

e-book

Hamster Coding

Scratch 6

Written by ConceptOn



How to Use

This manual is designed for the educational utilization of the Hamster robot.

- Please use this manual as on-screen instructions when teaching the Hamster class.
- The contents are easy to understand. Just read them before the class.
- Worksheets can be downloaded from the Robomation website.
- This manual can be used to ensure the best lesson plan.
- For more information, contact us at 7concepton@daum.net.



Hamster Coding

Scratch 6

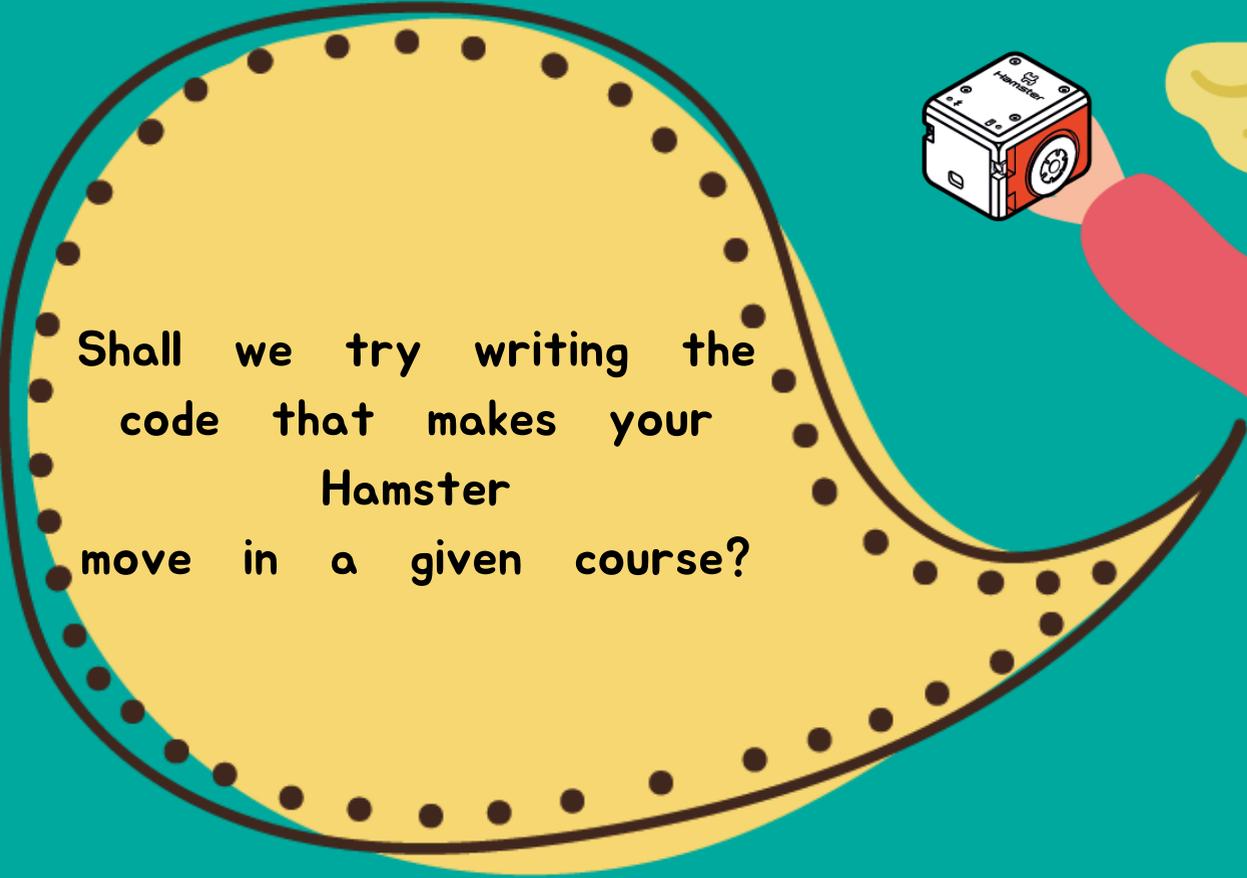
Let's get started with Hamster coding with the Scratch program!

