



Logic

Space



Coding



Focus



Classroom Discipline

01

Please sit down and keep quiet in class.

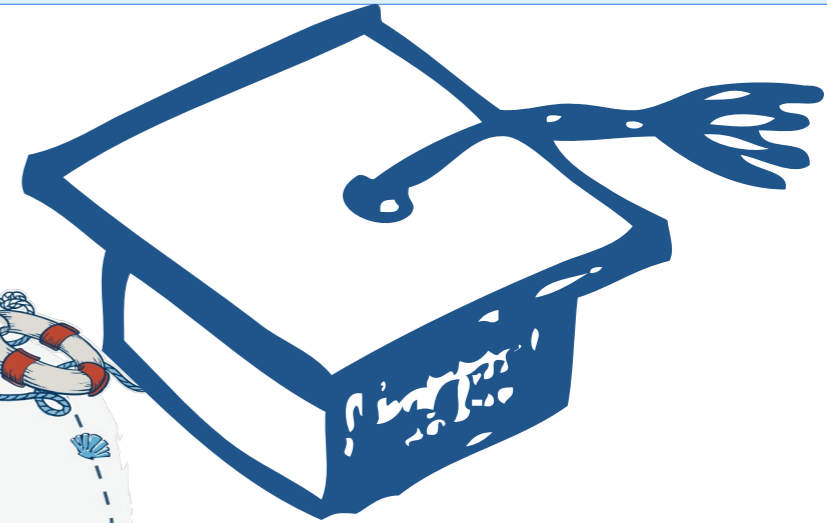
02

Please raise your hand if you have any questions.

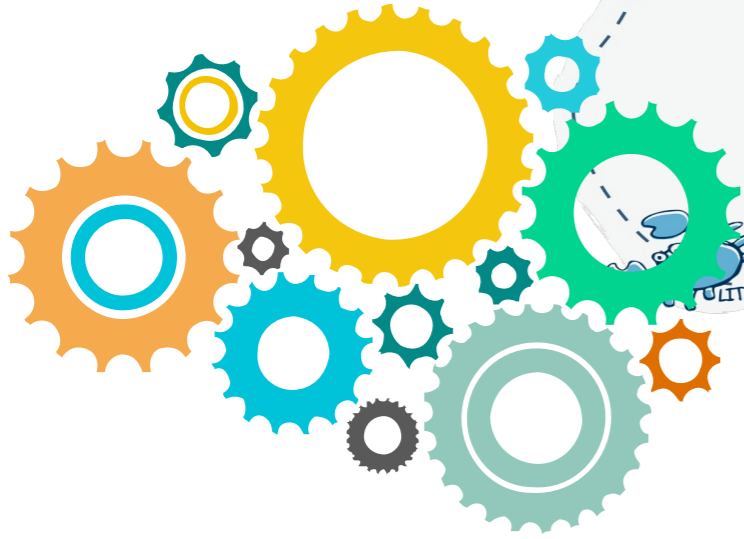
03

Please observe carefully when the pictures are played.





Crocodile 01





Course Goals



Thinkidea

1

Learning goals

2

Project Discussion

3

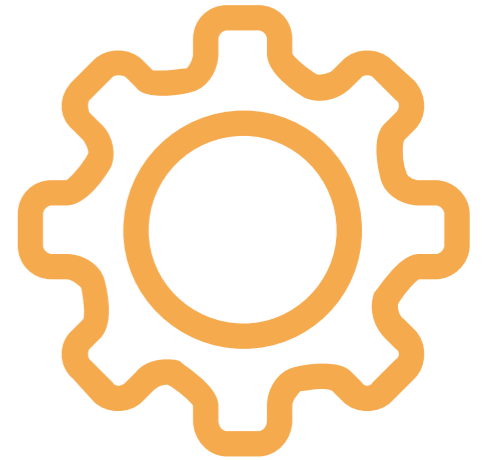
Logic Programming

4

Have a try

5

Consolidate and extend





1

Get to know the fierce crocodile, learn about its habits, and make the crocodile open its mouth to bite — faster and faster!

2

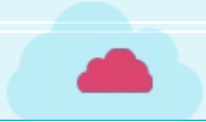
Consolidate the modules like **“Move”** 、 **“sensor”** .

