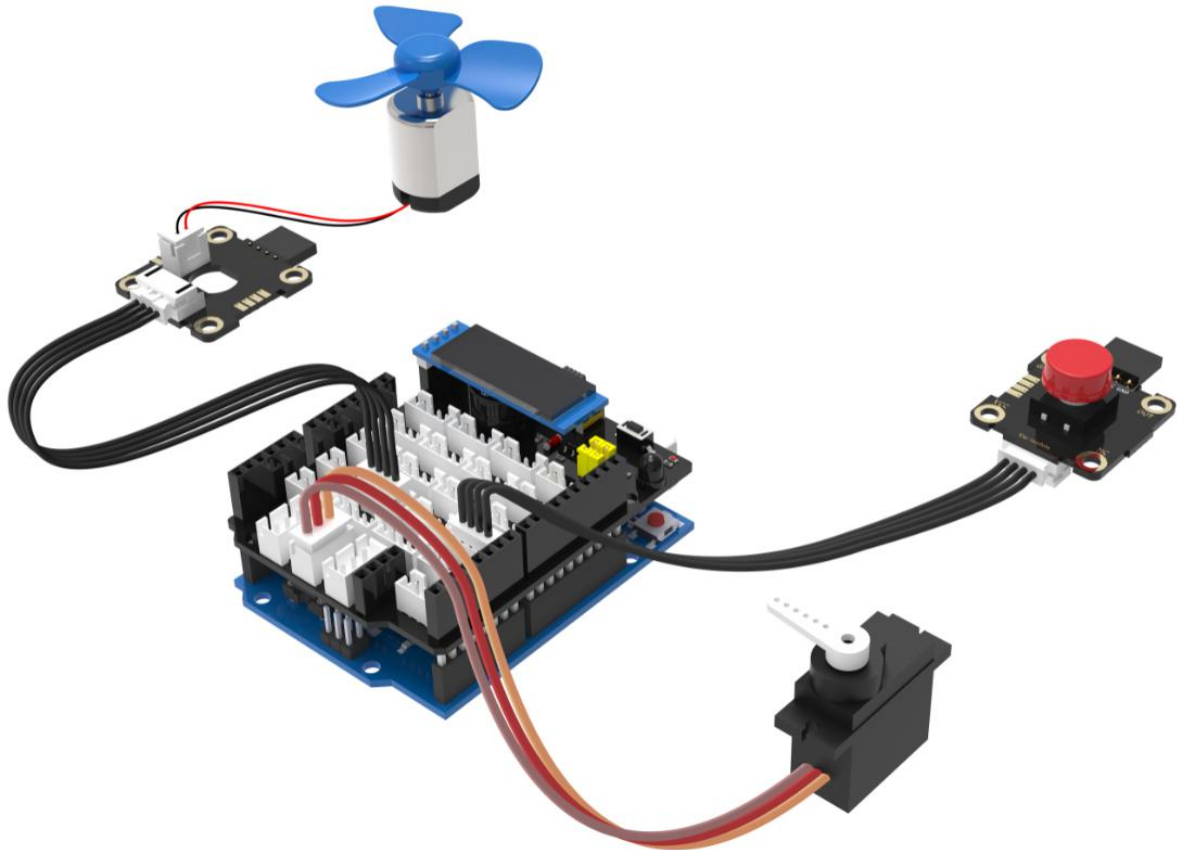


**Experimental content:** Control the fan to automatically shake its head through the servo

**Experiment preparation:** UNO board \*1, Plugkit sensor expansion board \*1, USB data cable \*1, 9G Metal digital servo \*1, Red button module \*1, Motor drive module \*1