The use of the Scratch programs will make coding more interesting!

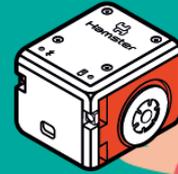


Today's Activity

Division	Description	Time
Introduction	Explore the problem. Why not code your Hamster to move on diverse routes?	5min
Development	Find a solution. Let's use the code for movement and rotation blocks. Solve the problem. Let's command your Hamster to move according to a given mission.	30min
Conclusion	Review today's activities. Let's talk about what you have learned and enjoyed.	5min



Shall we try writing the
code that makes your
Hamster
move in a given course?



Self-Driving Hamster



Pinky

You've written the code to operate your Hamster as you want!
Then, let's try Hamster's autonomous driving exercise!



Oh, autonomous driving exercise?

It sounds interesting...



Sunny

Self-Driving Hamster

A self-driving car is a vehicle that can move by itself without a driver.

In this lesson, let's try coding for your Hamster to move in a given course.

Next time, we'll practice coding to control the embedded sensor of Hamster for a more exciting autonomous driving experience!



Get ready

First, let's find out what is needed for Hamster coding.



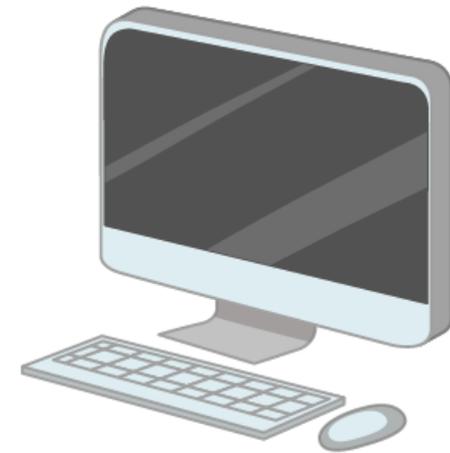
1 Hamster

4 Worksheet



2 Bluetooth Dongle

5 Writing supplies (pen and paper)

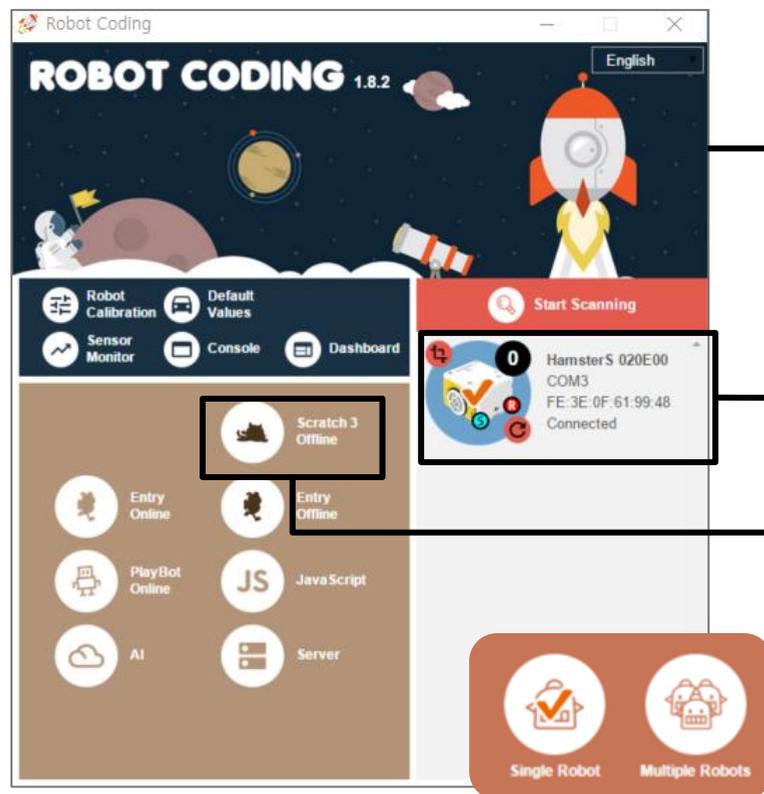


3 PC

6 Charging cable

Open the program

When opening the program, turn on Hamster and plug the Bluetooth Dongle into the USB port of your PC.