3

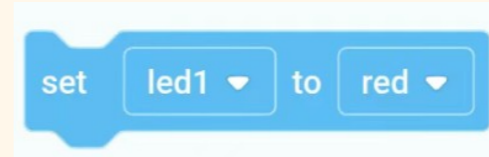
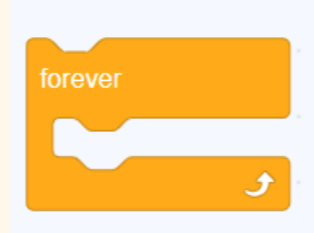
Learn new modules **“Variable”** .

4

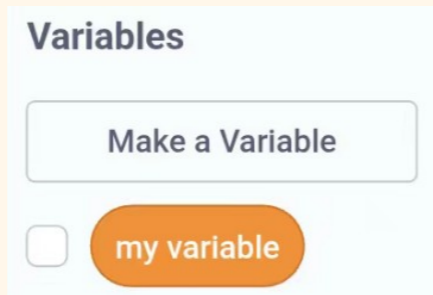
Comprehensively apply the learned modules to complete programming projects and expand.



Consolidate modules:



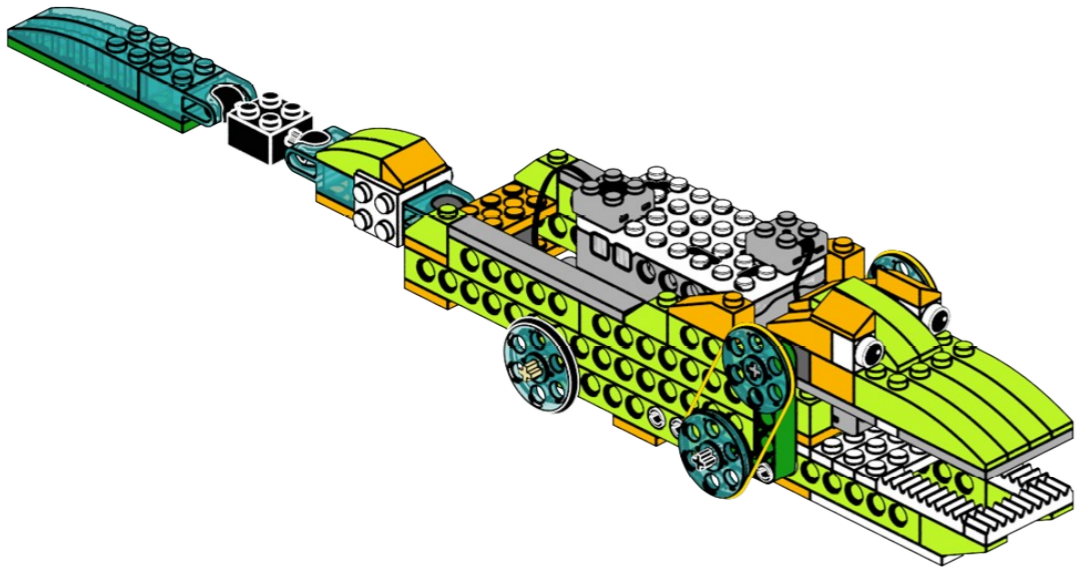
New modules:





