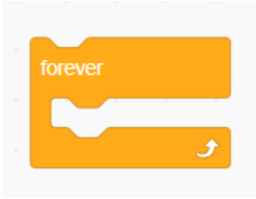
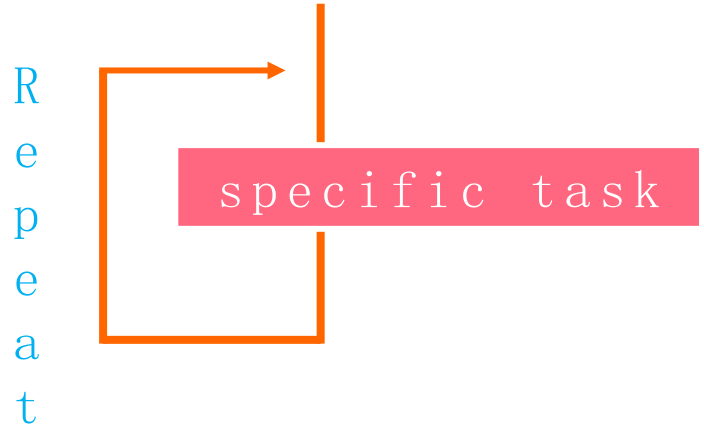
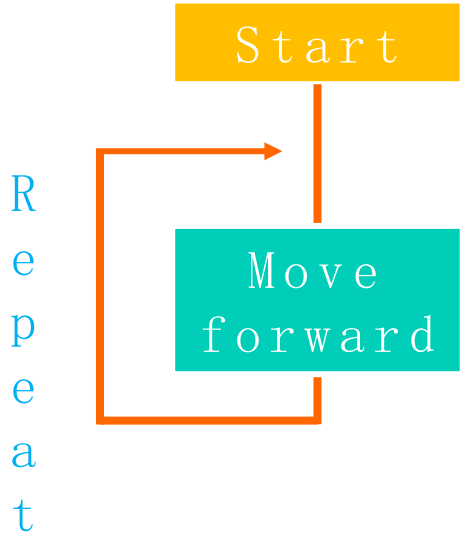
Course Review

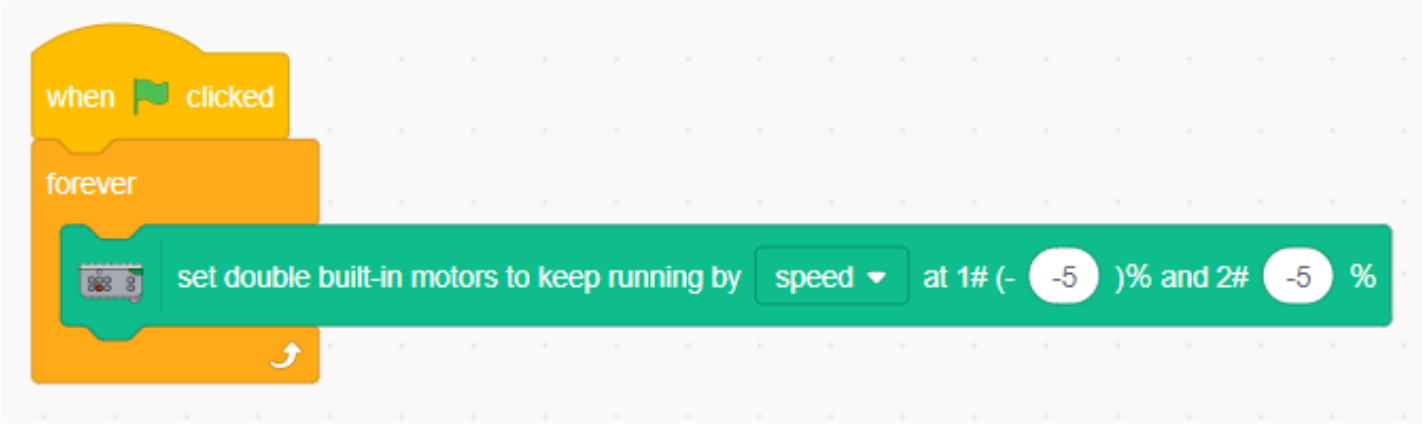
1. Repeat



Make the Superbot Master program to repeatedly perform specific tasks.



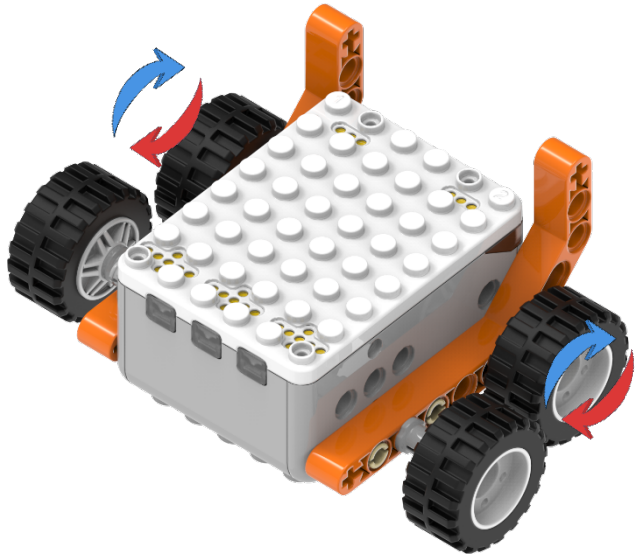




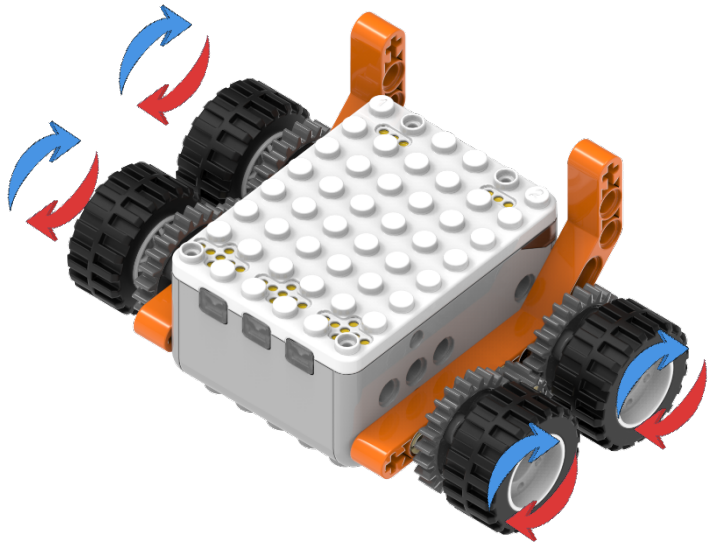
Course Review

Four-wheel drive and two-wheel drive:

A car that can only get power from the front wheels or the rear wheels is a two-wheel drive car.

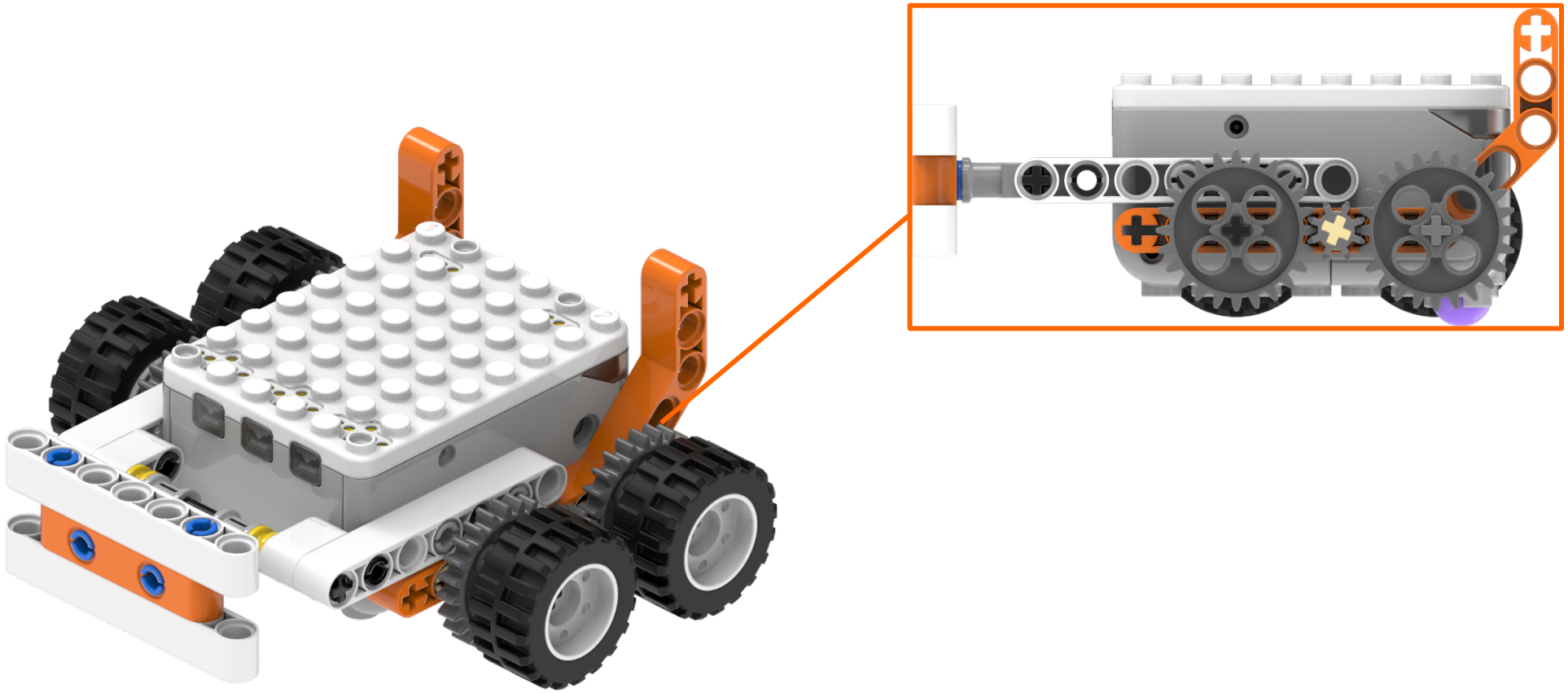


A vehicle that can drive all four wheels is a four-wheel drive vehicle. Off-road vehicles are four-wheel drive vehicles.



