

Oblique 45° movement

1. Learning goal

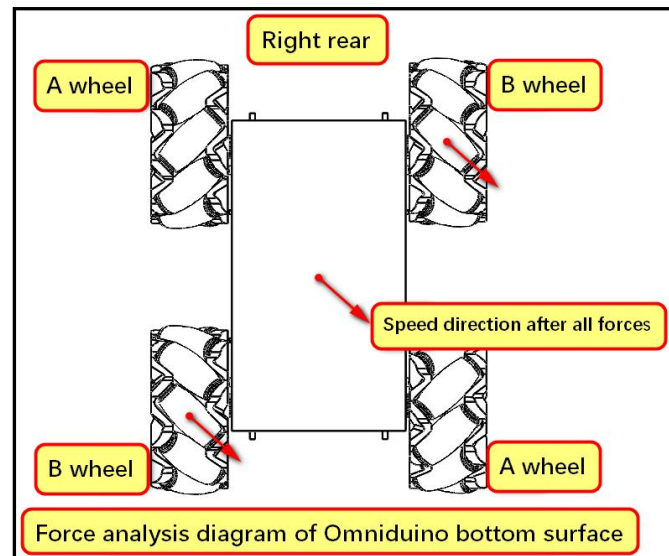
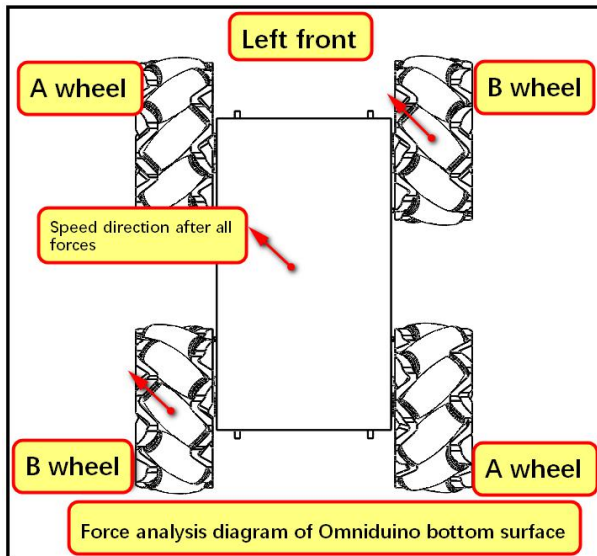
In this lesson, we will increase the function of the car moving diagonally to 45°.

2. Force Analysis

Analysis of the force of the car moving in a 45-degree direction.

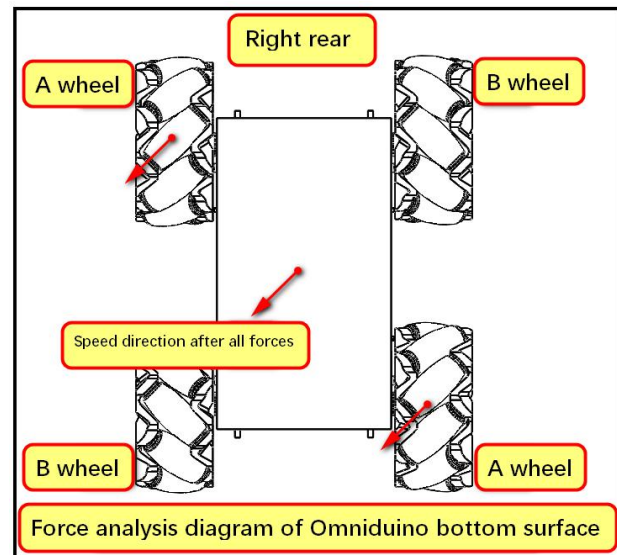
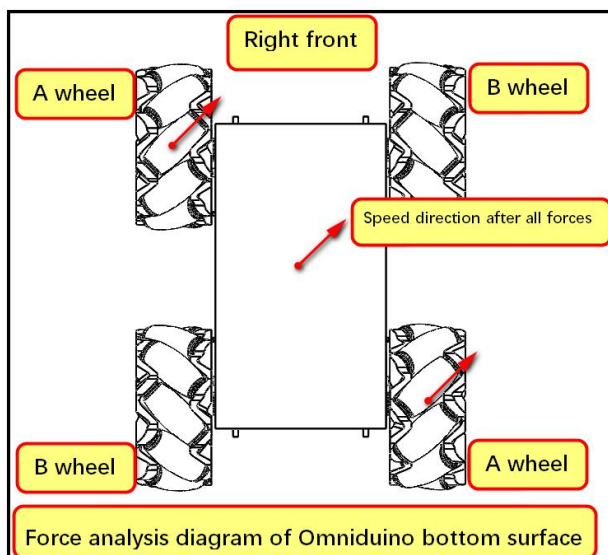
2.1 Move to the left front: A wheel stop, and the B wheel forward, the car moves to the left front.