Open the program

1

Run the Robot Coding program.

2

Check if your Hamster robot is connected with the Bluetooth Dongle (through its LED light colors).

3

Click on Scratch 3 Offline.

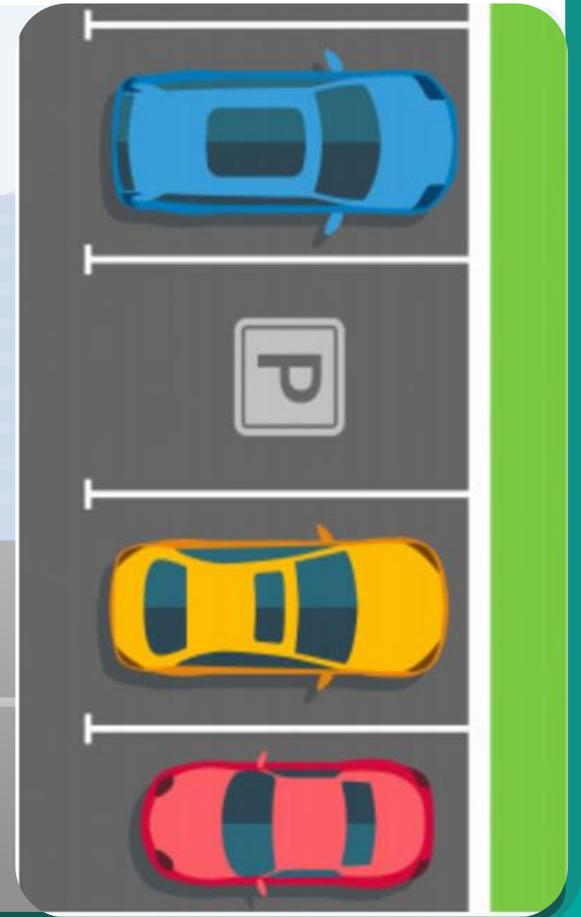
4

Click on "Single Robot" and then "New File."



Self-Driving Hamster

Let's write the code that allows your Hamster to figure out a course of movements beforehand, move in the course, and park in a designated place.