Course Review

3. Convert the sumo robot



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

Racing is a sport that is divided into two categories: track racing and non-track racing. It has a history of more than 100 years. The earliest racing competitions were held on roads between cities. Later, many drivers were reluctant to participate in road racing because of the great dangers of road racing, so professional racing tracks came into being.

Dear kids:
How to control the distance traveled by the car through the program?
How to control the car to turn?

Let's work together to build a "racing car" and embark on our journey of exploration!

暗物智能
DARKMATTER AI

Racing Competition

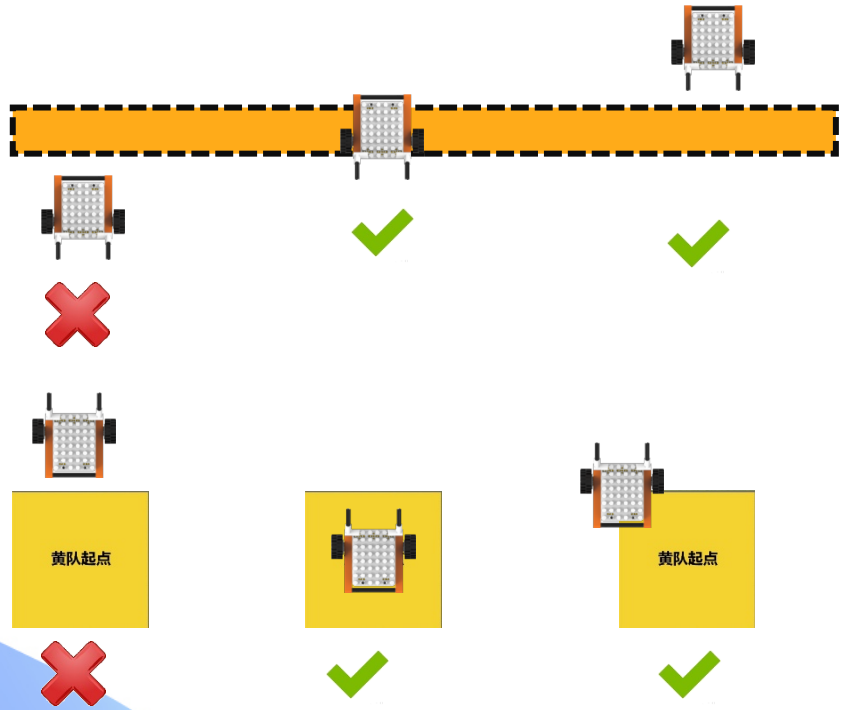
AI Courses

Scenarios

Competition Rules:

1. The contestant's car starts from the starting point and reaches the specified turning point, and then returns to the starting point from the turning point.

2. See who can return in the shortest time.



Scenarios

Question :

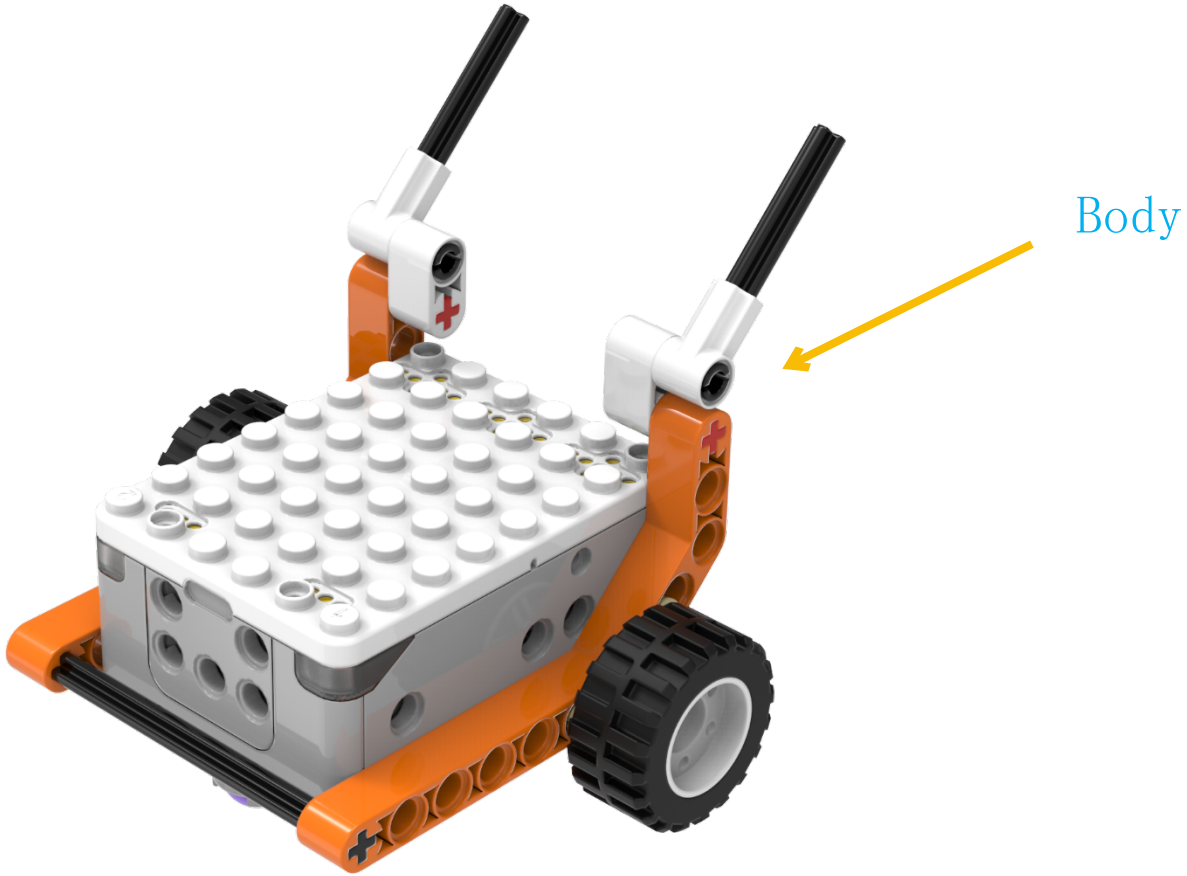
Dear kids, Do you know

1. How to control the distance traveled by the car through the program?

2. How to control the car to turn?

Scenarios

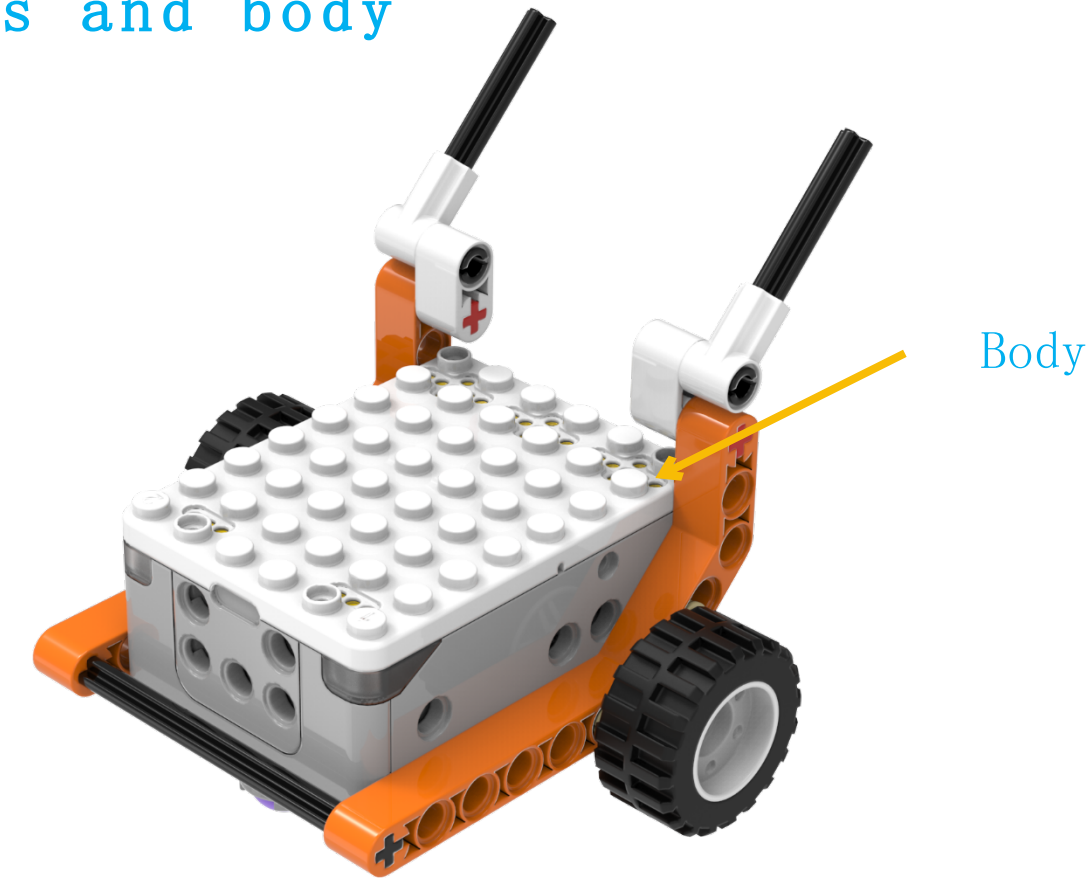
Today, you are all little engineers. Let's build the Racing Car together!