2.2 Move to the right rear: A wheel stop, when the B wheel reverse, the car moves to the right rear.



2.3 Move to the right front: A wheel forward, and the B wheel stop, the car moves to the right front.

2.4 Move to the left rear: A wheel reverse, when the B wheel stop, the car moves to the left rear.

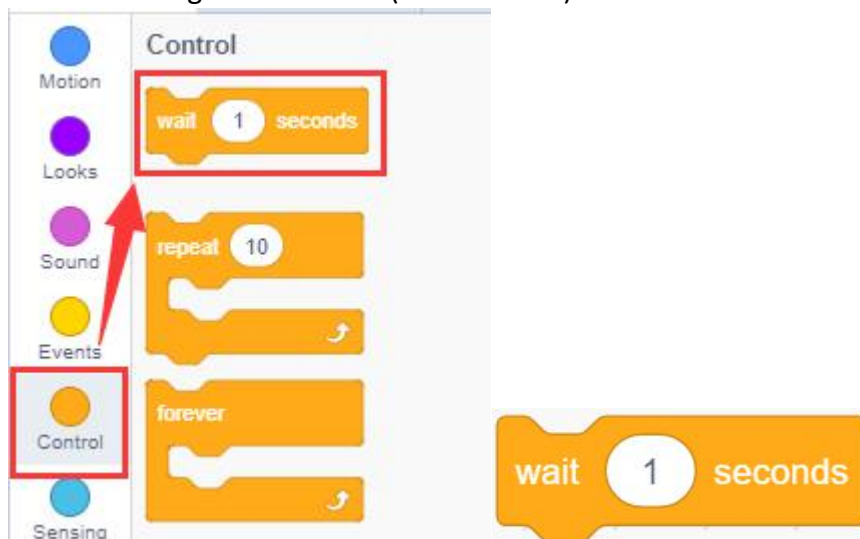


3. Looking for building blocks

1) Robot sport building block, we can choose movement status, the speed is adjustable between 0-160.



2) The function of waiting for the blocks is equivalent to the delay function in the program. We can enter different values according to our needs. (Unit: second)

