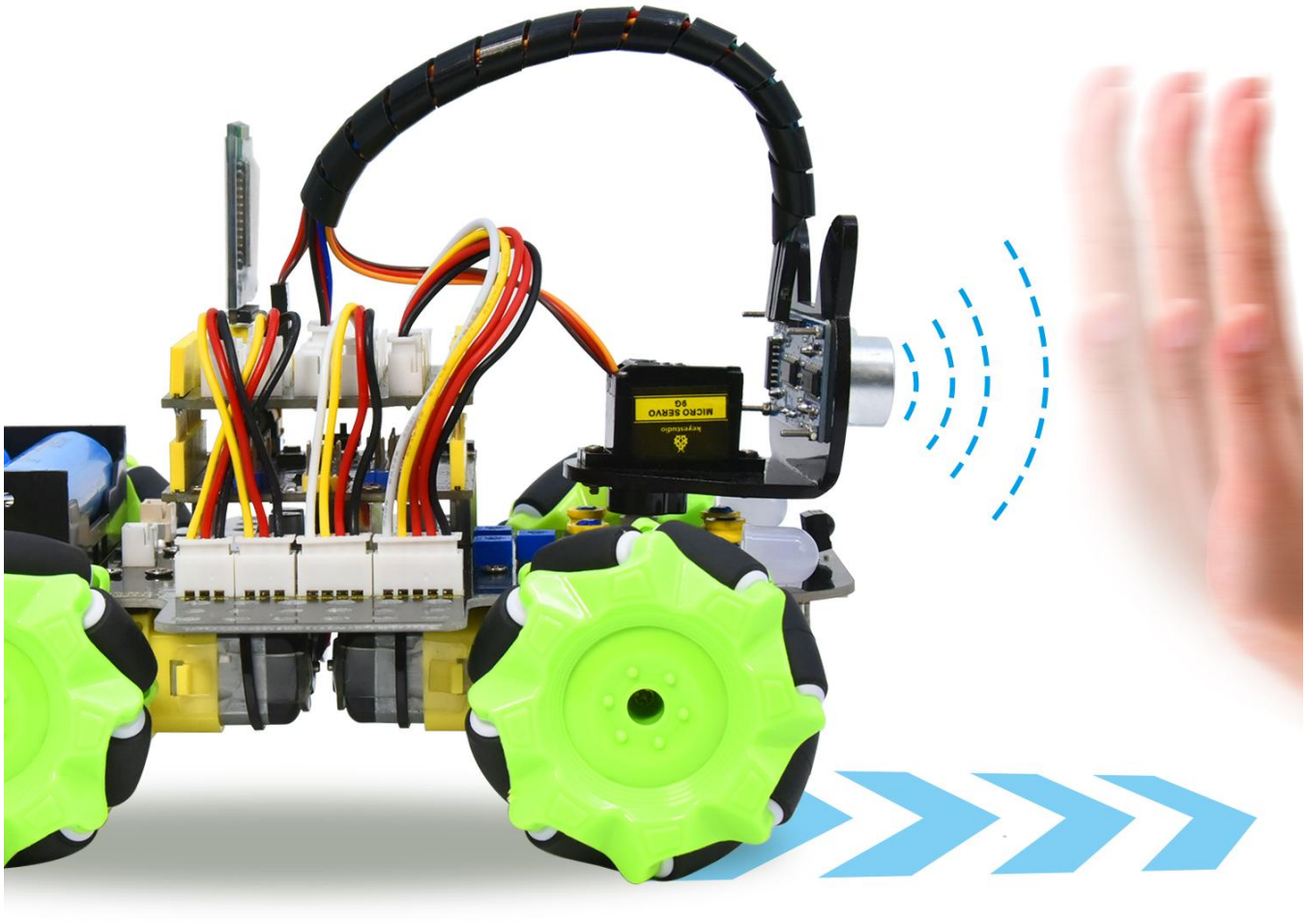
keyestudio

Project 8: Ultrasonic Following Smart Car

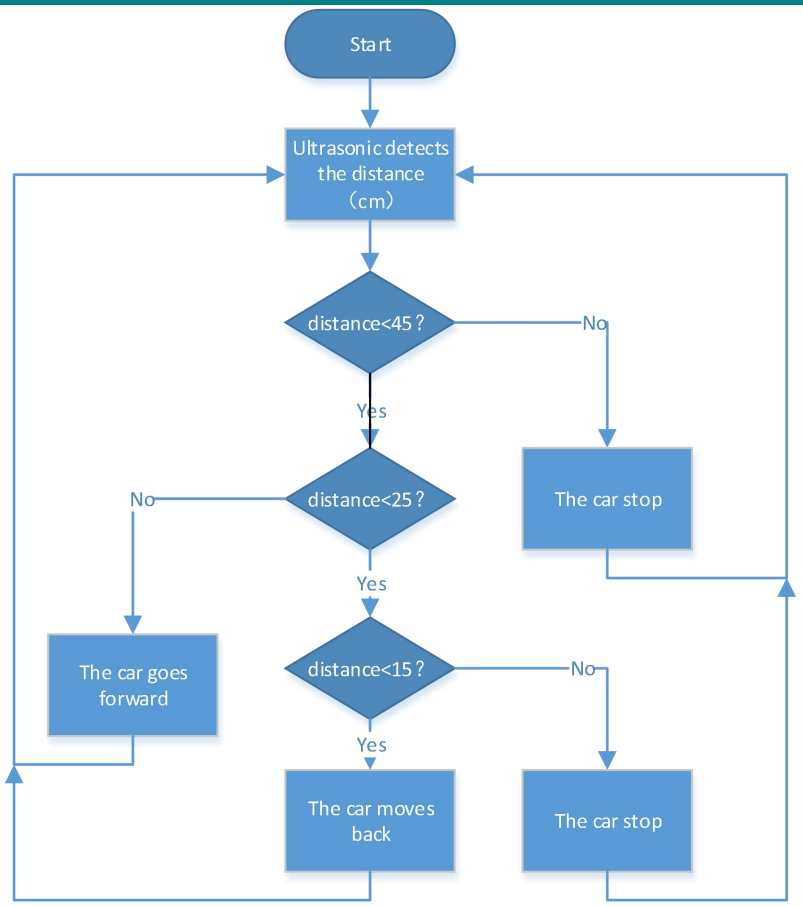


1. Description

In this project, we will work to combine an ultrasonic sensor with motors to make an automatic follow smart car.

The ultrasonic sensor detects the smart car and the obstacle distance to control the motion status of car.