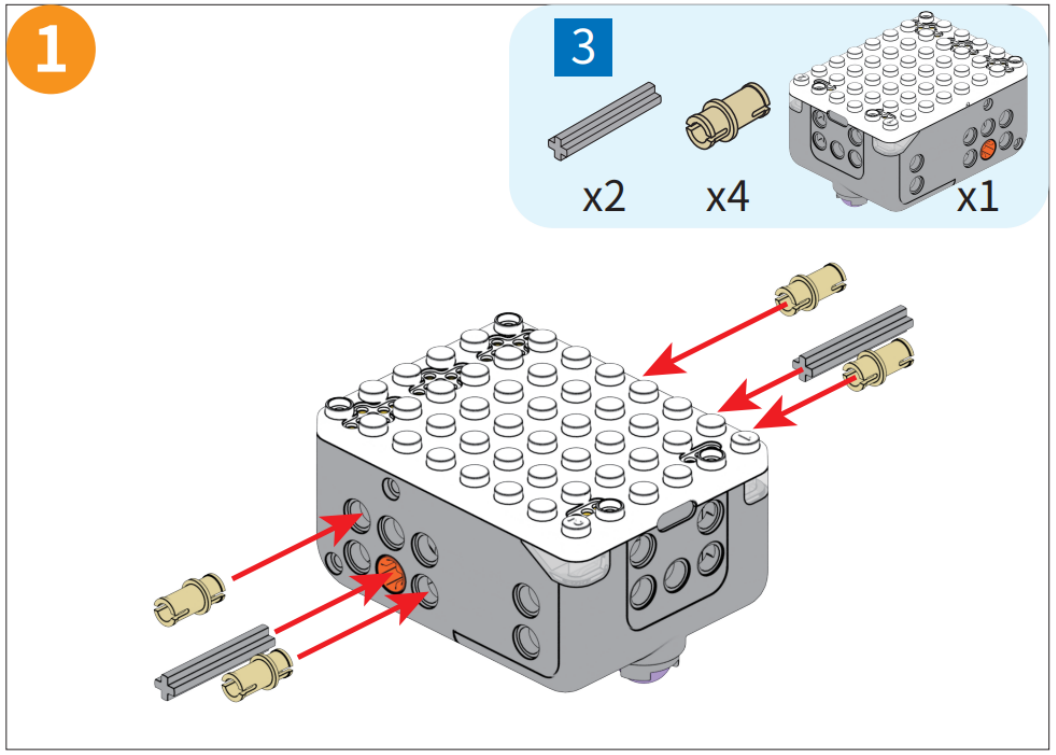
ASSEMBLY

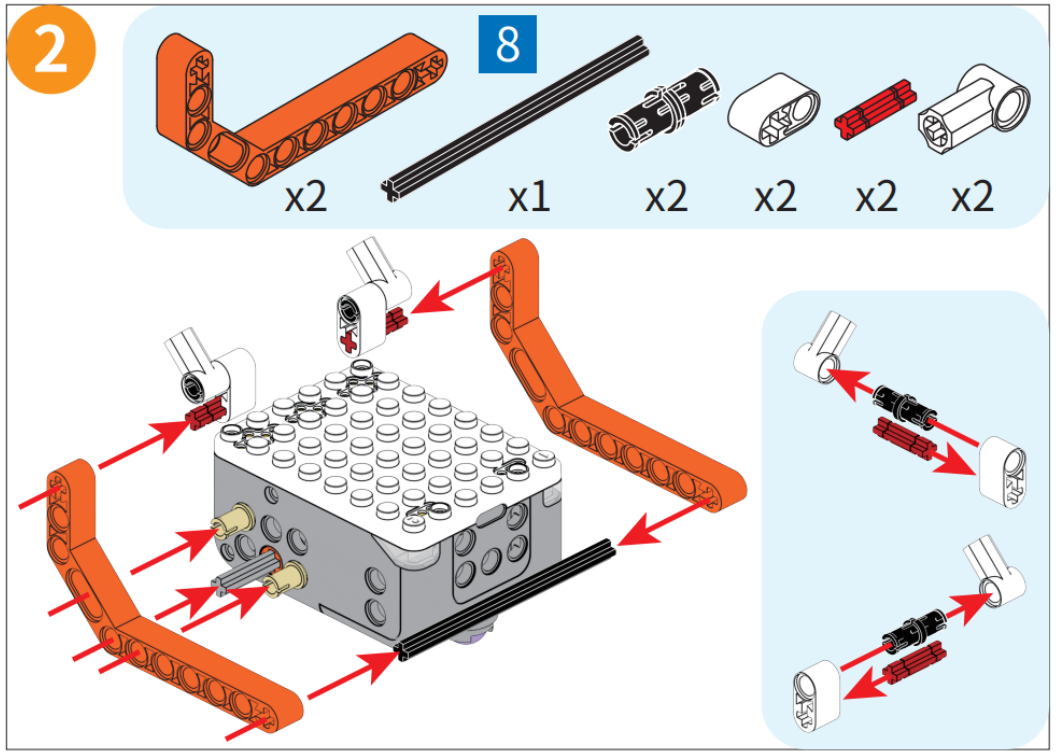
The Final Model

Assembling the countermeasure components and body



Assembly

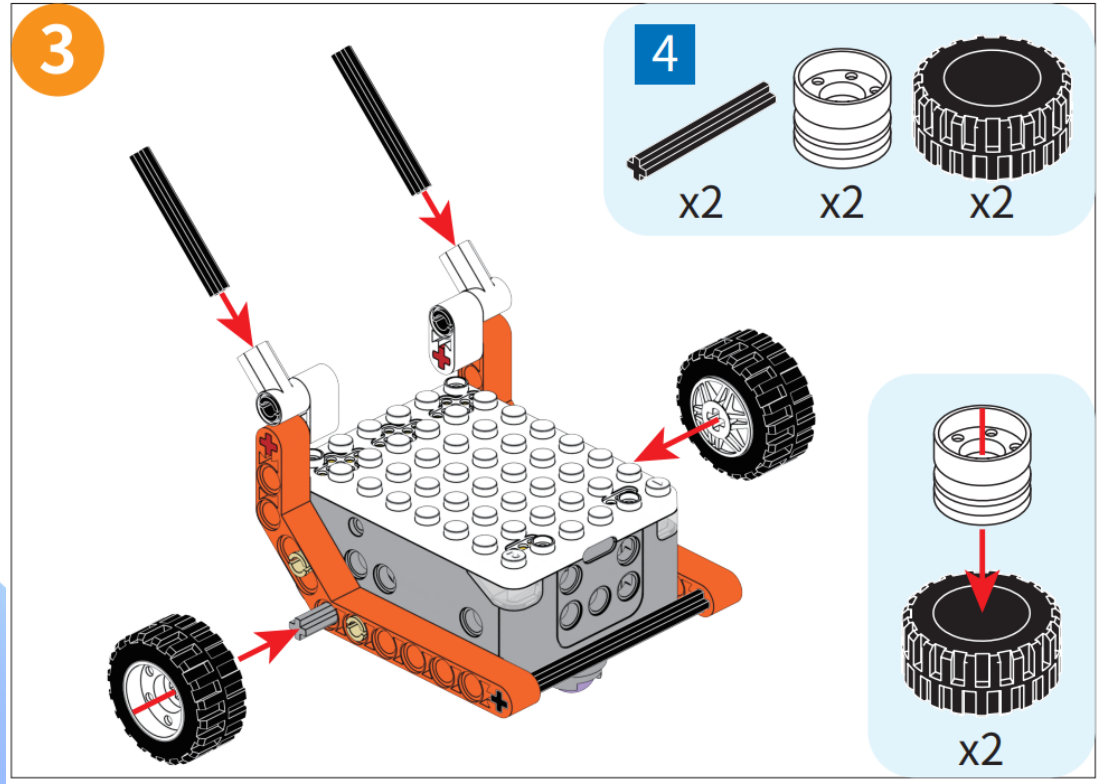


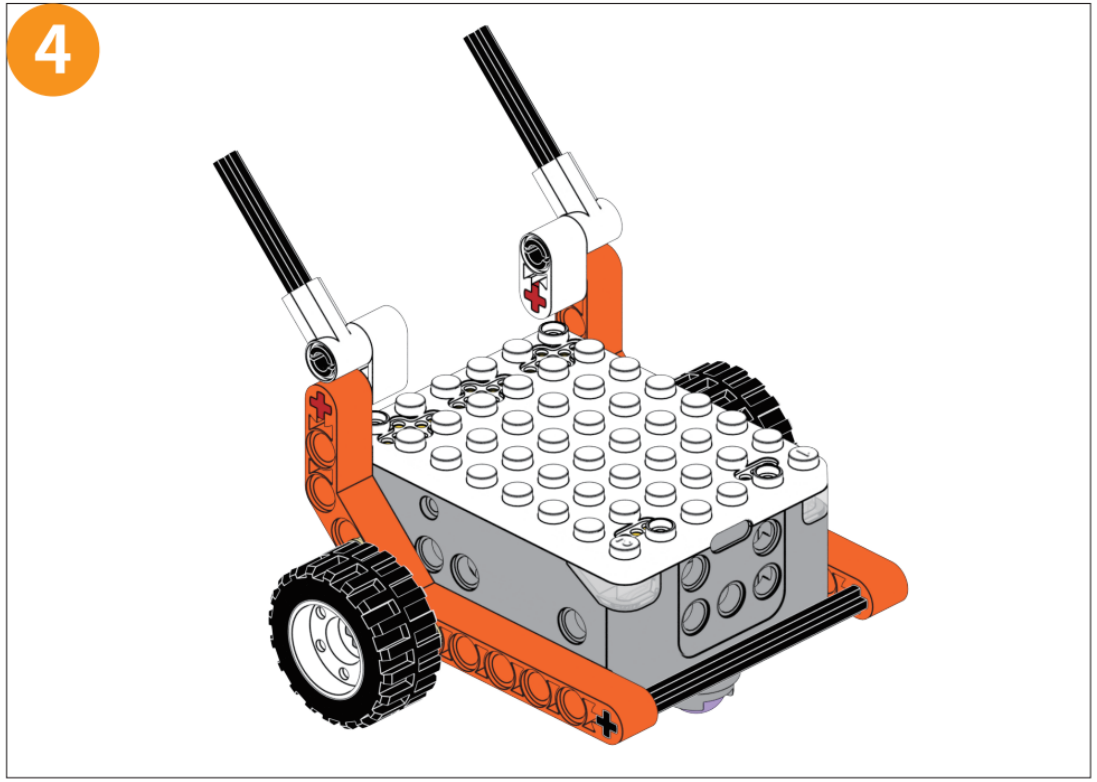


Assembly

Assembling the wheels

Assembly





PROGRAMMING

Introductions

Sequence Structure

In real life, no matter what we do, there are always ideas, processes and steps. The same is true for robots. Flowcharts can be used to present ideas or steps to complete a task. In flowcharts, different shapes and symbols represent different meanings.