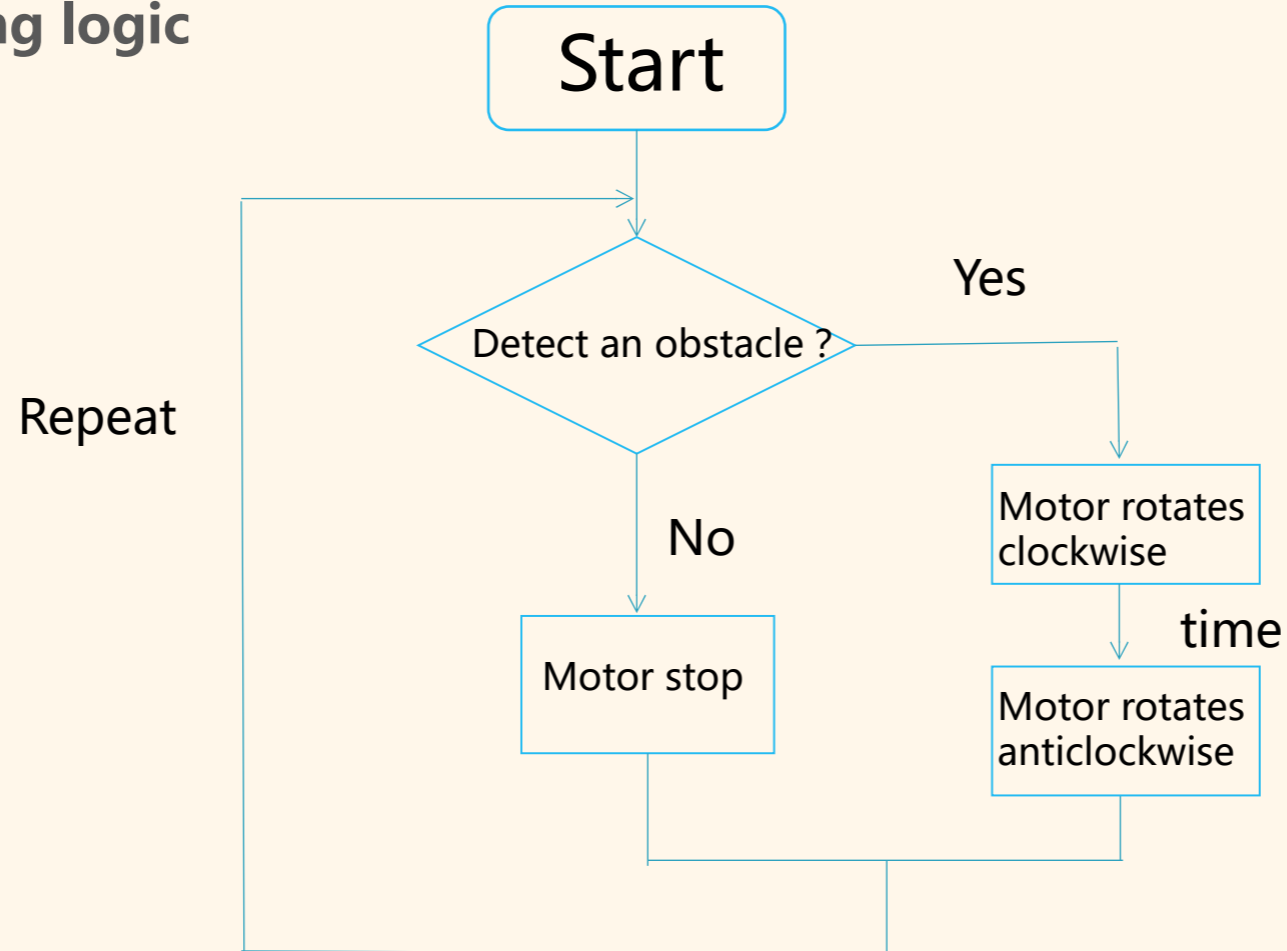
Project Discussion

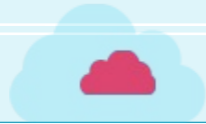
- 1. The crocodile opens its mouth.**
- 2. Our hand gets close.**
- 3. Then it bites down.**
- 4. Then it opens its mouth again.**