2. Flow Diagram



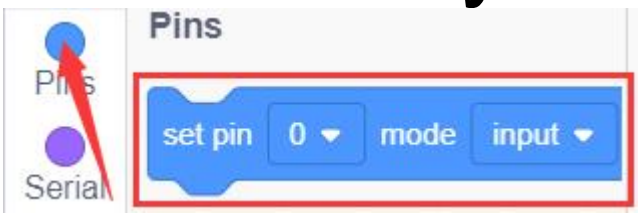
3. Test Code

You can drag blocks to edit. Blocks listed below are for your reference

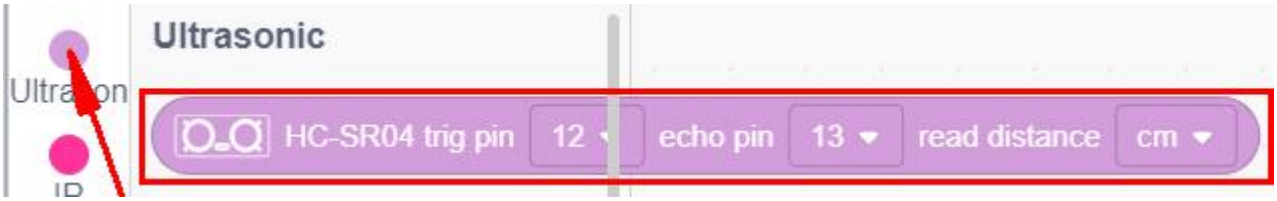
（1）

keyestudio

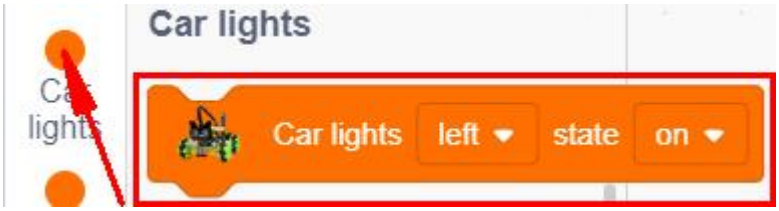
（2）



（3）



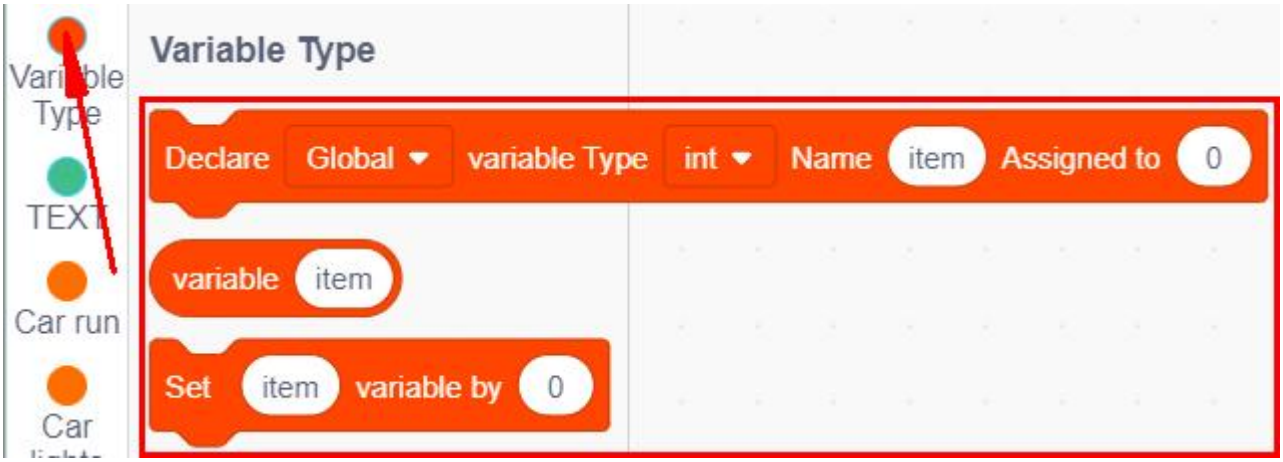
（4）



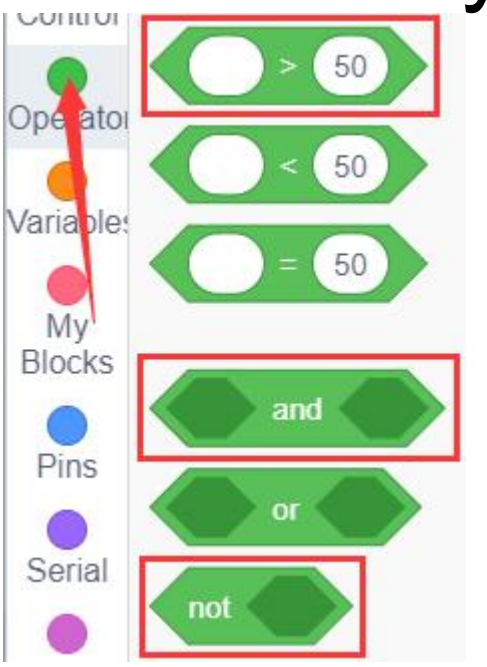
（5）

（6）

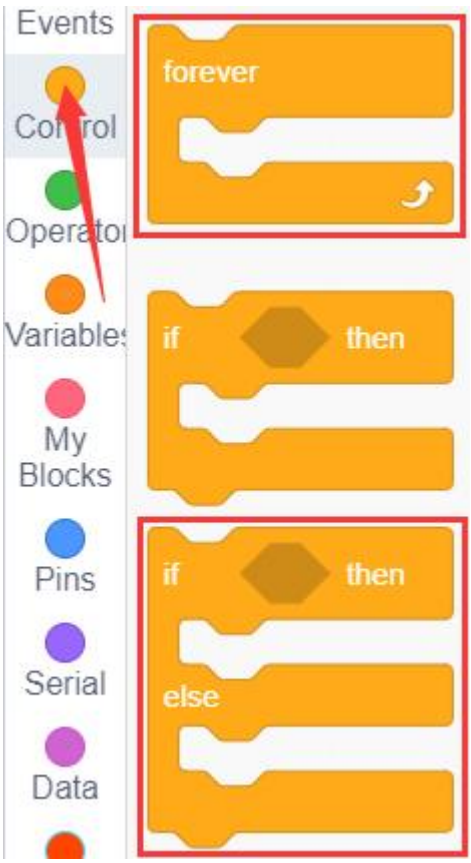
（7）



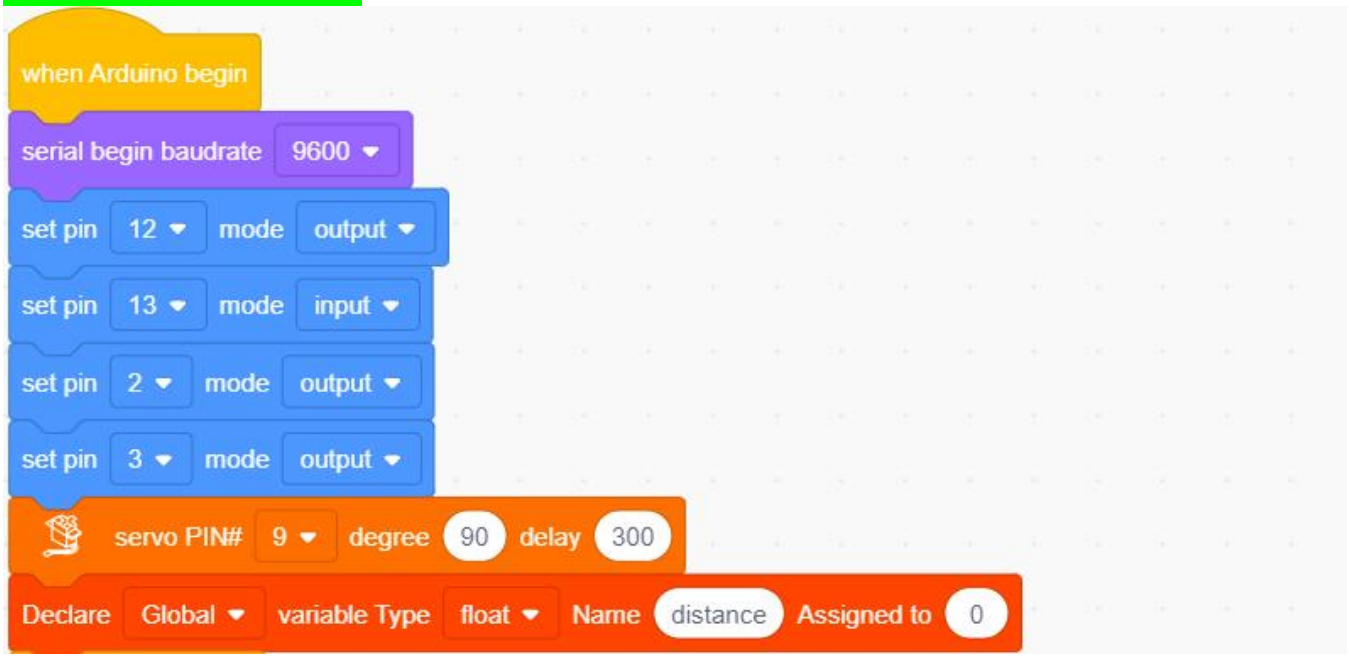
（8）