Shape Symbols	Representation	Shape Symbols	Representation
	Start & End		Process
	Judge		Input & Output

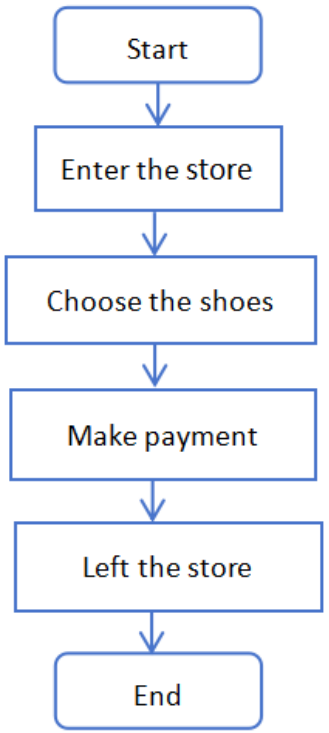
Introductions

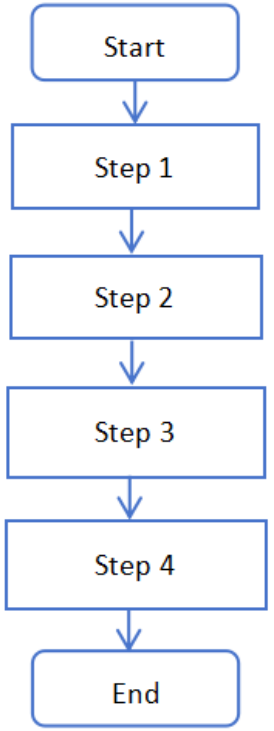
Sequence Structure

Sequential structure programming is the simplest.
You just need to write the corresponding statements in the order of solving the problem.
Its execution order is from top to bottom, one by one.

Flowchart Description

Sean walked into the shoe store, found a pair of running shoes that he liked and fit, paid for them, and finally left the store.



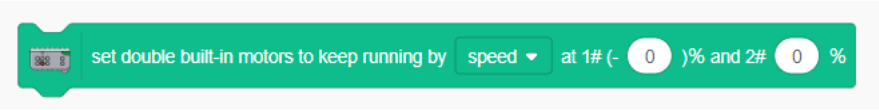


Introductions

Module Explanation

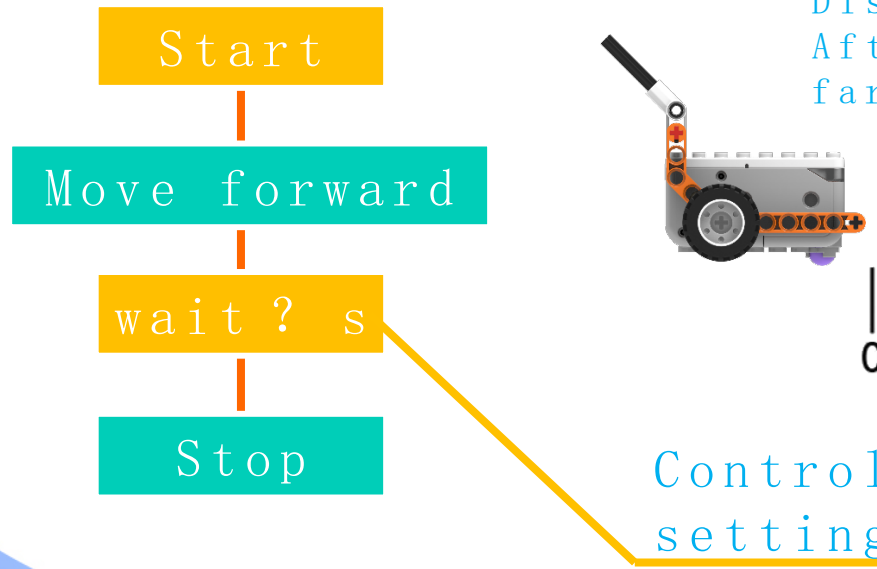
Make the Superbot Master wait for a certain period of time.

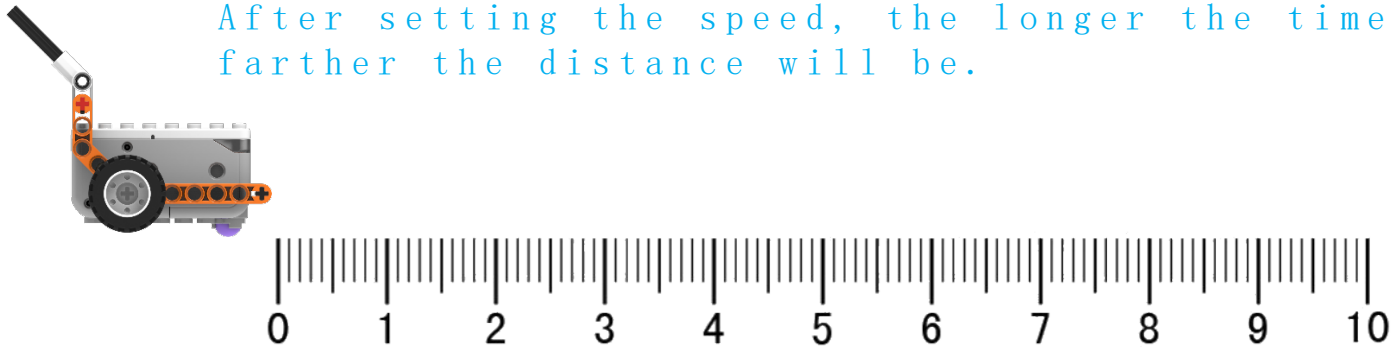
wait ? s



Setting the speed to 0 will stop the robot.

Distance = Speed x Time
After setting the speed, the longer the time is, the farther the distance will be.

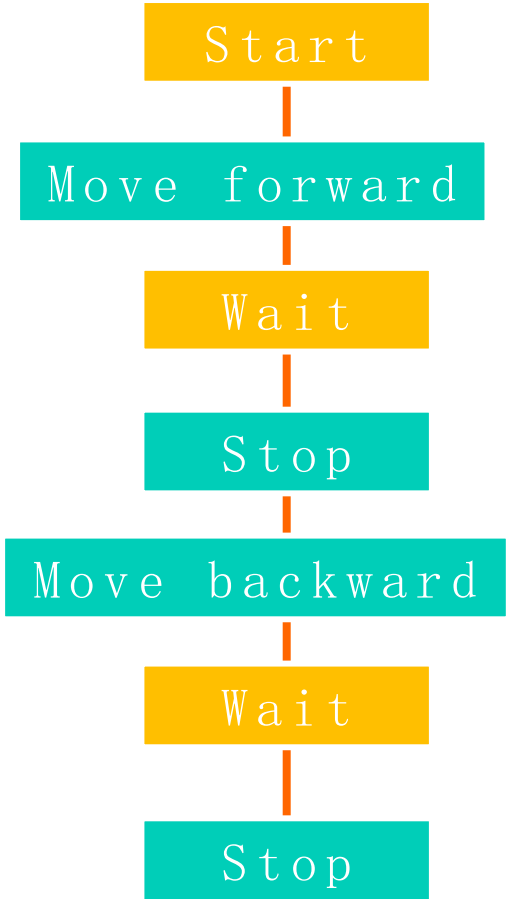


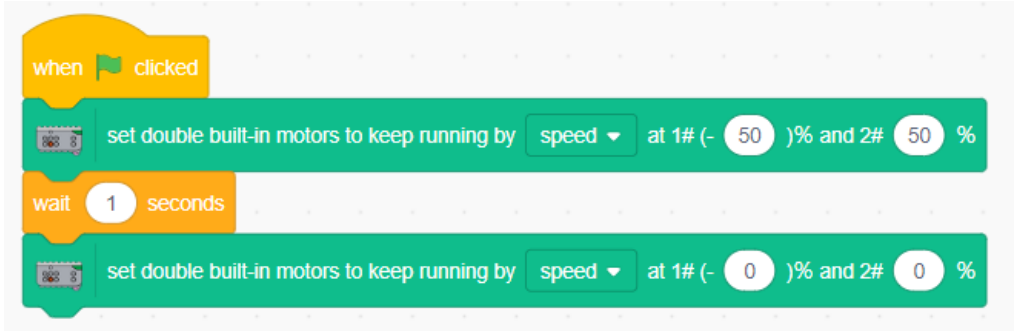


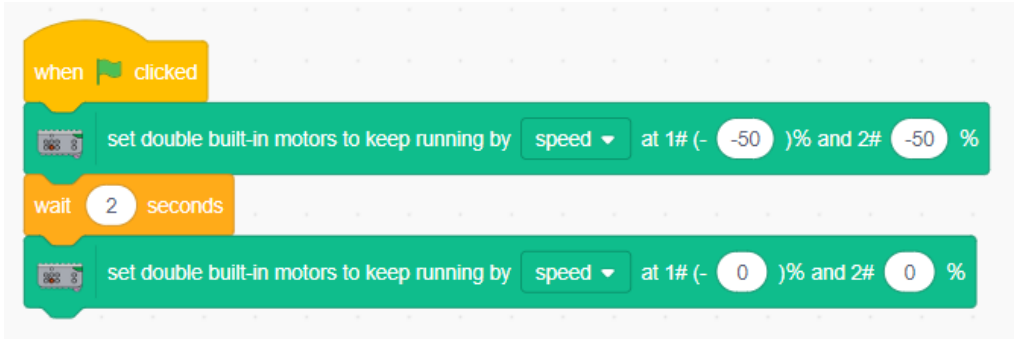
Control the distance the motor travels by setting the length of time