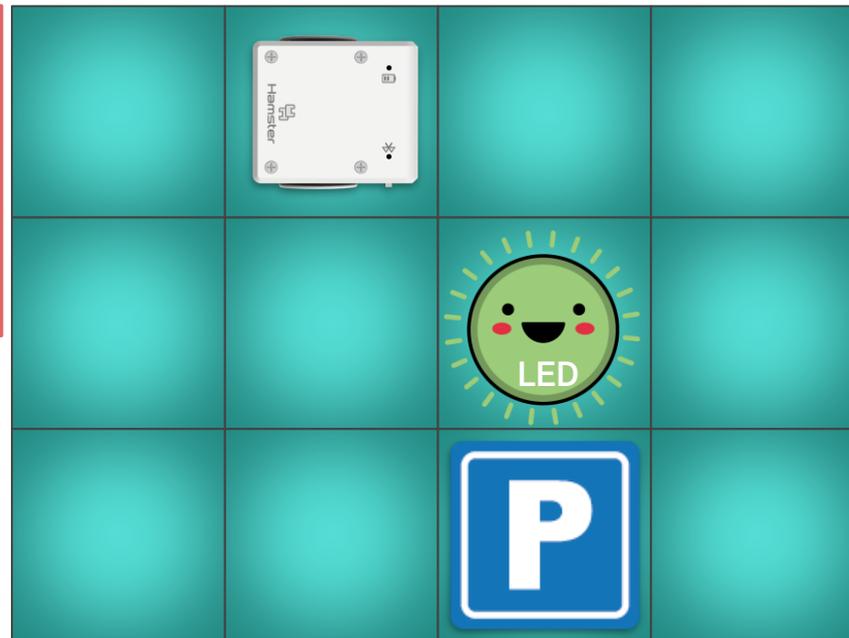
Autonomous driving exercise 1

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

Autonomous driving exercise 2

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

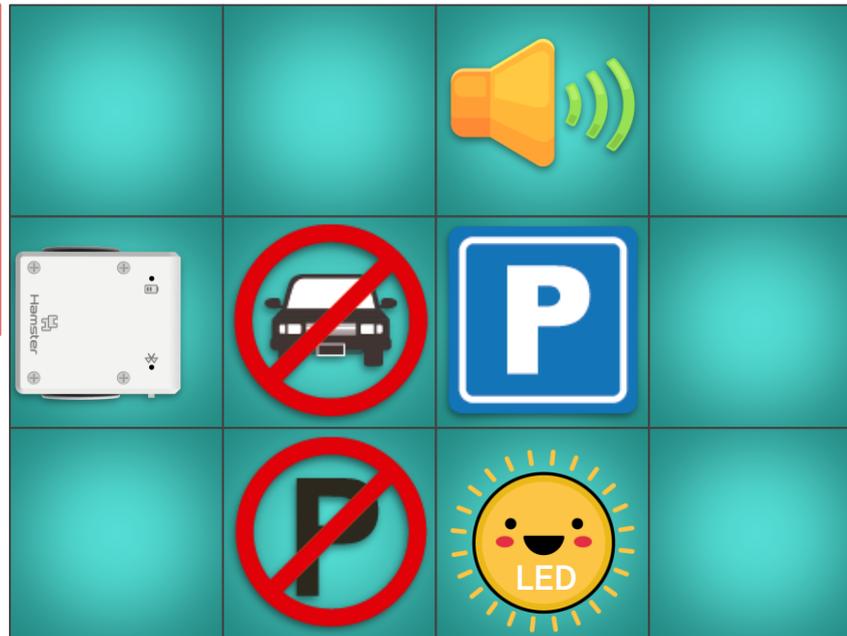
Autonomous driving exercise 3

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

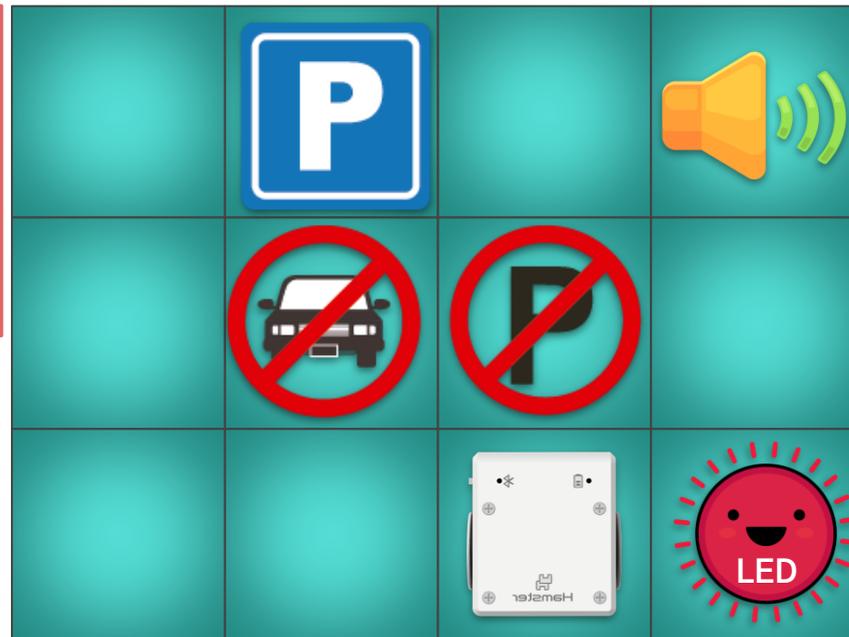
Autonomous driving exercise 4

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

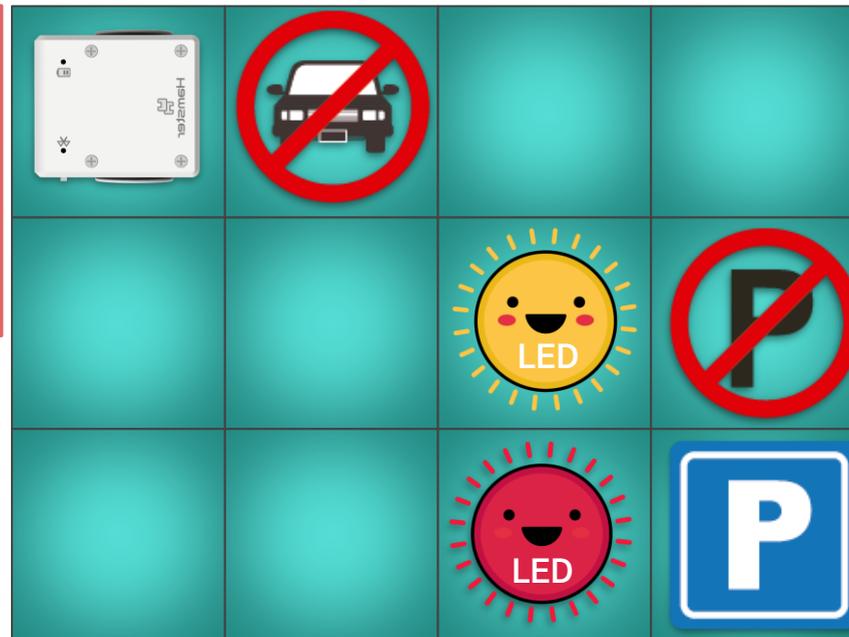
Autonomous driving exercise 5

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

Autonomous driving exercise 6

Let's write the code so that your Hamster can move and park.

Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10