Operator
Variables
My Blocks
Pins
Serial
> 50
< 50
= 50
and
or
not

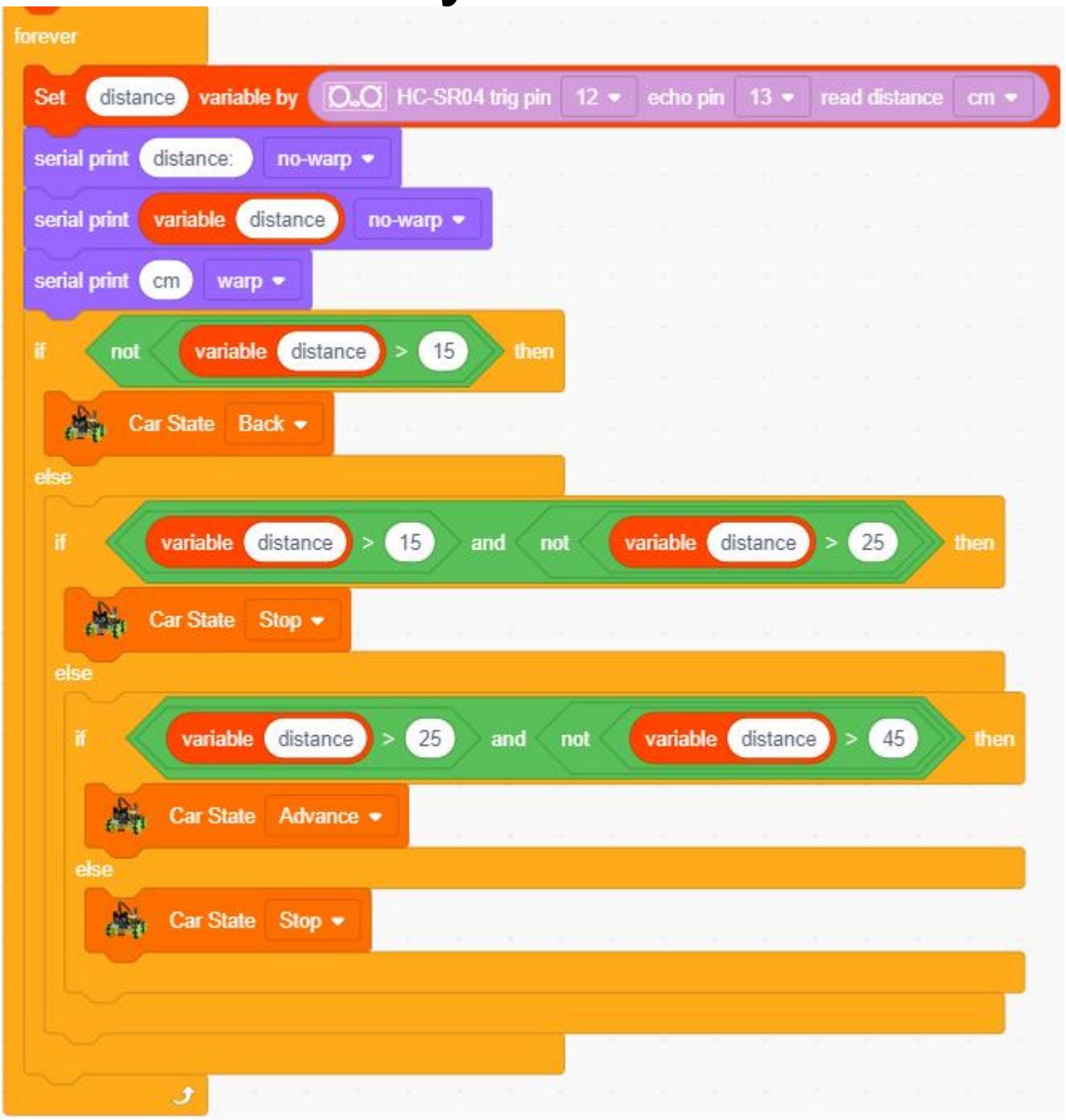
（9）


Events
Control
Operator
Variables
My Blocks
Pins
Serial
Data
forever
if then
if then
else

Complete Test Code



keyestudio


forever
Set distance variable by HC-SR04 trig pin 12 echo pin 13 read distance cm
serial print distance: no-warp
serial print variable distance no-warp
serial print cm warp
if not variable distance > 15 then
Car State Back
else
if variable distance > 15 and not variable distance > 25 then
Car State Stop
else
if variable distance > 25 and not variable distance > 45 then
Car State Advance
else
Car State Stop

4.Test Result

After uploading the code successfully, turn the DIP switch to ON end and power on, then the car will follow in a straight line. We put the palm of our hand in front of the ultrasonic, slowly forward, the car will follow our palm to move.