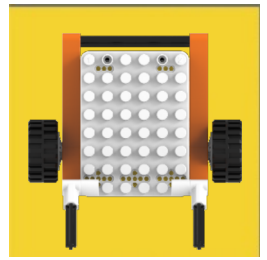
Introductions

Module Explanation





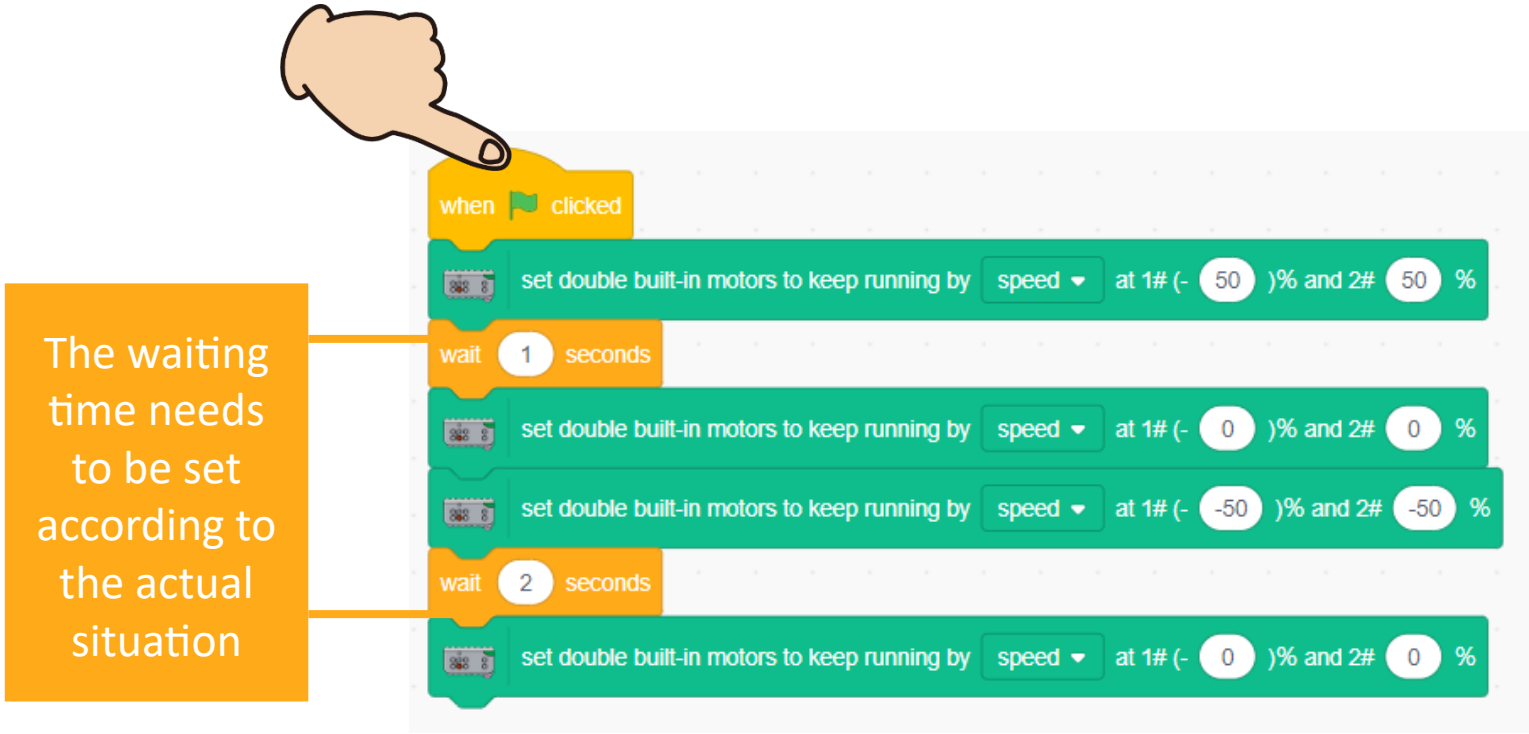




Play and Try

Let's give it a try:

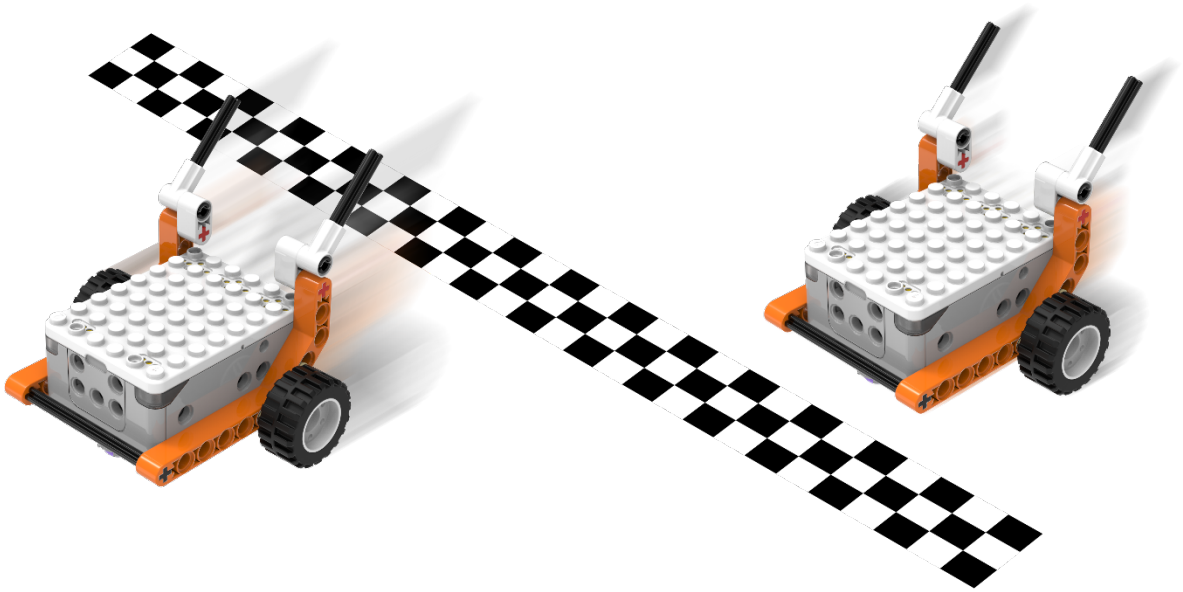
Click the Start button to see if the racing robot can complete the shuttle run.



The waiting time needs to be set according to the actual situation

Play and Try

Get ready, competitors—racing is about to begin!



Kids, is there a way to make the racing robot even more powerful?

CREATION

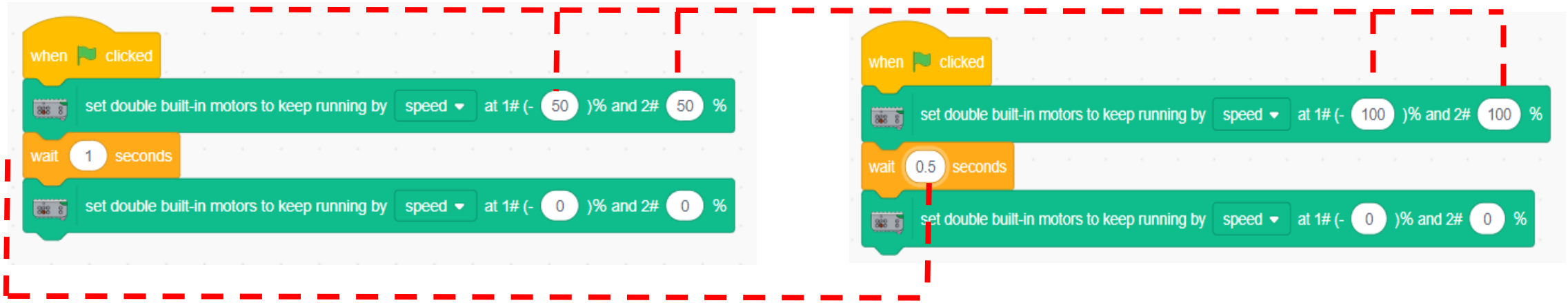
Create

Distance = Speed x Time

To maintain a consistent distance
the time needs to be reduced.

Distance = ↑ Speed X ↓ Time

Speed increase



In order to ensure the same distance,
the time needs to be reduced

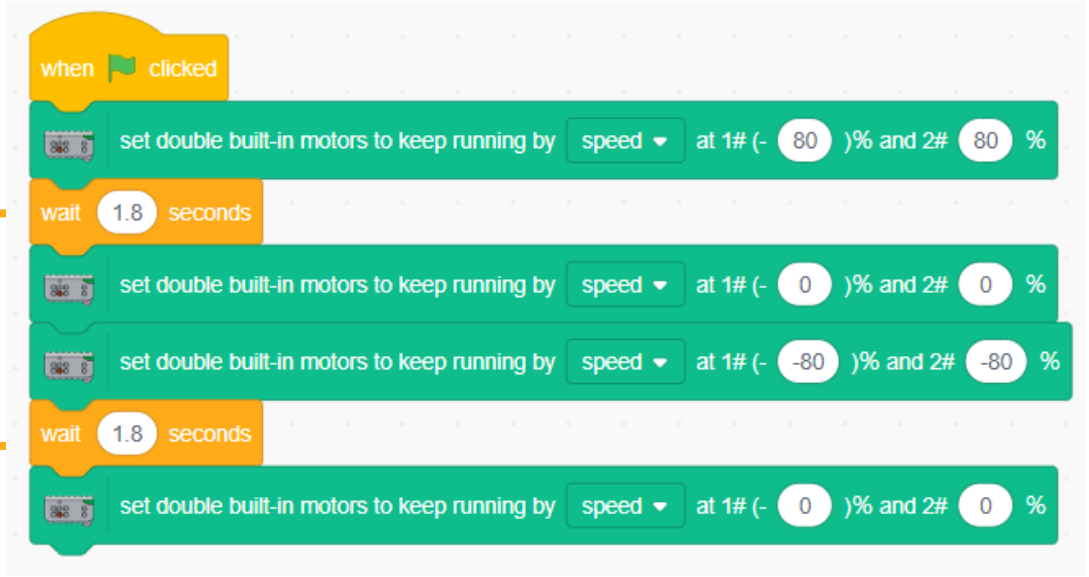
Create

1. Change the power to make it faster

Try increasing the power value to make your robot race faster.

