Logic

Space

Coding

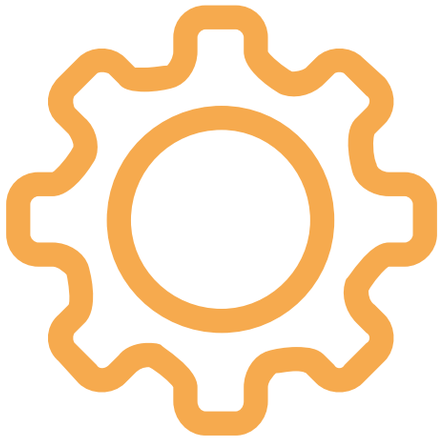
Focus

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.



Color Sorting Machine 02

Course Goals

Thinkidea

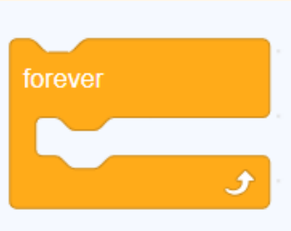
1. Learning goals
2. Project Discussion
3. Logic Programming
4. Have a try
5. Consolidate and extend

1

1. Build a sorting machine and let it recognize different colors.
2. Consolidate the modules like “**if...then...**” 、 “**Operators <**” 、 “**Sense**”.
3. Learn new modules “**if...then...elsr**” 、 “**light**” .
4. Comprehensively apply the learned modules to complete programming projects and expand.

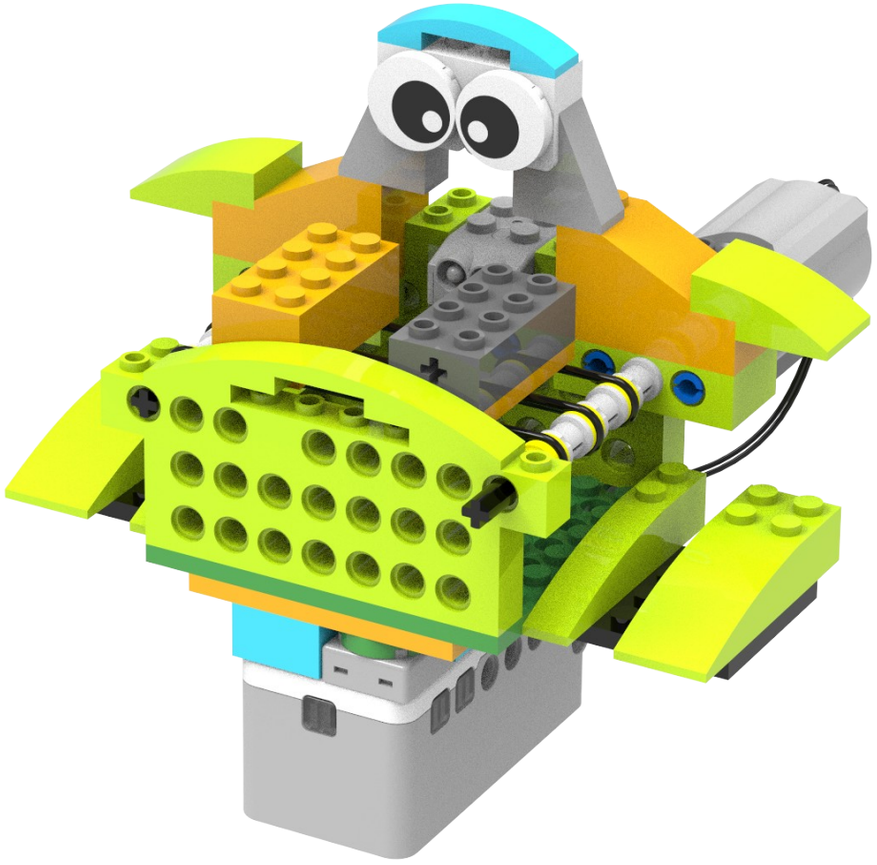
1

Consolidate modules:



New modules:

2



Project Discussion

1.After receiving the command.

2.The sorting machine says: “Start sorting” .