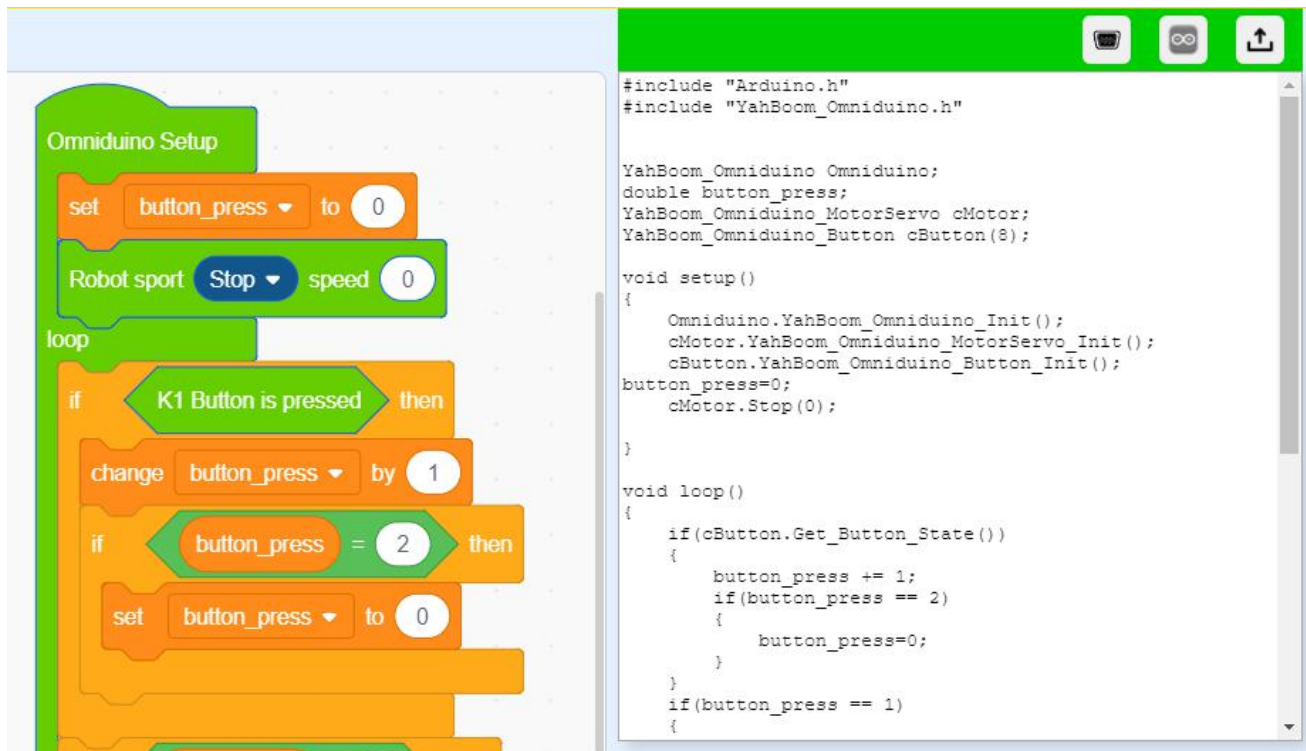


Combine blocks



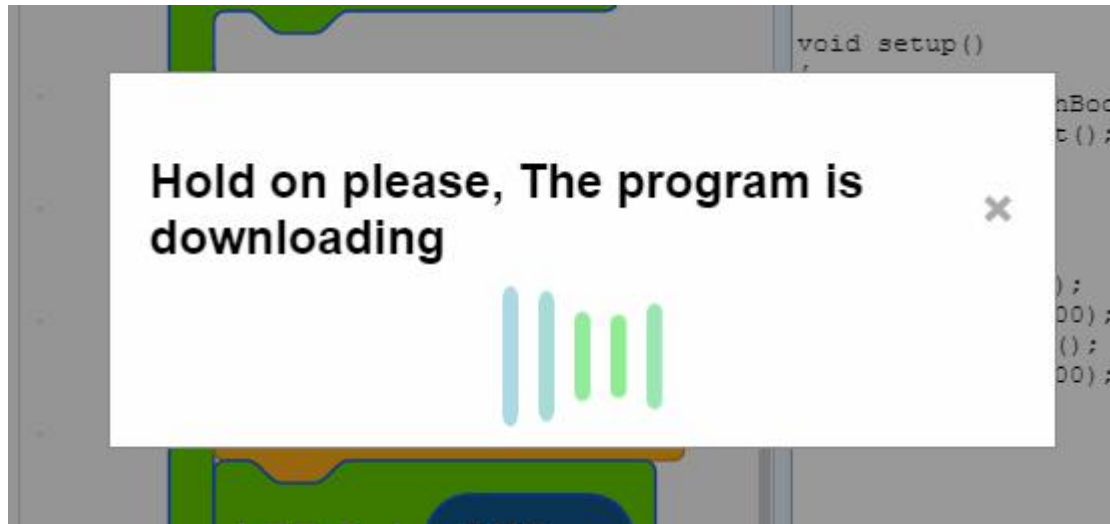
4. Compiling and uploading the program

4.1 After building the blocks, click the **[code mode]** in the upper right corner of the Helloblock programming interface. We can see the corresponding Arduino code.

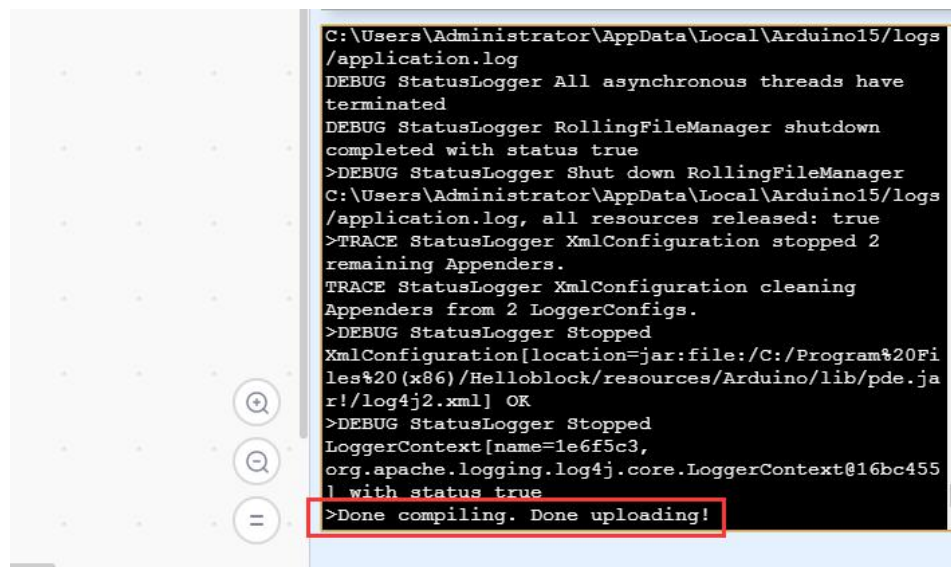


4.2 Then, you need to connect Omniduino car to your computer. Select the CH340 port number identified in the previous step in the upper right corner. Then, click the up arrow to start compiling and uploading the program.





4.3 When the words "**Done compiling Done uploading**" appear in the lower right corner of the programming interface, which means the program has been uploaded.



5. Experimental phenomenon

After the program is downloaded. After we press the K1 button, omniduino car will move to the left and front for 1 second --> right and front for 1 second --> right and back for 1 second --> the left and back for 1 second. The movement track of the car is similar to a diamond.