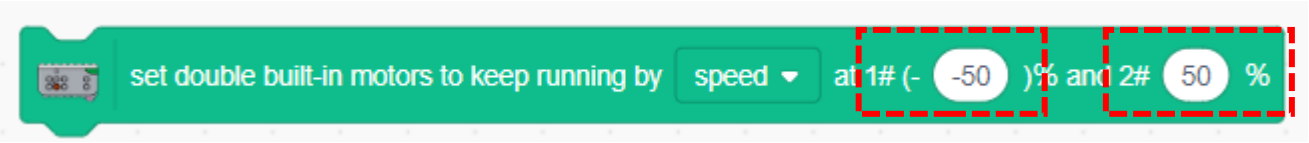
Distance = ↑ Speed X ↓ Time

The waiting time needs to be set according to the actual situation

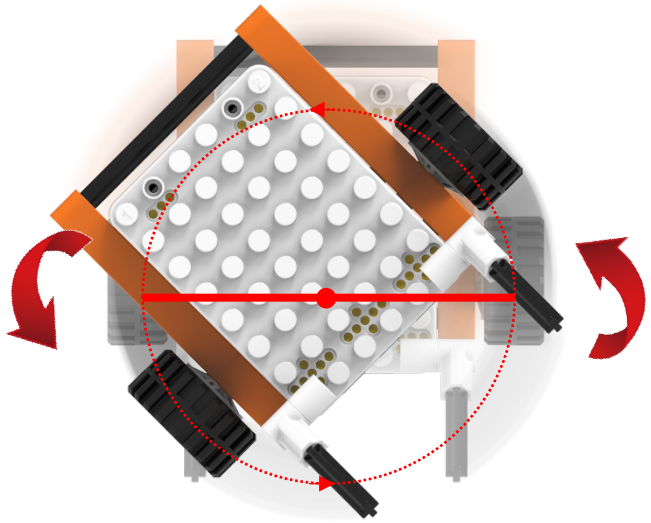


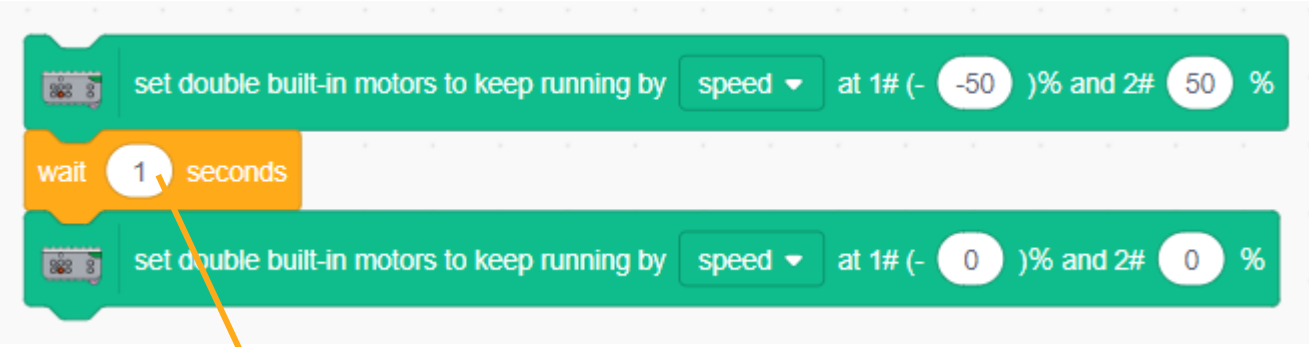
Create

Turning (forward and backward)



Set one motor forward and one motor backward to make the robot rotate around the two wheels.



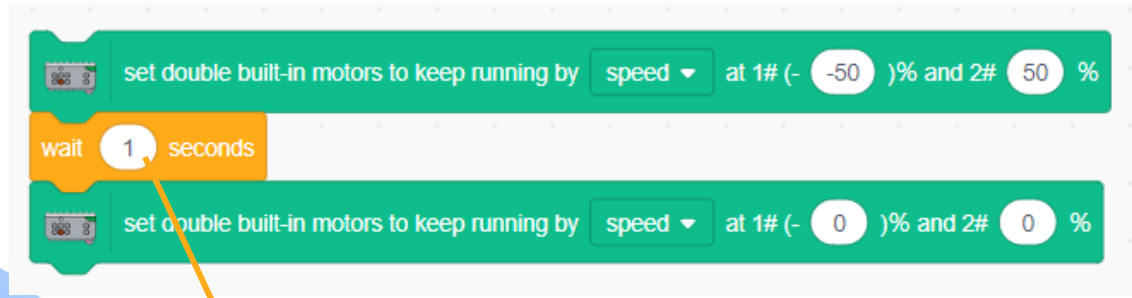


When the turning speed is constant, the amount of turning can be adjusted by controlling the time

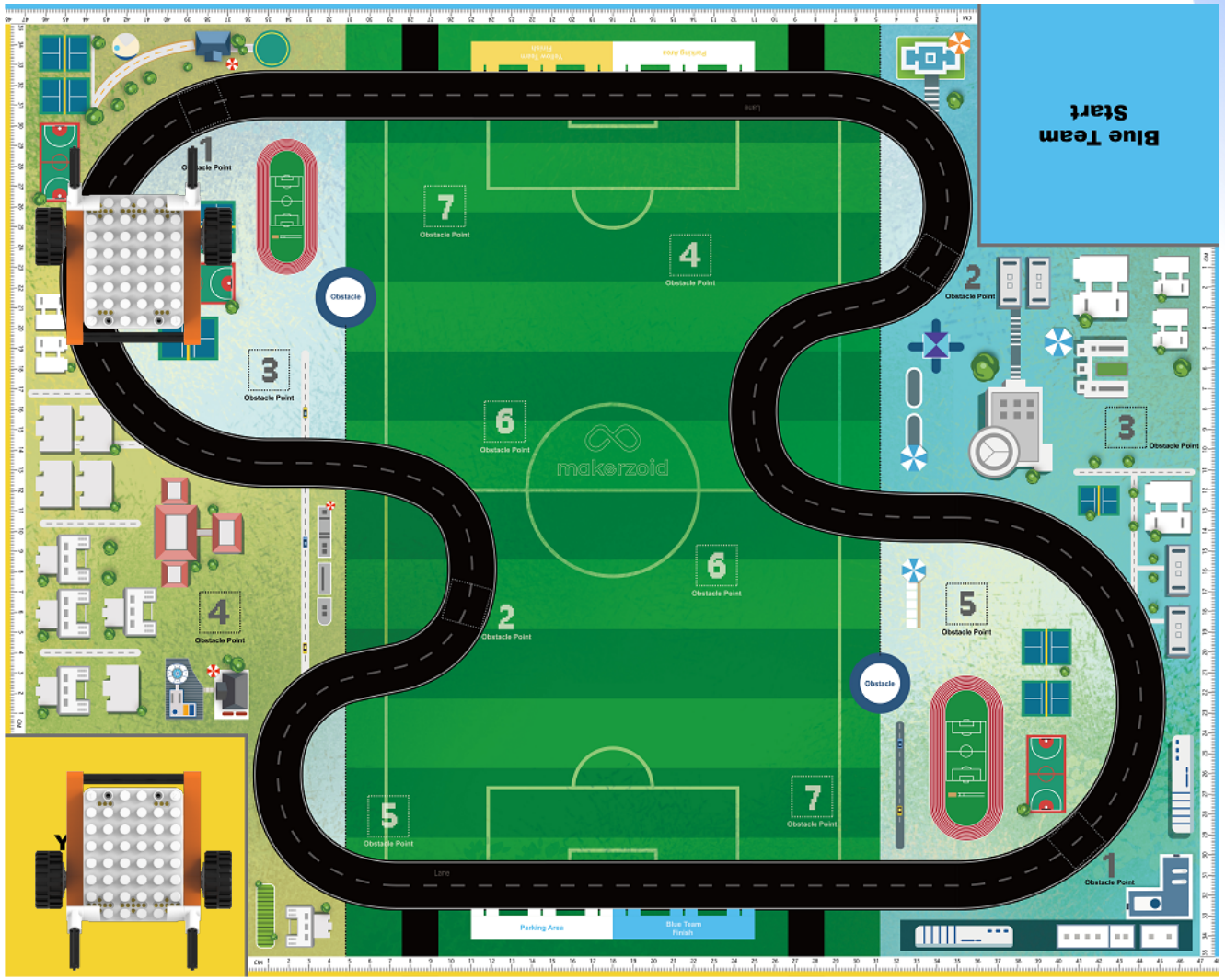
Create

2. Turn around and go back

Adjust the program to allow the car to turn around and go back.