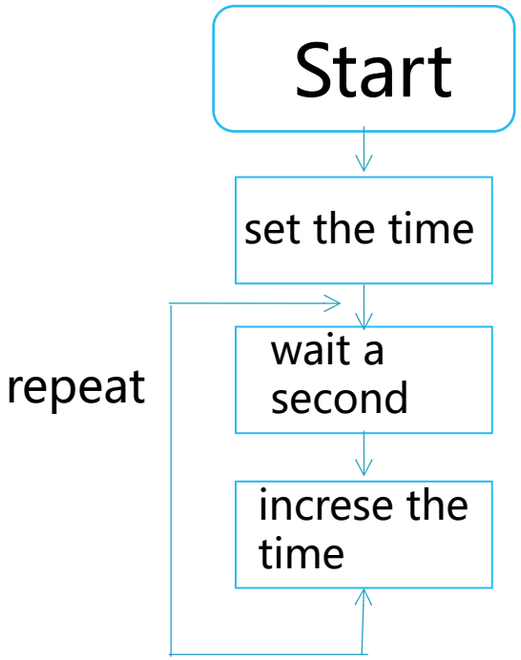
3.Light colors turn on the yellow light and move to the left.

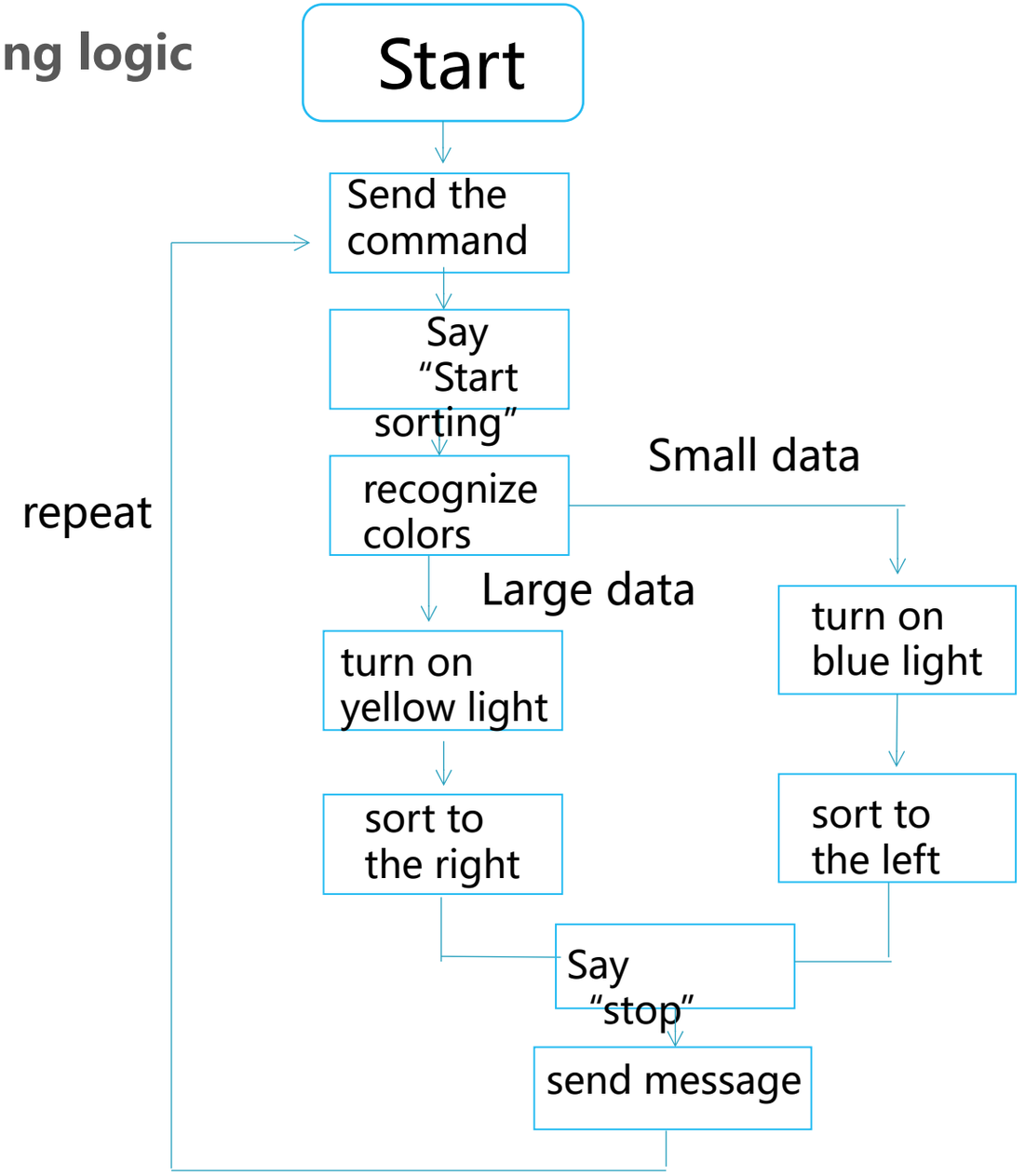
4.Dark colors turn on the blue light and move to the right.