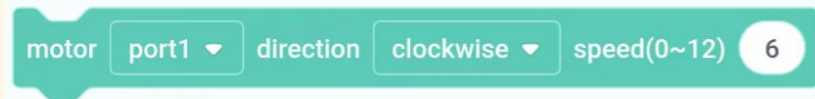
1. Programming logic





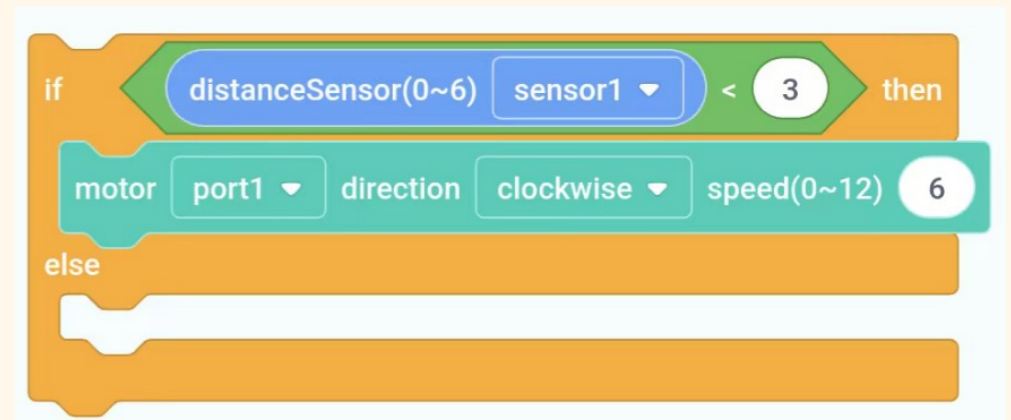
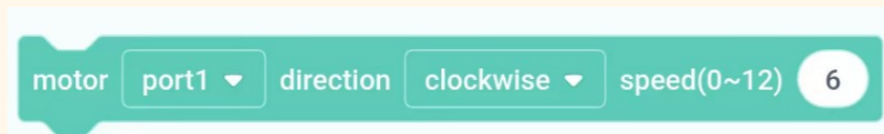
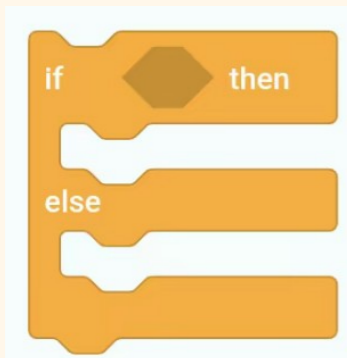
1. Programming logic

1. The crocodile opens its mouth.



Determine the direction for the crocodile to open its mouth.

2. When the crocodile sees the food,



1. Programming logic

1. The crocodile bites people.

wait 1 seconds

After biting, the crocodile opens its mouth again.

```

if distanceSensor(0~6) sensor1 < 3 then