 set left led to red

 clear left led

 play sound beep 1 times

Autonomous driving exercise 7

Let's write the code so that your Hamster can move and park.

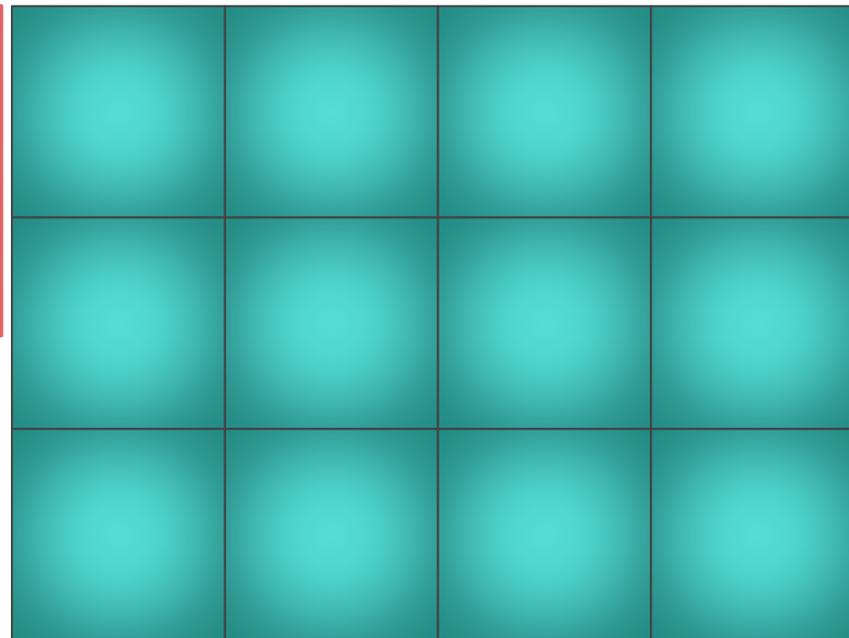
Preparations: Hamster, Worksheet (autonomous driving board)

Let's code step by step only using specified blocks.

First, organize code in your head before trying it!

Buzzer LED

Parking



Specified blocks

when  clicked

 move forward 1 seconds

 turn left 1 seconds in place

repeat 10



 set left led to red

 clear left led

 play sound beep 1 times

Let's Review

- 😊 What did you learn today?
- 😬 Did you encounter any difficulties?
- 😍 What interested you the most about Hamster robot?

See you
again!

