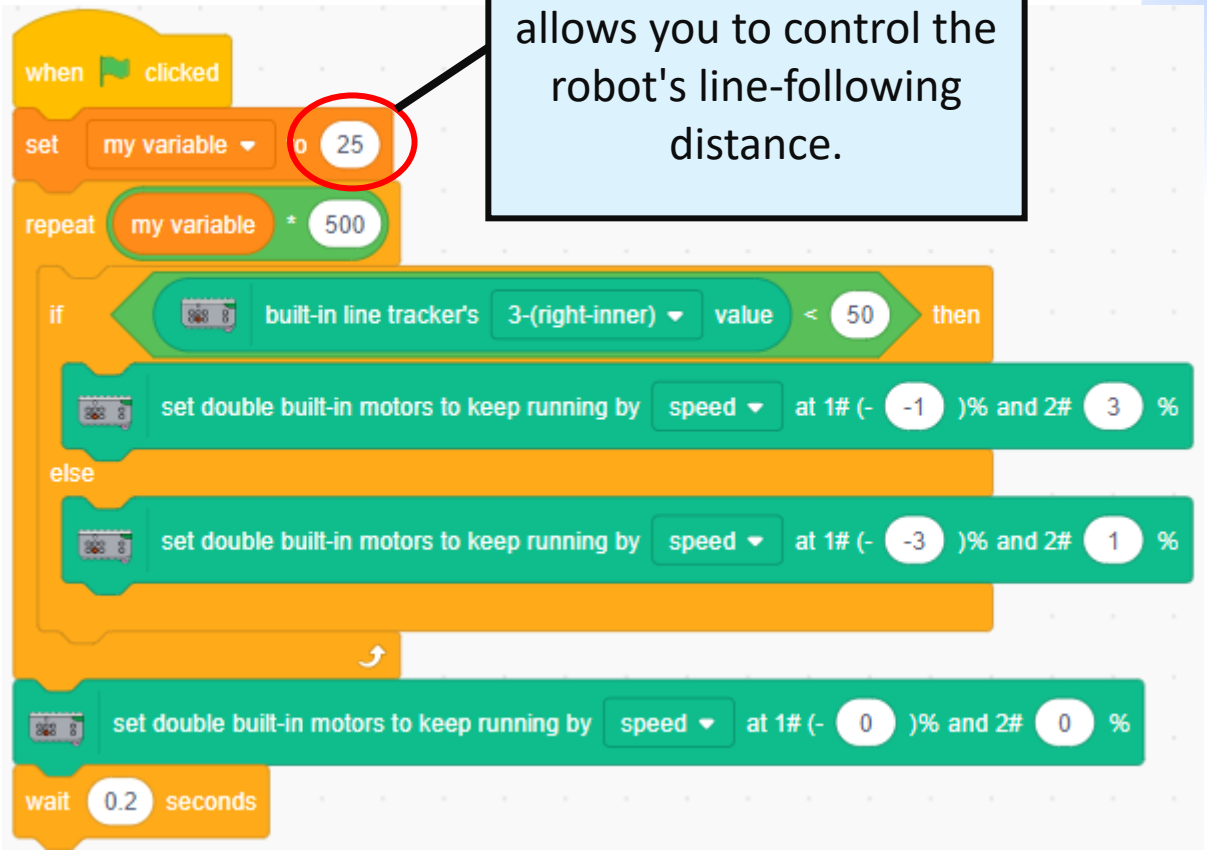
Multiply two sets of data and output the result.

Summary

3. Line patrol distance

Make the robot follow a line for a certain distance.