  motor port1 direction anticlockwise speed(0~12) 6
  wait 1 seconds
else
  
```

2. After biting, open the mouth.

motor port1 direction clockwise speed(0~12) 6



wait 1 seconds

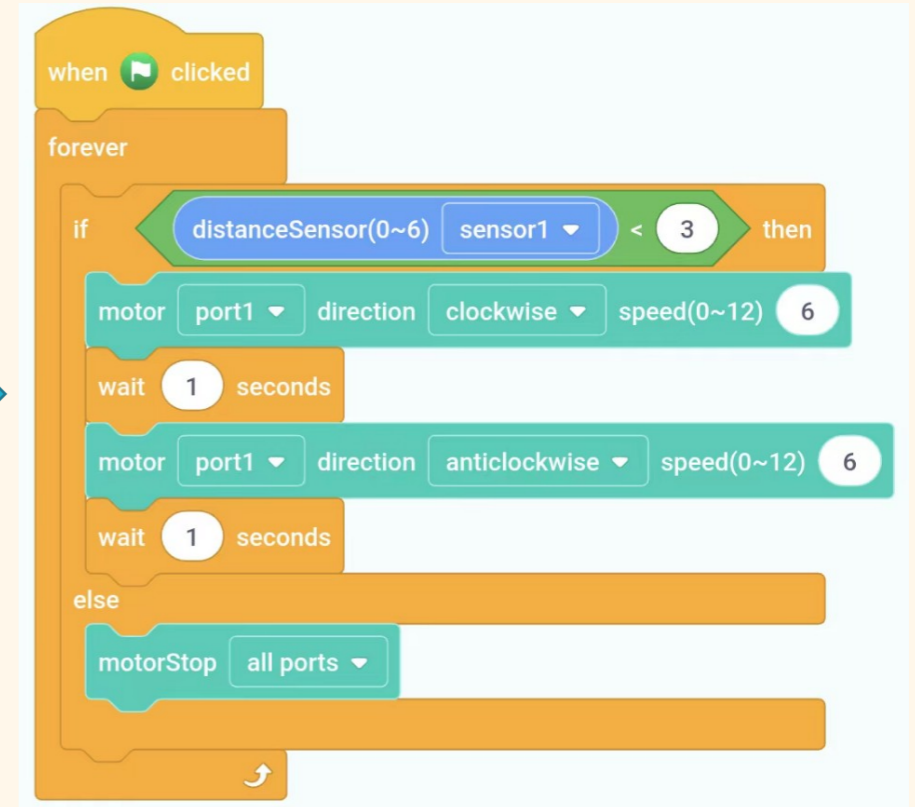
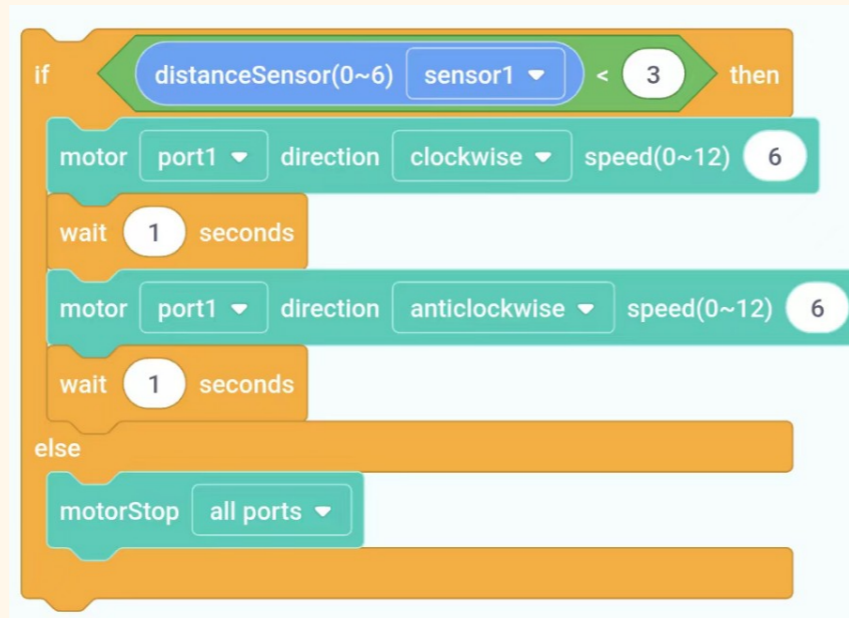
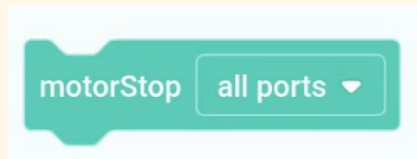


```

if distanceSensor(0~6) sensor1 < 3 then
  motor port1 direction clockwise speed(0~12) 6
  wait 1 seconds
  motor port1 direction anticlockwise speed(0~12) 6
  wait 1 seconds
else
  