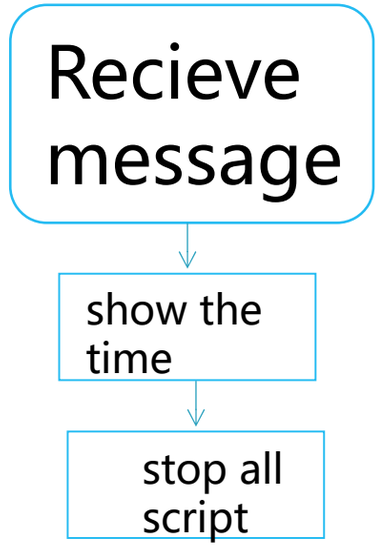
5.Finally, show the sorting time.

3

1.Programming logic





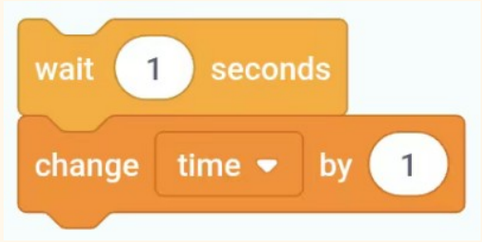


3

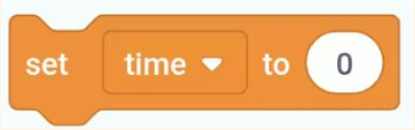
1.Programming logic

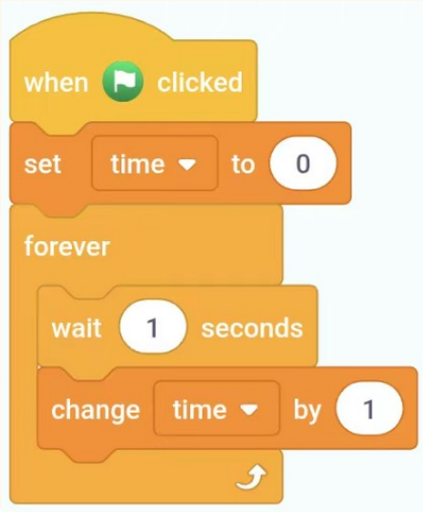
1.Calculate the time

create a variable



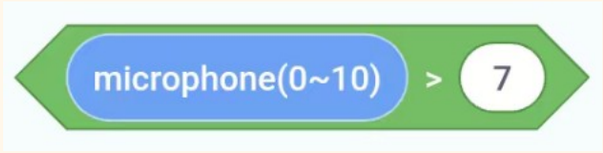
2.Set the time to 0 first.