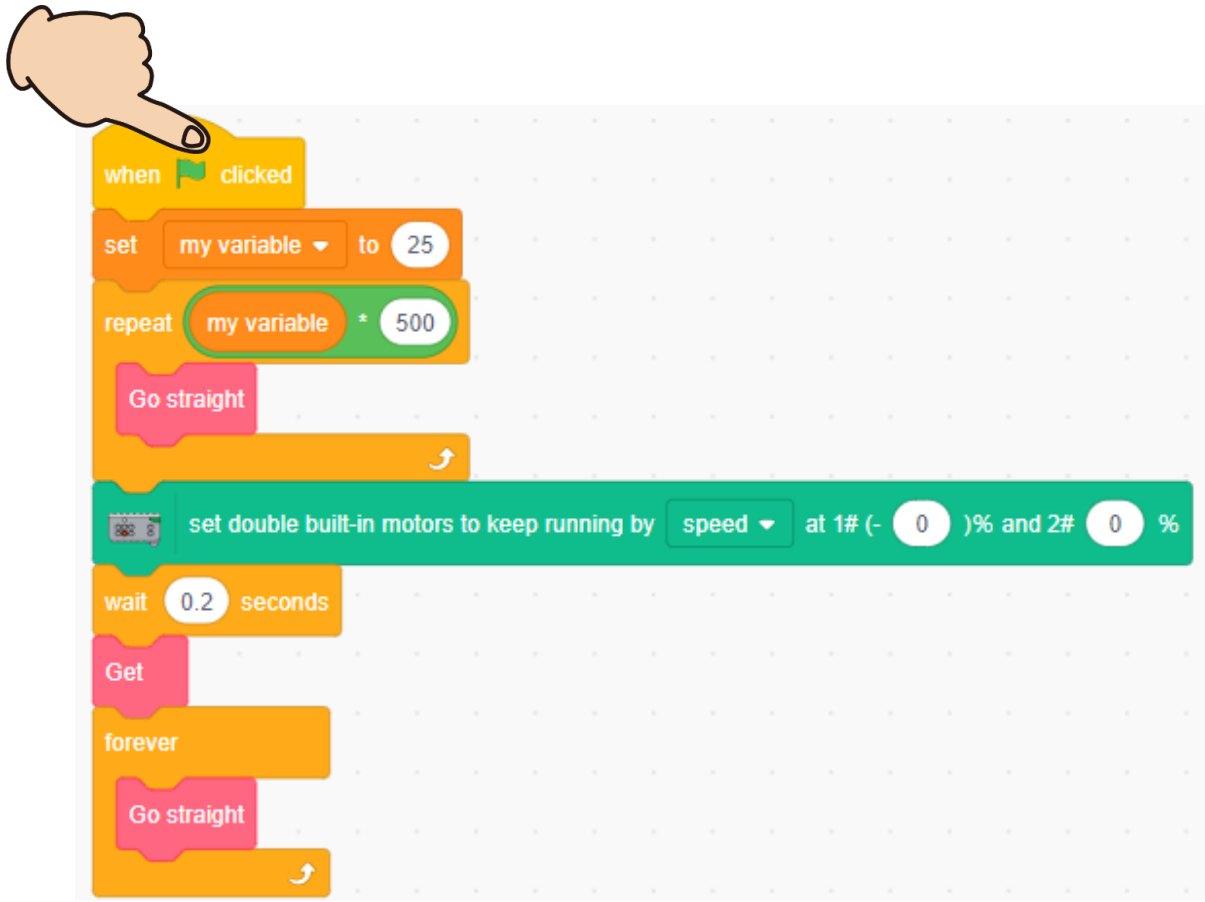


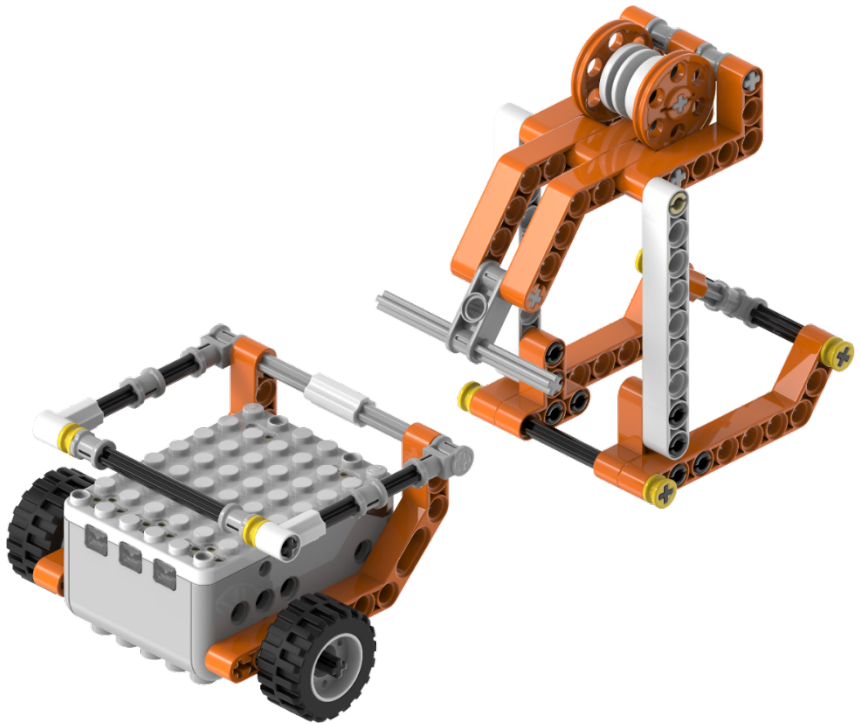
Adjusting this value allows you to control the robot's line-following distance.

Running the program offline showed that the robot barely moved. After testing, we found that 500 iterations allow the robot to move a certain distance, so we will use 500 as a unit.

Summary

4. Complete the competition





SHARE WITH YOUR PARENTS

Share the knowledge about the Carrying Competition with your mom and dad when you get home!