Robotics Learning Series

Matador



This robotics kit is a building-block programming system developed by Joinmax. The kit is equipped with various sensors such as sound sensitivity, color sensor, touch sensor, photoelectric sensor, color light, ultrasonic, camera and many building blocks parts. Students can build various building block robots with their imagination, and use graphical programming software to program the robot and experience the joy of hands-on creation.

Learning Target

01

Knowledge goal

Knowledge of variables and how to use variables for calculations.

02

Ability goal

Familiar with the use of color sensor module, master the basic operation of variables.

03

Emotional attitudes and values

Learn to think in essence.

Learning Target

01

Learning focus

Master the basic usage of color sensor.

02

Learning difficulties

Flexible application of knowledge of variables and their operations.

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Course Introduction



Course Introduction



Have you ever seen a bullfight in Spain?

The charm of bullfighting lies in the fact that it is an adventurous sport, full of breathtaking blood and beautiful sublime. The entanglement between the bullfighter and the bull is worthy of a magnificent artistic dance. The Nobel Prize winner Hemingway once said: "bullfighting is the only one artist in the art of death threats." Indeed, the Spanish bullfighting endows this competitive sport with artistic beauty. It is the first form of art, and it is the perfect combination of strength and beauty.

Course Introduction



Matador

Know about Matador

The robot in this lesson is called "Bullfight". The bullfight is there, so where are the bullfighters? That is, of course, the students, you have a look at the terrible bullfighting, the students play to your wisdom and see how to surrender it below we learn together.

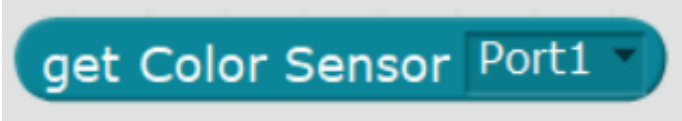
Teaching New Knowledge

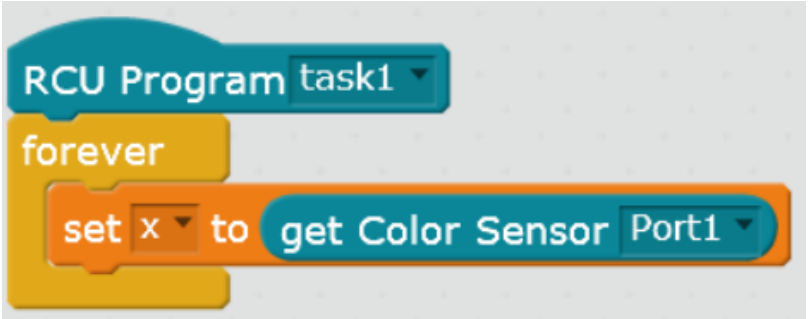


Teaching New Knowledge

The color sensor detects the color by comparing the color of the object with the reference color. When the two colors match within a certain error range, the detection result will be output.

Usage: [electronic module] - [sensor] - [color detection] P for the connection port: in the controller screen color sensor to measure numerical - red is 3 to 2 to 1, green, blue, yellow, and black for 4 to 5, white is 6.





Note: color sensor detection objects have a certain distance, in appropriate range easier to detect color belongs to the sex, the results will be more accurate.

Teaching New Knowledge

When calculating at the same level, calculate successively from left to right; After the two levels of operation, calculate, first, add and subtract. Parentheses, first calculate the inside of the parentheses, then the outside the brackets; Have multilayer brackets, first calculate in parentheses, then calculate the inside of the parentheses, and then the braces, finally the outside the parentheses. If there is power, the first to calculate power. In the mixed operation, first calculate the number in brackets, brackets since the childhood, if there is a power to calculate power, and then from senior to junior.

Teaching New Knowledge

Direct proportion refers to two related quantities, one of which changes and the other changes with it. If the two amount corresponding to the ratio of two Numbers must be in, These two quantities are called directly proportional, and their relation is called directly proportional. The relation is inversely proportional.