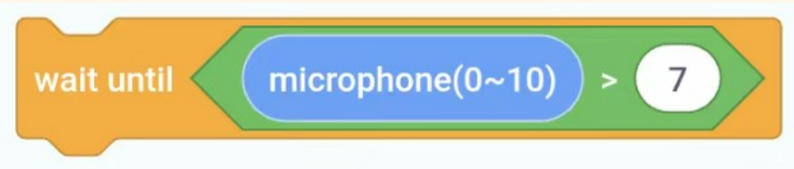




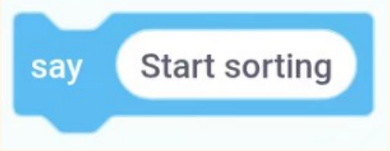
1.Programming logic

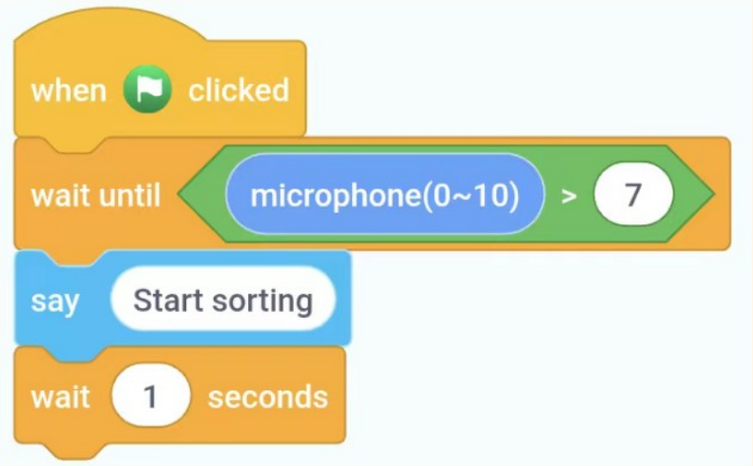
1.Send the command





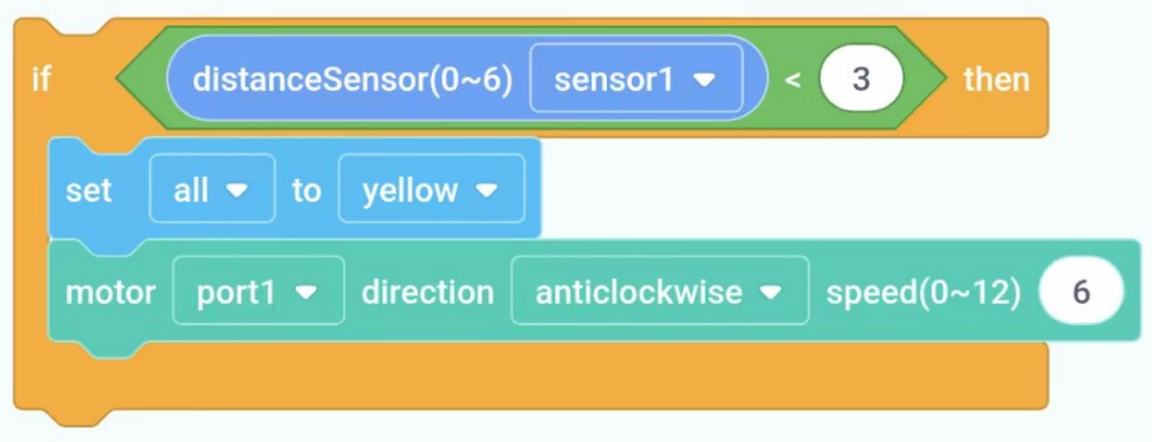
2.Say



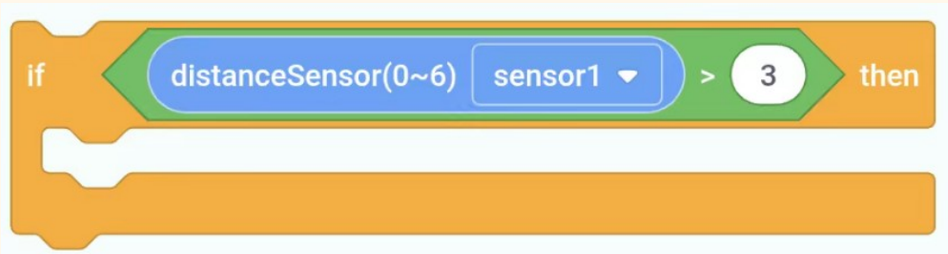