```

1. Programming logic

1. Programming for the situation when the crocodile is operating normally.



1. Have a try.

Task 1: Let's add some lighting effects!

The image shows two Scratch code snippets. The main snippet is a 'when clicked' block followed by a 'forever' loop. Inside the loop, there is an 'if' block: 'if distanceSensor(0~6) sensor1 < 3 then'. The 'then' branch contains: 'motor port1 direction clockwise speed(0~12) 6', 'wait 1 seconds', 'motor port1 direction anticlockwise speed(0~12) 6', and 'wait 1 seconds'. The 'else' branch contains: 'motorStop all ports'. A second, smaller 'when clicked' block is shown to the right, with a 'Light' block attached to it.

```
when clicked clicked
forever
  if distanceSensor(0~6) sensor1 < 3 then
    motor port1 direction clockwise speed(0~12) 6
    wait 1 seconds
    motor port1 direction anticlockwise speed(0~12) 6
    wait 1 seconds
  else
    motorStop all ports
when clicked clicked
Light
```

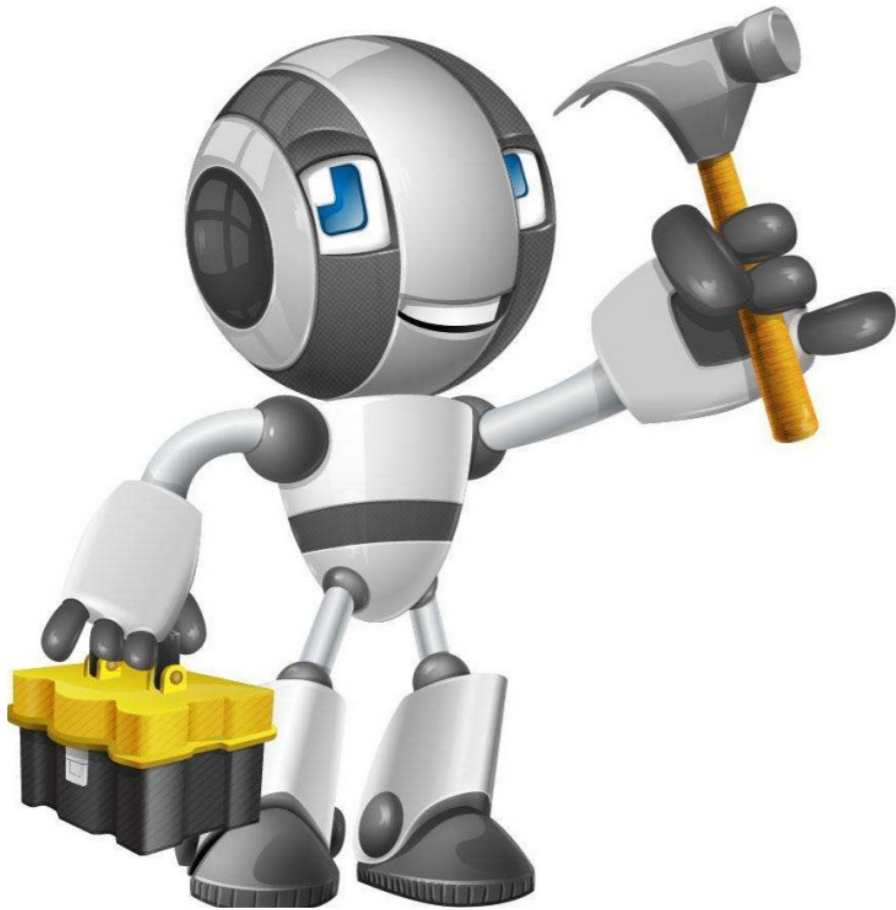


Consolidate and extend

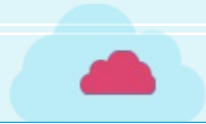
Q1 : Alex programmed the crocodile with this program, but after it bites, it doesn't open its mouth again. Why

```
when clicked
forever
  if distanceSensor(0~6) sensor1 < 3 then
    motor port1 direction clockwise speed(0~12) 6
    wait 1 seconds
    motor port1 direction anticlockwise speed(0~12) 6
  else
    motorStop all ports
```

A1 : Because a waiting time was not added.



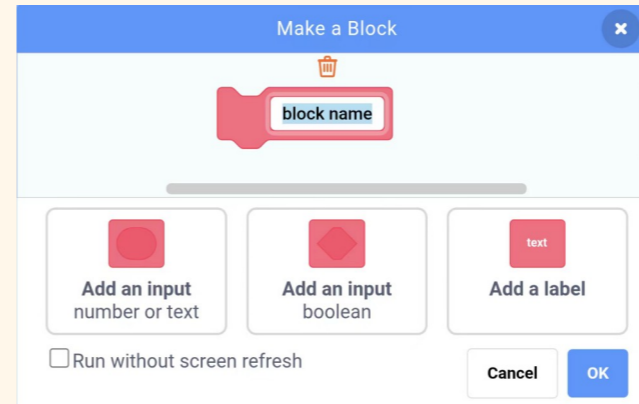
Q &
A



Knowledge Review



(1)



By defining scripts, we can replace complex programs with custom ones and use them more easily.

(2)



Compare the values on both sides.

Alex programmed the crocodile like this. What will happen? ()

```
when clicked
  forever
    motorStop all ports
    if distanceSensor(0~6) sensor1 < 3 then
      motor port1 direction clockwise speed(0~12) 6
      wait 1 seconds
      motor port1 direction anticlockwise speed(0~12) 6
      wait 1 seconds
```

- A** Nothing happen.
- B** The crocodile will not close its mouth.
- C** The crocodile will keep opening and closing its mouth.
- D** The crocodile will not move.



Answer
:
Analysis
:

A

There is no change at all—only the logical order has changed slightly.

```
when clicked
  forever
    motorStop all ports
    if distanceSensor(0~6) sensor1 < 3 then
      motor port1 direction clockwise speed(0~12) 6
      wait 1 seconds
      motor port1 direction anticlockwise speed(0~12) 6
      wait 1 seconds
```

```
when clicked
  forever
    if distanceSensor(0~6) sensor1 < 3 then
      motor port1 direction clockwise speed(0~12) 6
      wait 1 seconds
      motor port1 direction anticlockwise speed(0~12) 6
      wait 1 seconds
    else
      motorStop all ports
```





Talk





THANKS

