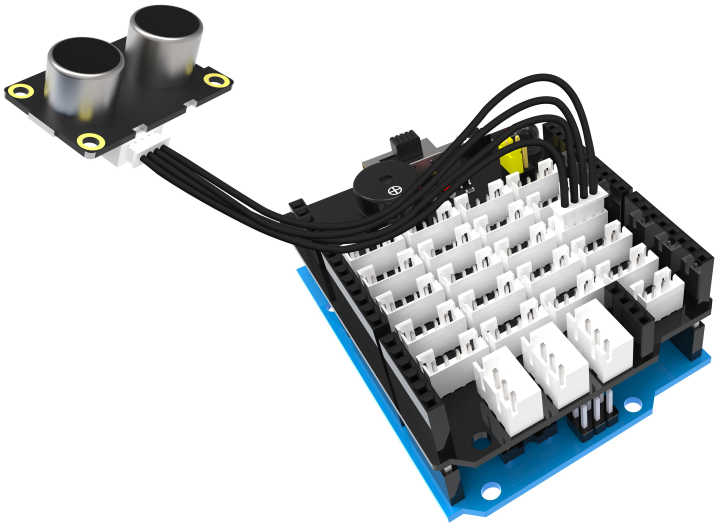
Experimental content: When ultrasonic module detect different distance, the buzzer play different tone(do rui mi fa sol la si).

Tip: Reference tone do(C4), rui(D4), mi(E4,) fa(F4), sol(G4), la(A4), si(B4).

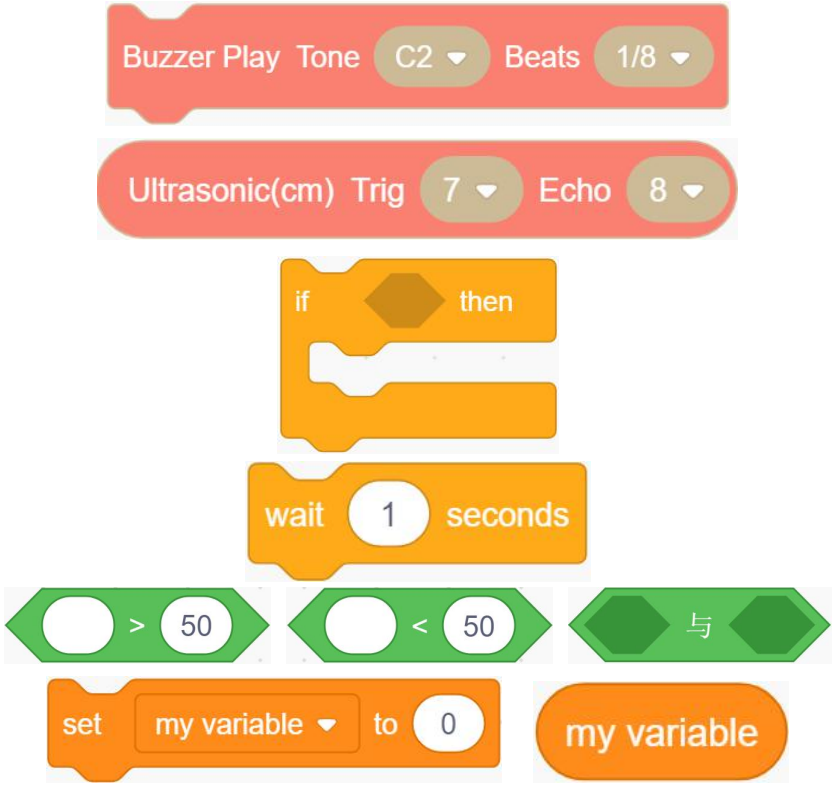
Experiment preparation: UNO board *1, Plugkit sensor expansion board *1, 4pin cable (PH2.0) * 1, USB data cable *1, Ultrasonic sensor module *1.

Experimental wiring:



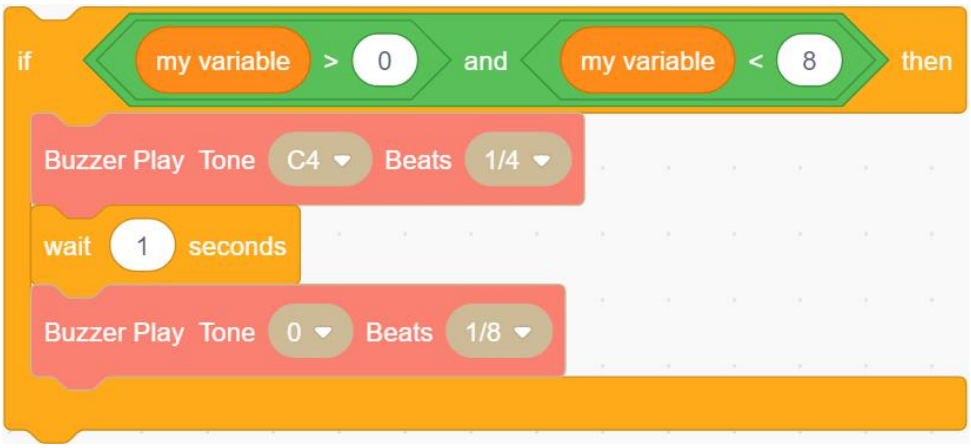
Experimental steps:

1.Select the following blocks in the [Plugkit], [Control], [Operator],[variable].