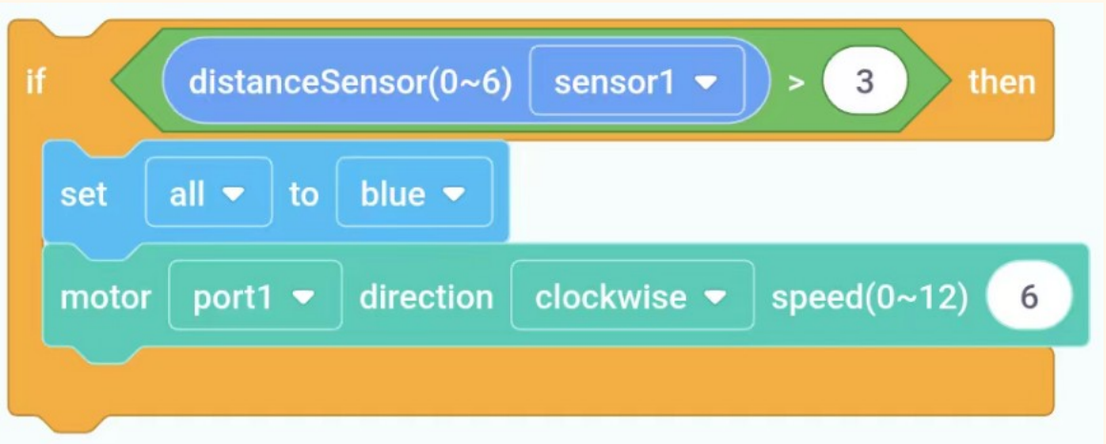
1.Programming logic

1.Start recognizing, light colors turn on the yellow light and move to the left.



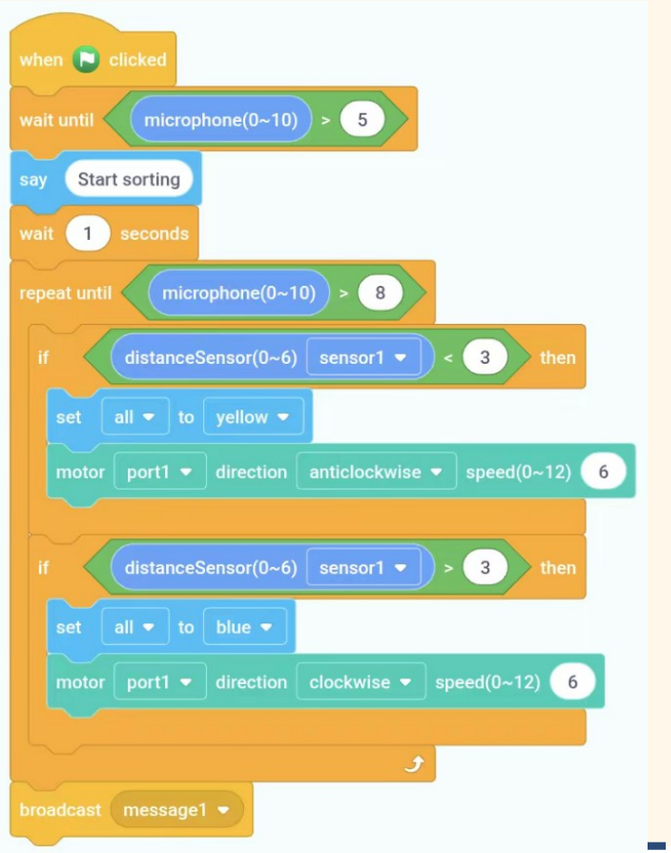
2.Start recognizing, Dark colors turn on the blue light and move to the right.