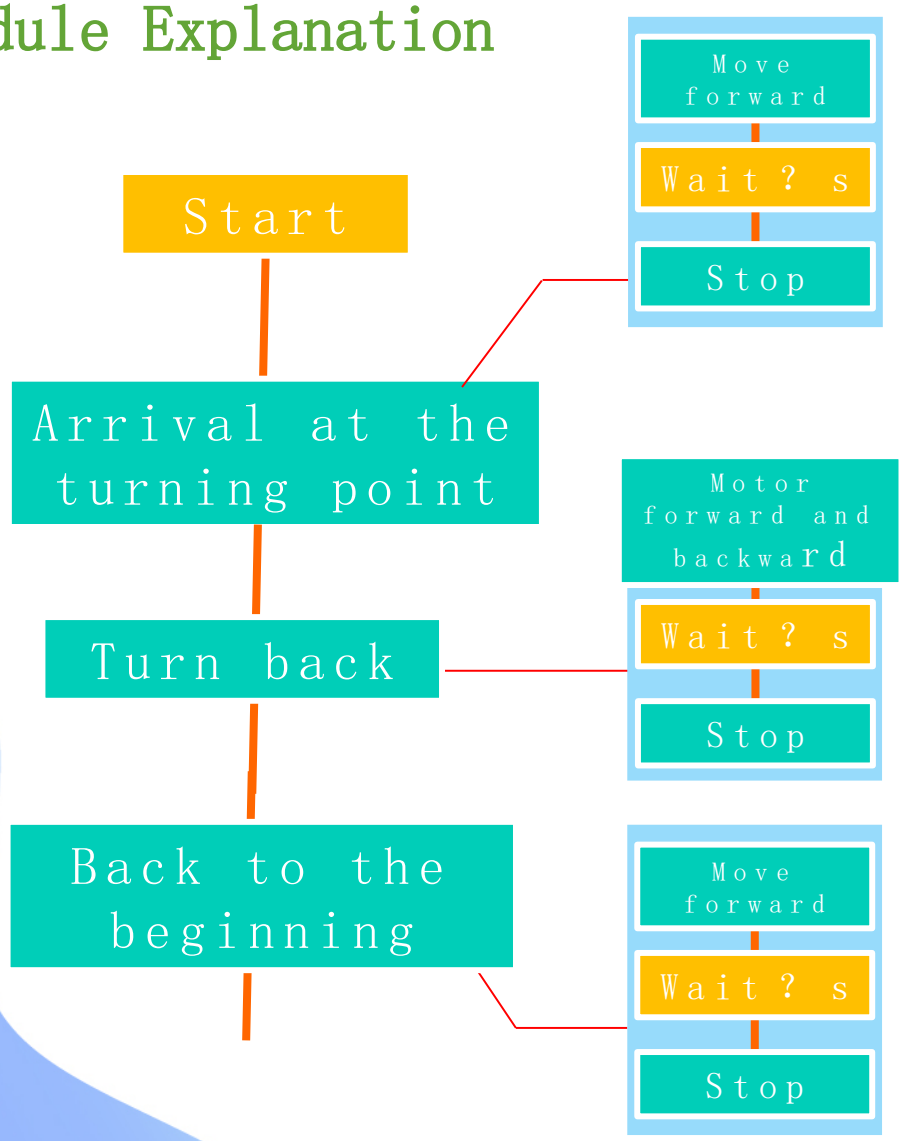


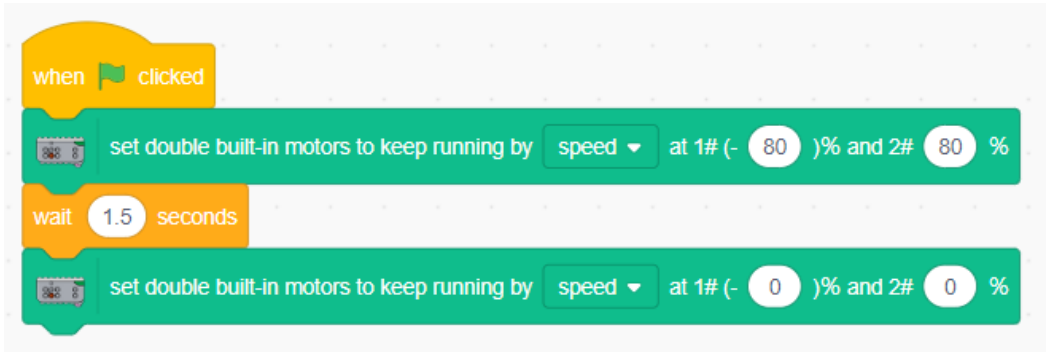
When the turning speed is constant, the amount of turning can be adjusted by controlling the time

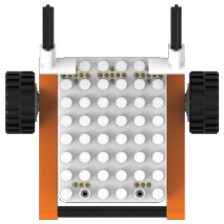


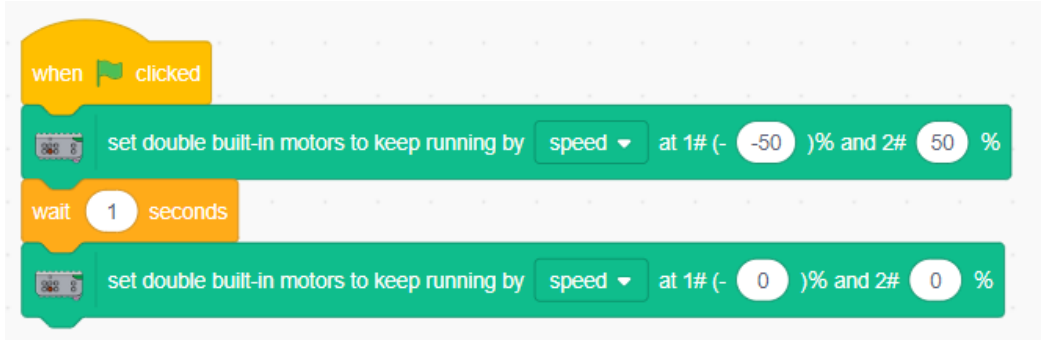
Introductions

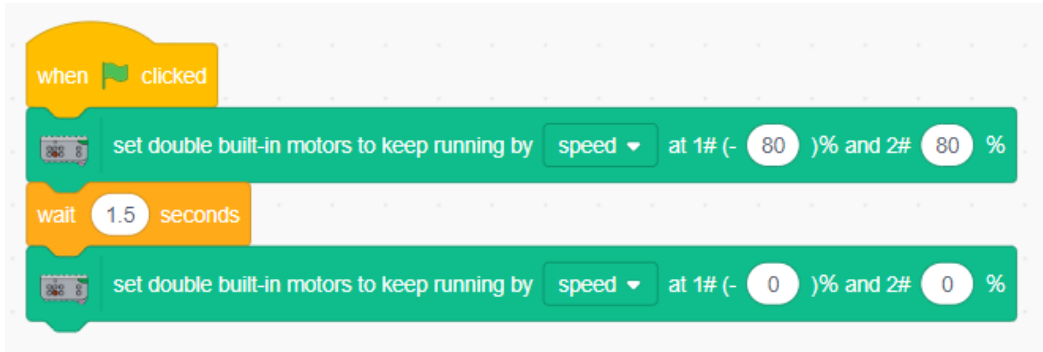
Module Explanation

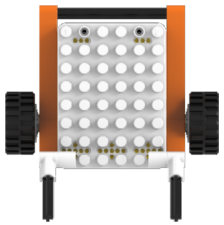












SUMMARY

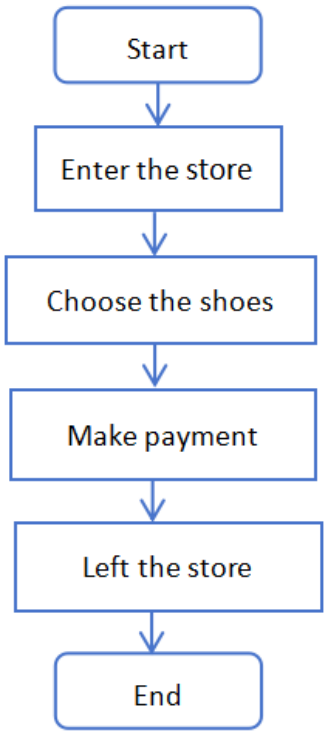
Summary

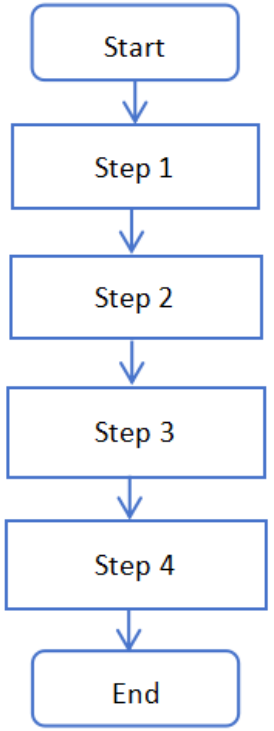
1. Sequence structure of the program

Sequential structure programming is the simplest. You just need to write the corresponding statements in the order of solving the problem.
Its execution order is from top to bottom, one by one.

Flowchart Description

Sean walked into the shoe store, found a pair of running shoes that he liked and fit, paid for them, and finally left the store.



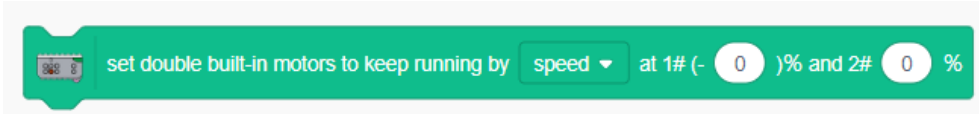


Summary

2. Module explanation

Make the Superbot Master wait for a certain period of time.

Wait ? s



Setting the speed to 0 will stop the robot.