2.Set my variable to the data collected by the ultrasonic sensor.

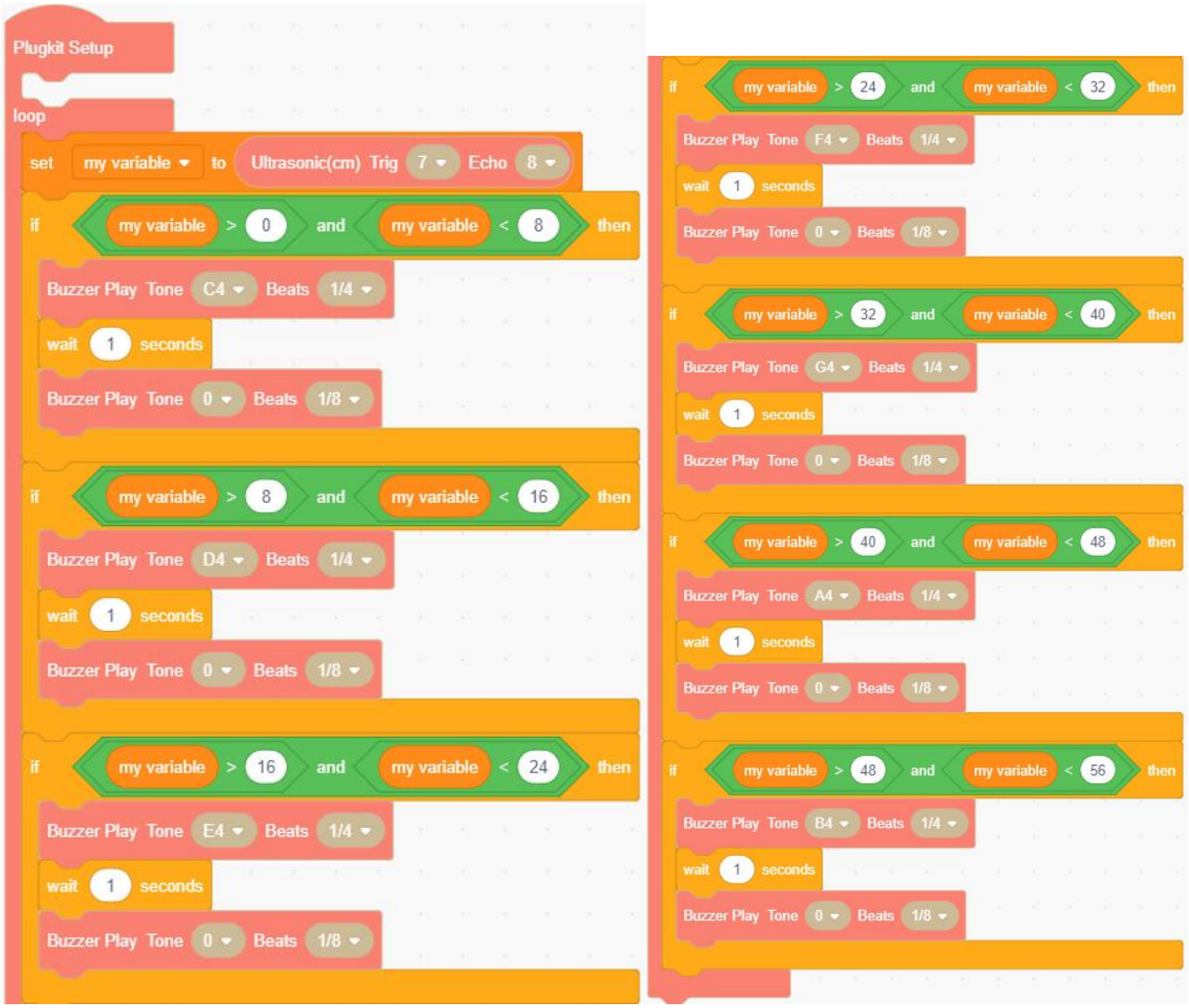
3.If the value of my variable is greater than 0 and my variable is less than 8 at the same time, the buzzer module makes a sound. We use a “logic and(&)” block. The function of this block, when the left and right conditions is satisfied at the same time, it is true, otherwise it is false.



4.We take a distance of 8cm and output a different tone every 8cm. It can be modified by duplicating the block combination of step 3.

Distance	**Tone**
0~8cm	do(C4)
8cm~16cm	rui(D4)
16cm~24cm	mi(E4)
24cm~32cm	fa(F4)
32cm~40cm	sol(G4)
40cm~48cm	la(A4)
48cm~56cm	si(B4)

5.Put the combination of the blocks in step 2 and the combination of blocks in steps 3 and 4 into the loop. Because the overall program is long, only the segmented program is provided here, combine the blocks from left to right as shown below



6.Compiling and uploading programs.

Experimental phenomena: When ultrasonic module detect different distance, the buzzer play different tone(do, rui, mi, fa, sol, la, si).