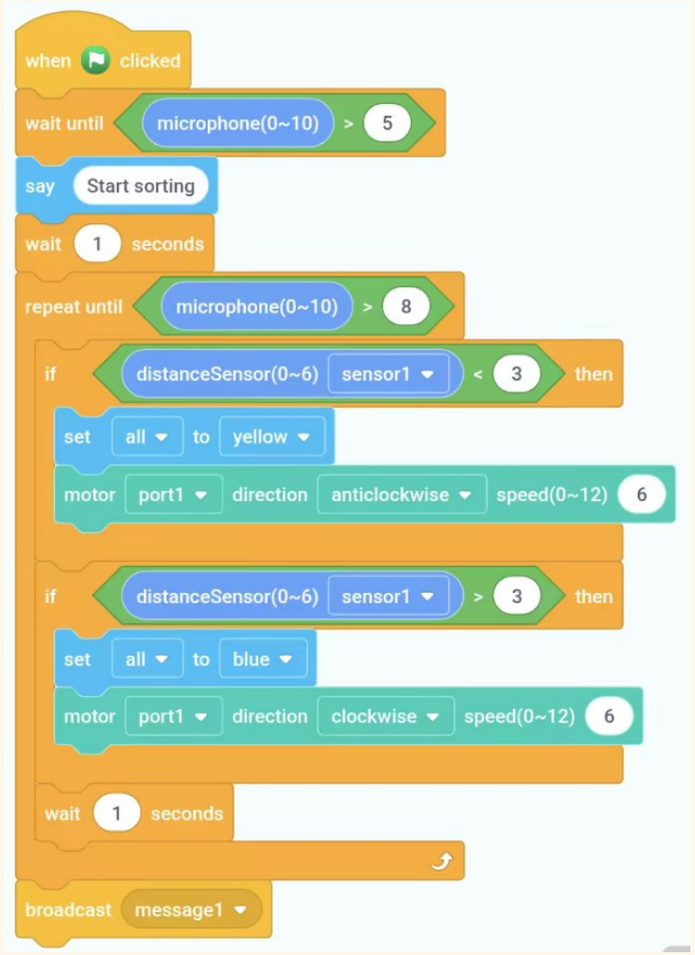


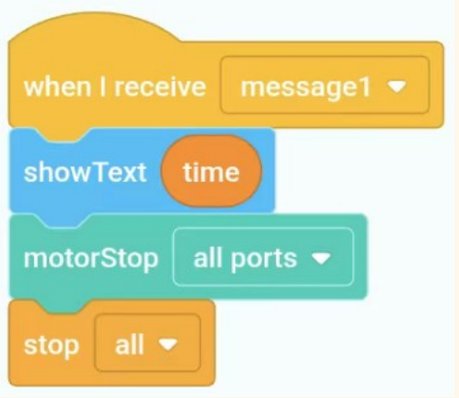


1.Programming logic

1.Show the time







3

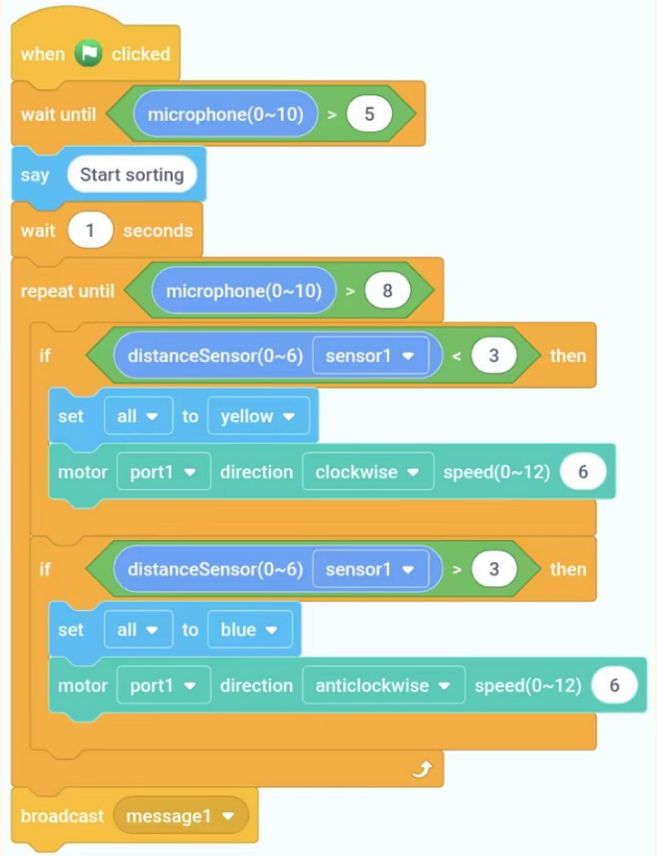
1.Have a try

Use your imagination to make your own version!

Consolidate and extend

Q & A

Q1 : Alex wrote a program for the sorting machine. What happens when it runs?



A1 : The sorting machine will swap the positions of light and dark colors.