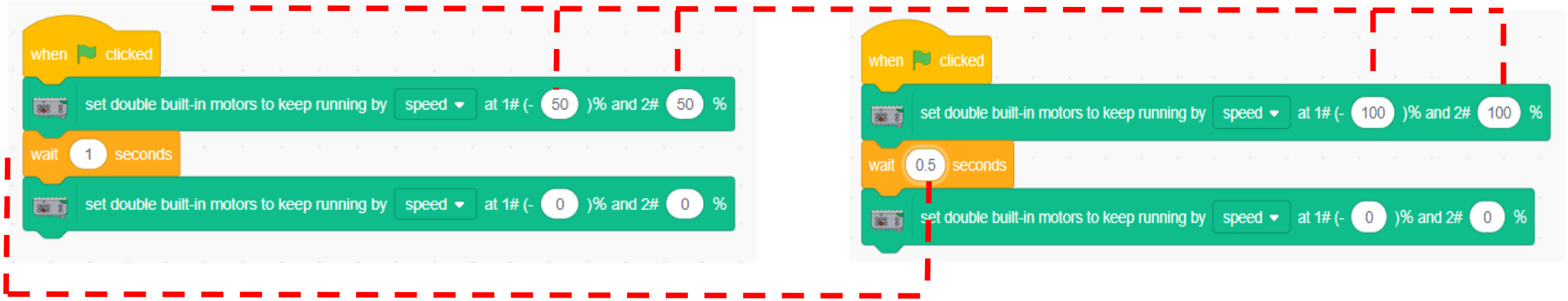
Summary

3. Methods for controlling the running distance of the car

To maintain a consistent distance the time needs to be reduced.

Distance = Speed X Time

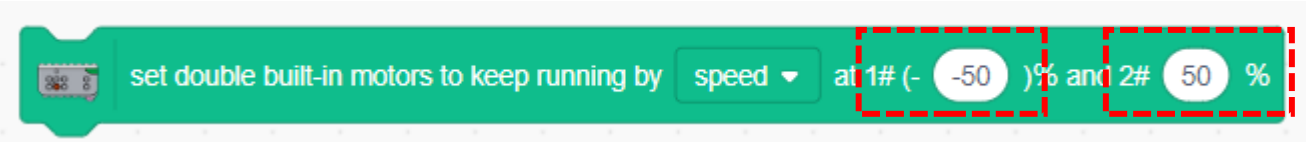
Speed increase



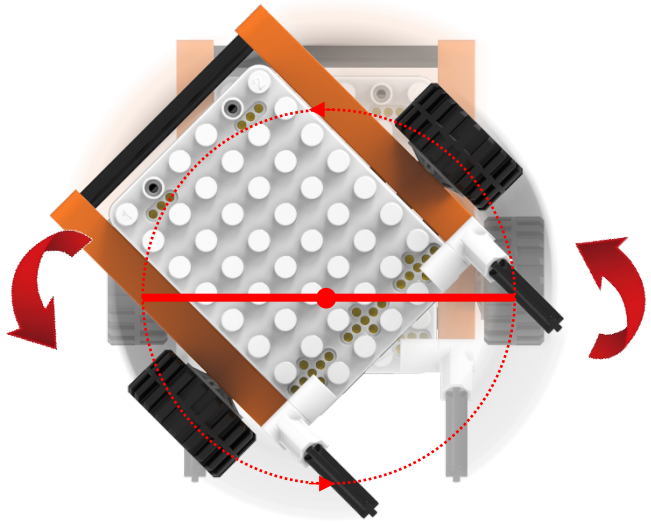
In order to ensure the same distance, the time needs to be reduced

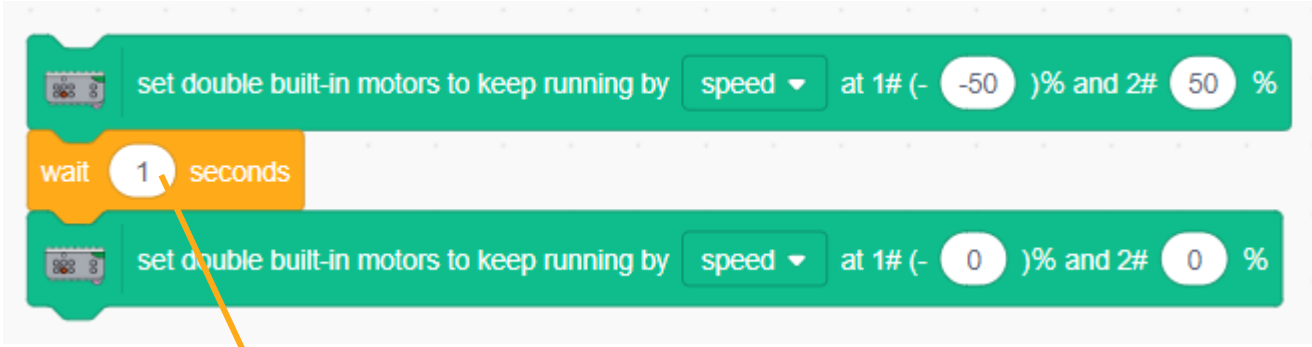
Summary

Turning (forward and backward)



Set one motor forward and one motor backward to make the robot rotate around the two wheels.



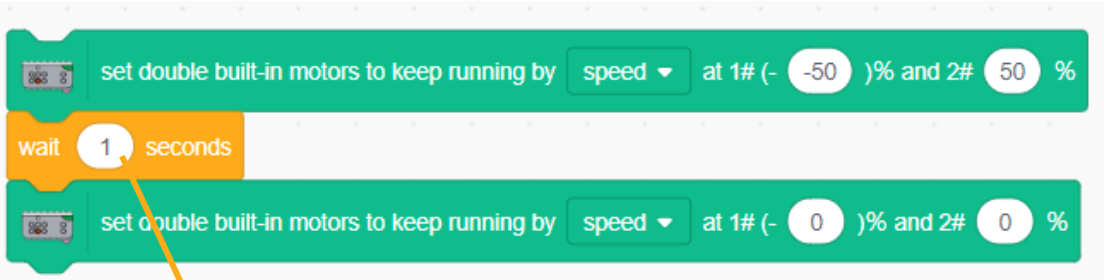


When the turning speed is constant, the amount of turning can be adjusted by controlling the time

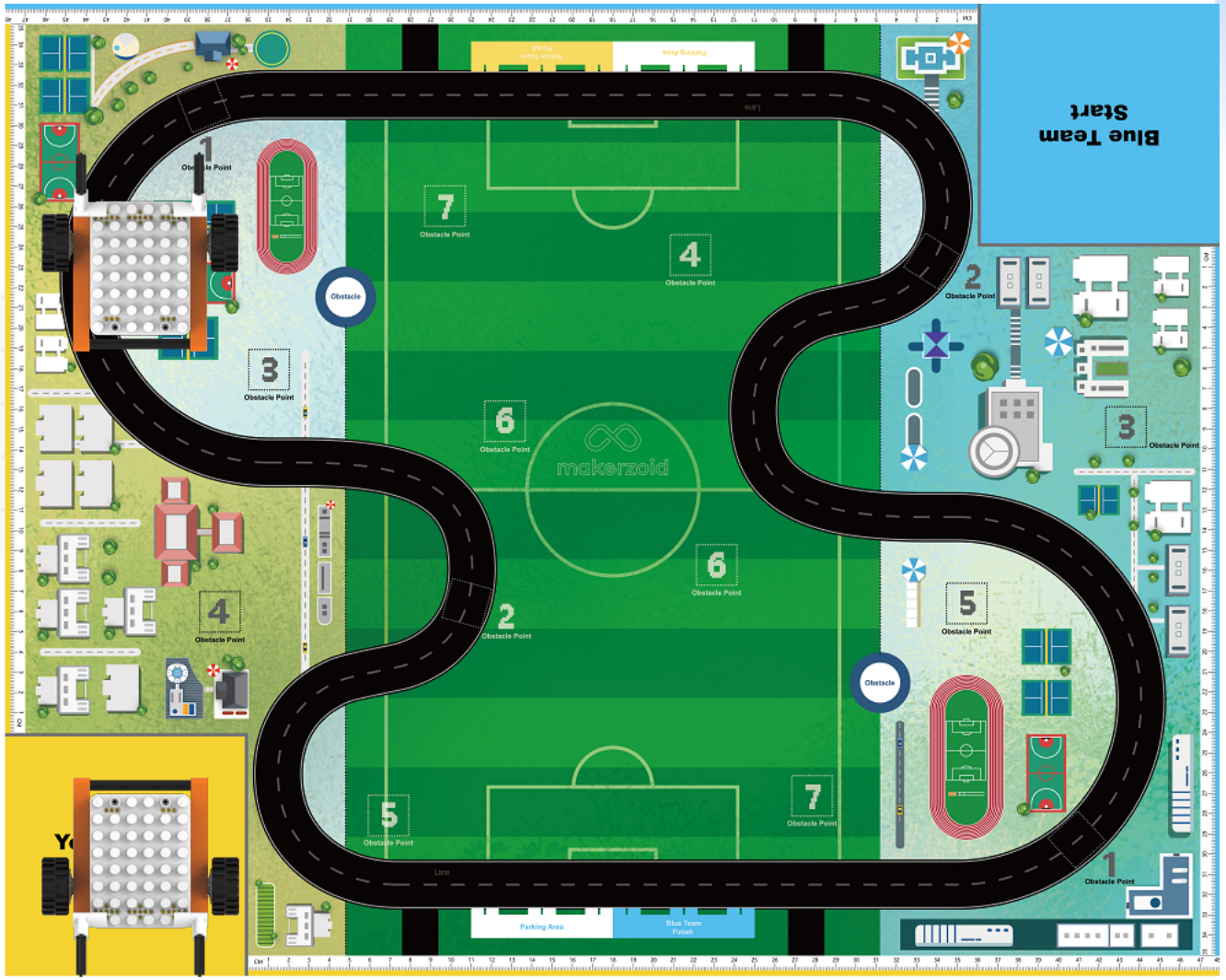
Summary

5. Complete the competition

Adjust the program to allow the car to turn around and go back.



When the turning speed is constant, the amount of turning can be adjusted by controlling the time



SHARE WITH YOUR PARENTS

Share the knowledge about the Racing Robot with your mom and dad when you get home!