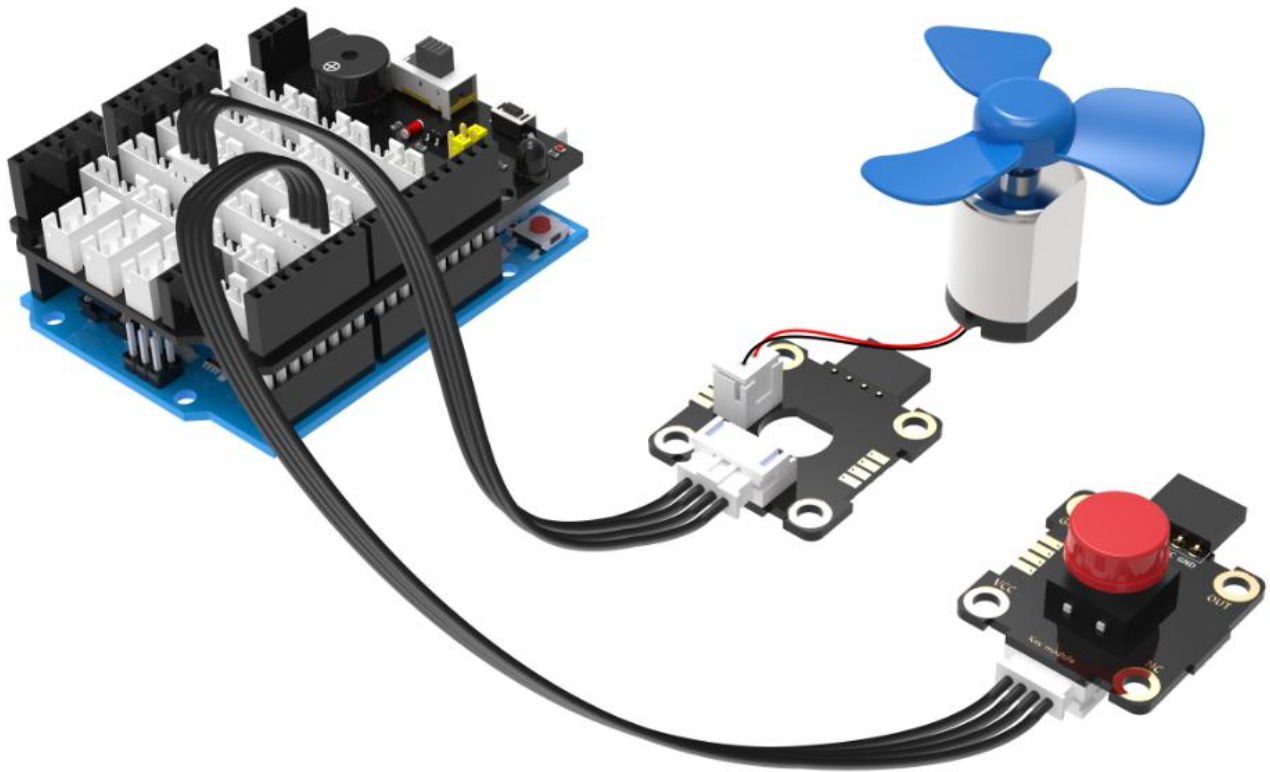**Experimental content:** The wind speed can be switched by pressing the buttons. Low speed(30), middle speed(60), high speed (90).

Experiment preparation: UNO board *1, Plugkit sensor expansion board *1, USB data cable *1, 4pin cable(PH2.0) *2, Motor drive module *1, Motor fan *1, Red button module *1.
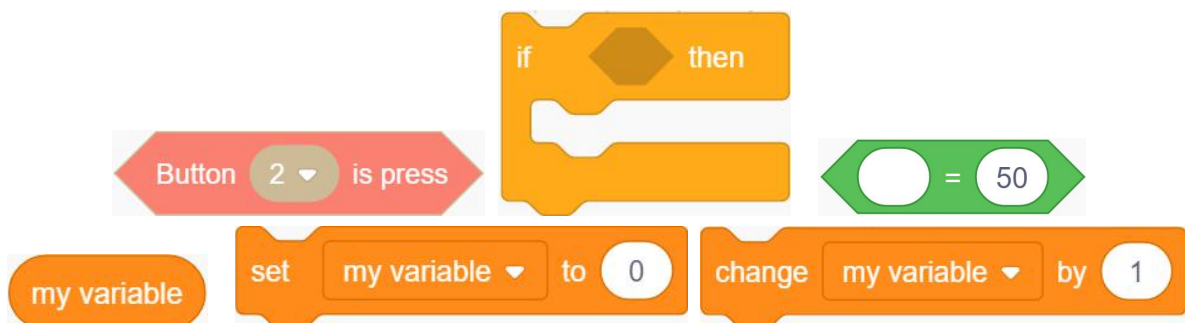
Experimental wiring:

About motor drive wiring the same as the [Drive motor fan]

The red button module is connected to the (GND, ~ 5, 4, 5V) interface of the sensor expansion board, OUT pin connect to pin 4 of expansion board.