Task Practice



Task Practice



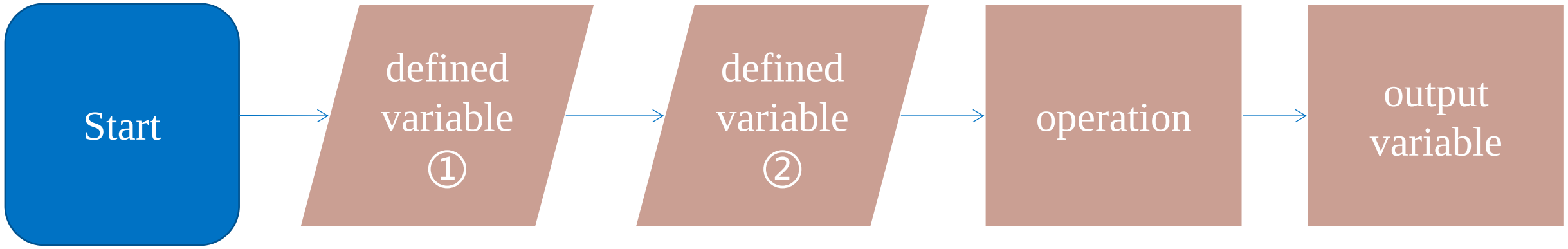
Assembly requirements

1. stable structure
2. focus is right
3. shape match

Programming and Debugging

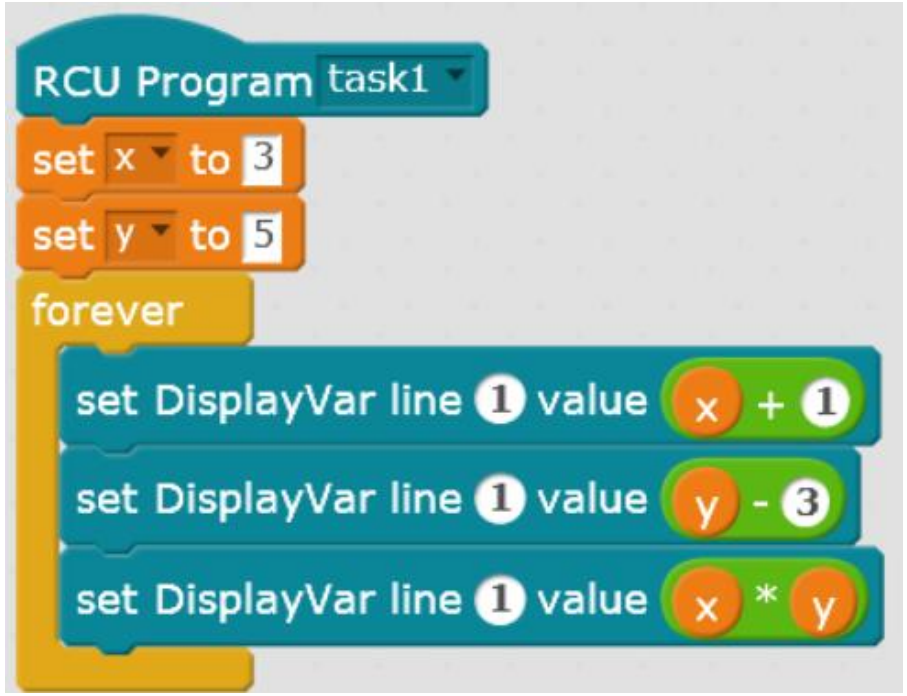


Programming and Debugging



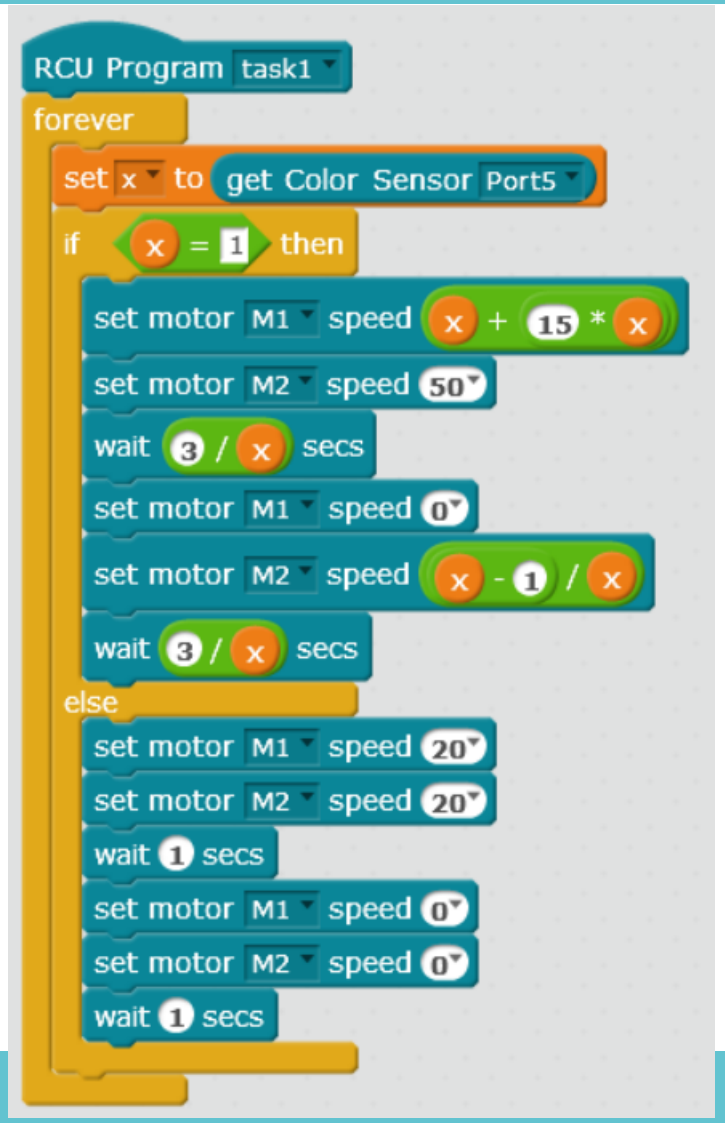
Programming and Debugging

1. When the variable x is set to 3 and the variable y is set to 5, the results of "x+1", "y-3" and "x*y" will be displayed in row 1/2/3 respectively



Programming and Debugging

2. When the robot detects different colors, it uses the calculation of variables to make "Matador" more difficult.



Checking Effect



Test Effect



Review the learning content and deepen your impression.

Question 1

What is the name of the robot made today?

Question 2

What hardware do today's robots use?

Question 3

What else is special about Spain?

Thank you for watching

Matador Robotics Lesson