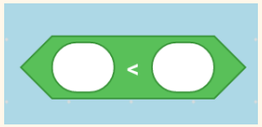
5

Knowledge Review

(1)

The “if…then…” command is a commonly used logic block, and it is usually used together with a repeat loop.

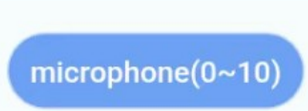
(2)



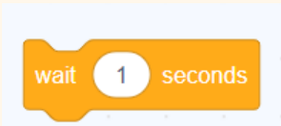
The compare block is used to check which of the two values is greater or smaller.

5

Knowledge Review

(3) 

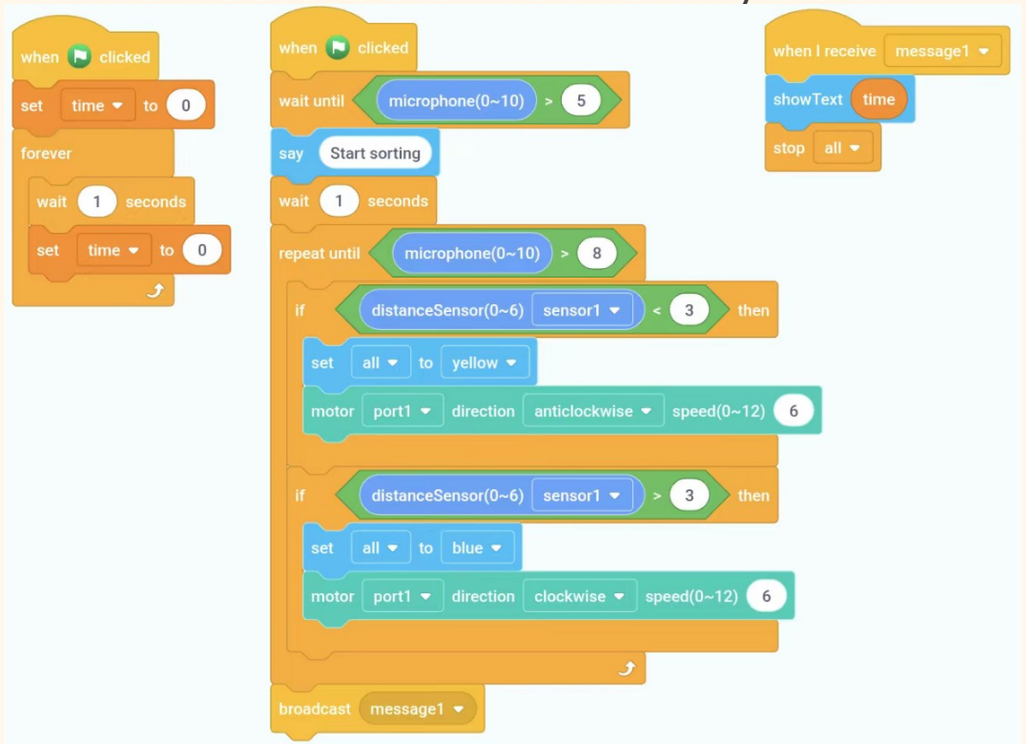
Sound sensor module

(4) 

The program runs in sequence, with a waiting interval between the two scripts.

5

Alex wrote a program for the sorting machine, but the machine shows 0 for the time. Why is that?



A The motor direction is set incorrectly.

B Because the variable module was set as a set module.