Experimental steps:

1. Select the following building blocks in the [Plugkit], [Control], [Operation], and [Variable].
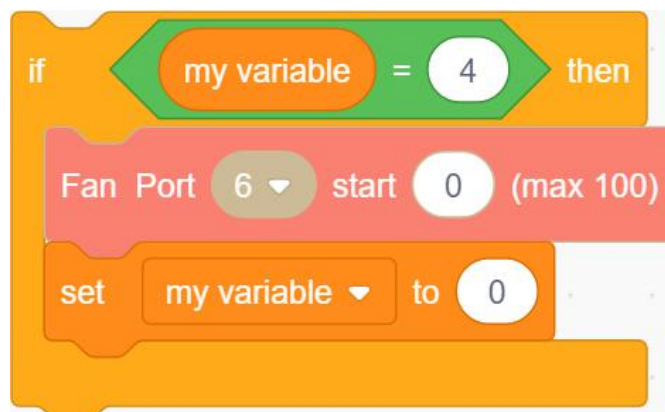
2. Select the pin 4 of the button block, if the button module is pressed, then, my variable will increase 1 and delay 1s.

```
if      Button  4 ▾  is press   then
        change  my variable ▾  by  1
        wait  1  seconds
```
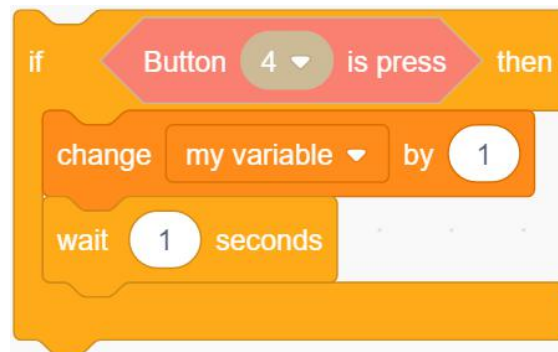
3. Set the fan module port to 6 and the wind speed to 30, 60, 90, and 0. If my variable = 1, the fan switches to low speed (30), if my variable = 2, the fan switches to medium speed (60), if my variable = 3, the fan switches to high speed (90), if my variable = 4, the fan will stop (speed =0) ,and set my variable to 0 at the same time.

```
if      my variable  =  1   then
        Fan  Port  6 ▾  start  30  (max 100)
```

...

```
if      my variable  =  3   then
        Fan  Port  6 ▾  start  90  (max 100)
```

```
if      my variable  =  4   then
        Fan  Port  6 ▾  start  0  (max 100)
        set  my variable ▾  to  0
```

4. Put the "set my variables to 0" blocks into the setup block, then, add the blocks from steps 2 and 3 to the loop. Because the overall program is longer, only step-by-step procedures are provided here, and the two parts are spliced into the loop in the direction of the arrow.
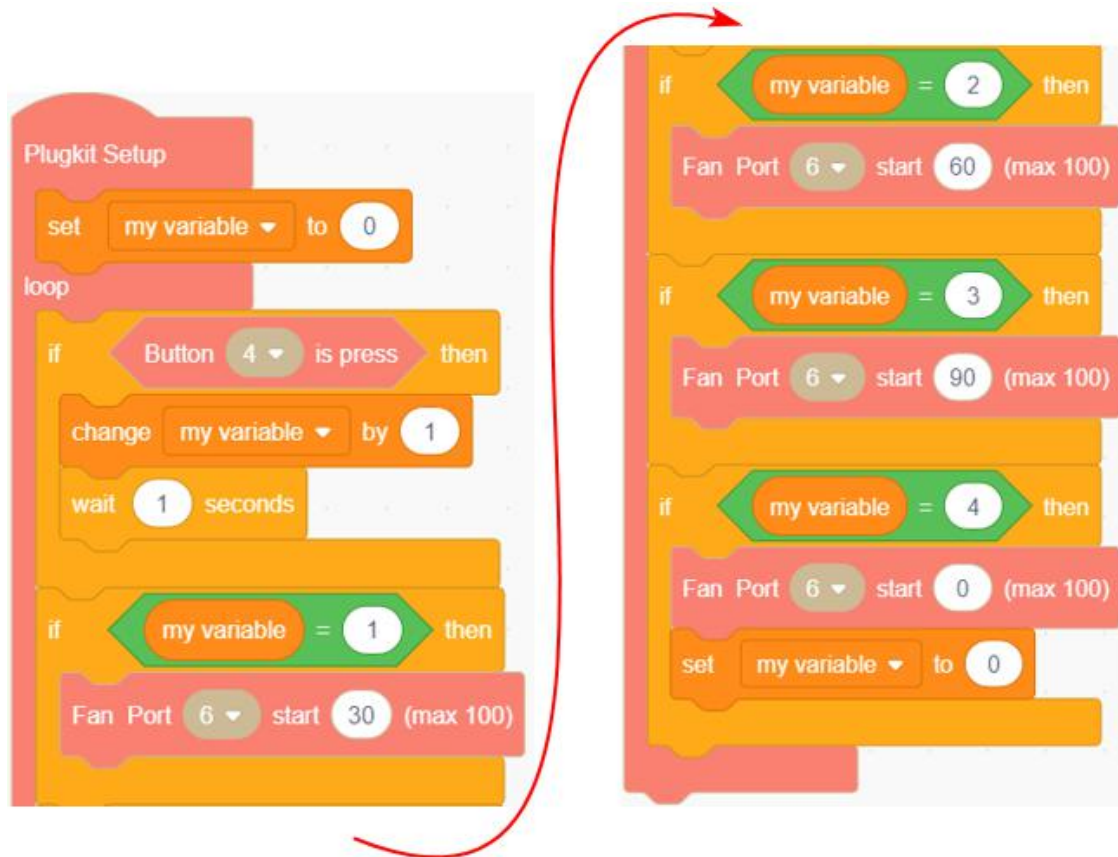
5. Compiling and uploading programs.

Experimental phenomena: The fan didn't rotate at initialization, we can start fan by pressing

the red button. The first press is low (wind speed 30), the second press is medium (wind speed 60), the third press is high (wind speed 90), the fourth press is to turn off the fan, and the fifth press returns to low. Keep the loop in this state.