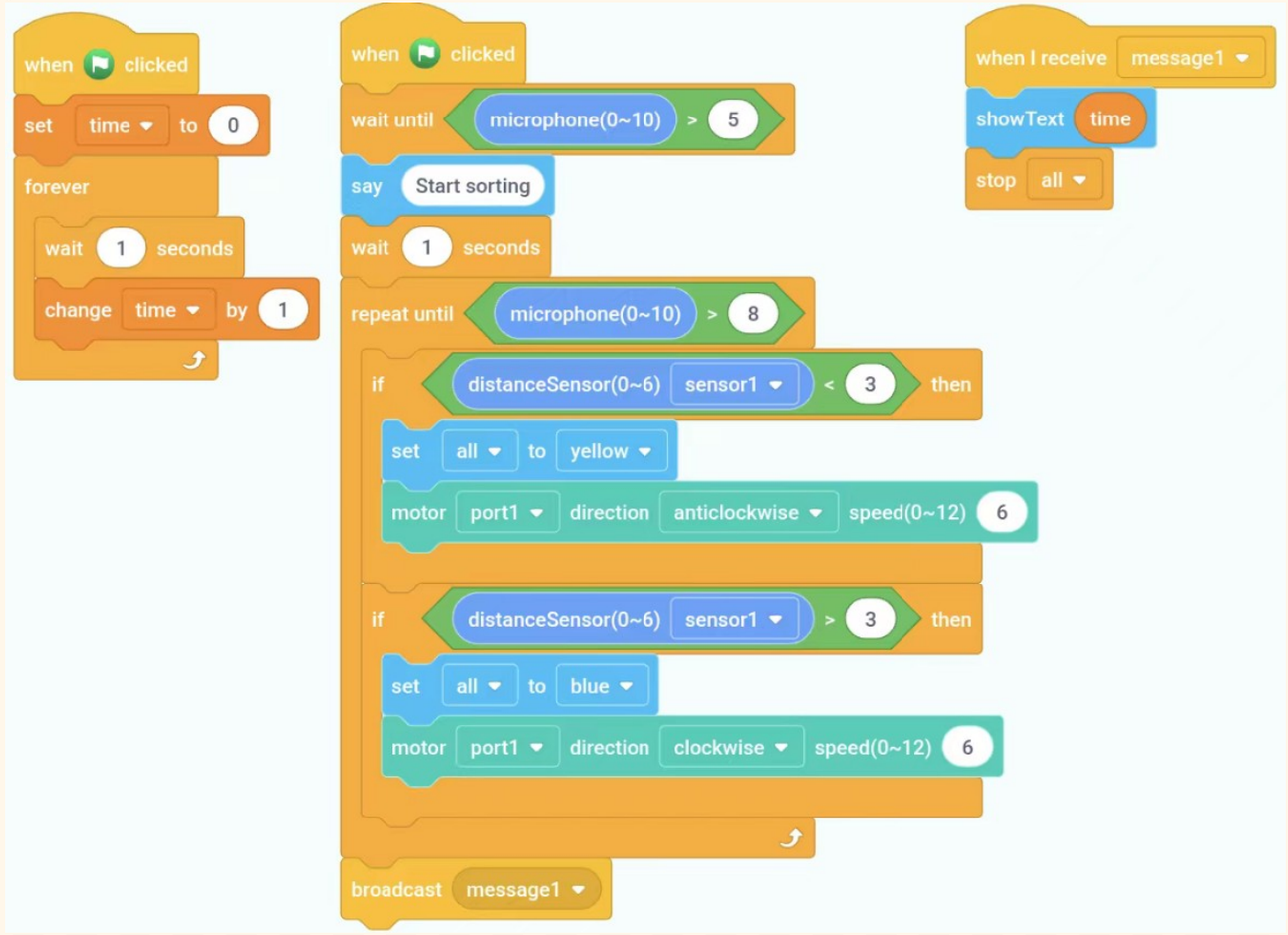
C Because there is no repeat module.

D Because it finished sorting in a very short time.

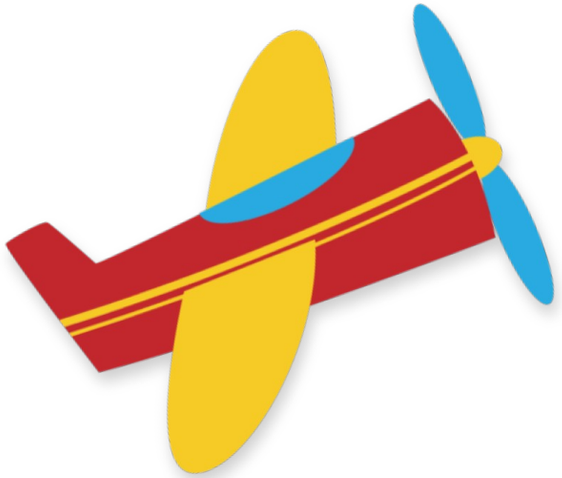
5

Answer : **B**

Analysis : **Because the variable module was set as a set module.**



Talk



THANKS