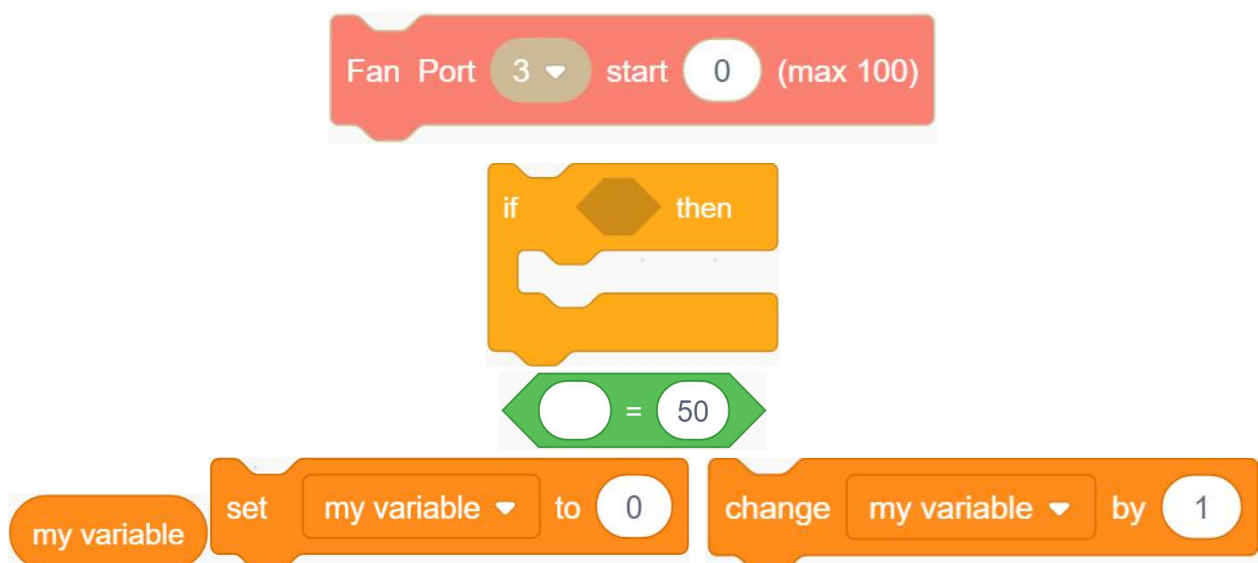
**Experimental wiring:**



The motor drive module is connected to the connector with silk screen (GND, 7, ~ 6, 5V) on the sensor expansion board.

**Experimental steps:**

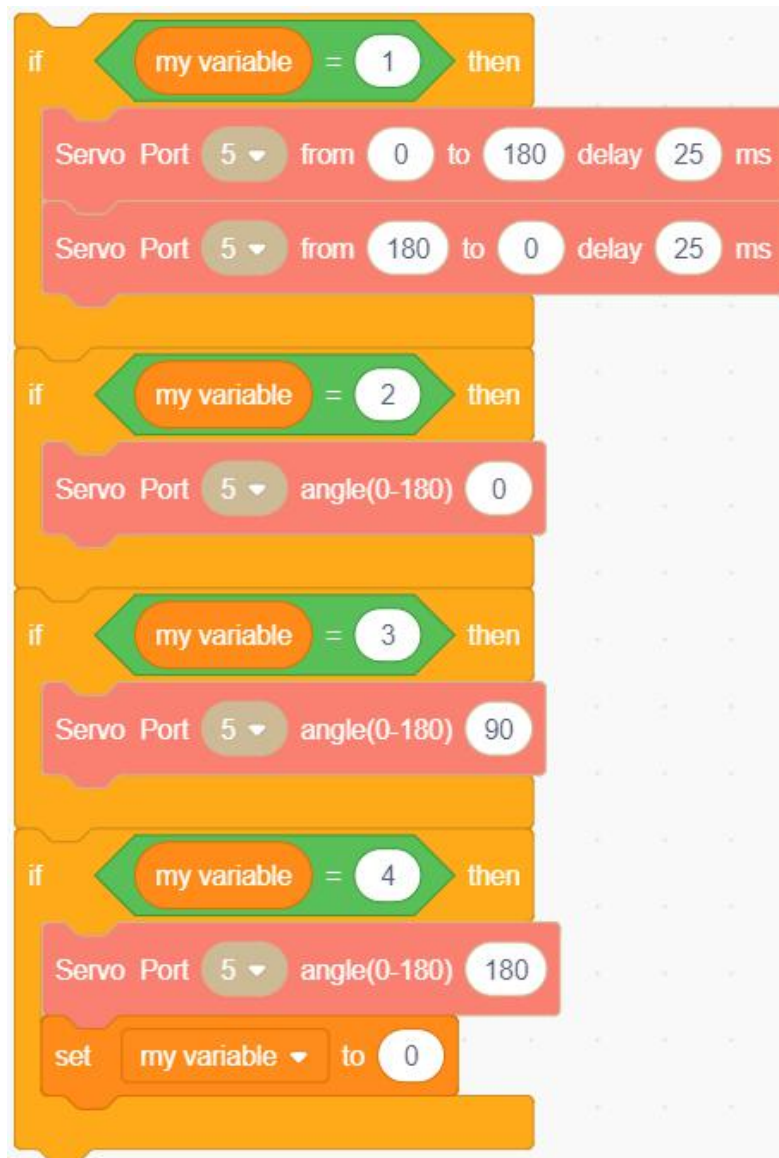
1. Select the following building blocks in the [Plugkit], [Control], [Operation], [variable]



2. When button be pressed, my variable will change by 1.



3. If my variable = 1, the servo shaking, if my variable = 2, the servo angle is 0°, if my variable = 3, the servo angle is 90° and if my variable = 4, the servo angle is 180°, then, set my variable to 0. The speed of the fan shaking can be controlled by adjusting the delay time of each degree of the servo.



4. Select the fan block port as 6, and set it to the wind speed we need, and then combine this block with the block combination of step 2 and step 3 into the loop block, and then set the servo angle to 0 and put set my variable to 0 blocks into the setup initialization.



5. Compiling and uploading programs.

**Experimental phenomena:** During initialization, the fan speed is set to 35, and the servo turns to 0°.

When the red button is pressed for the first time, the fan turns on the shaking head mode.

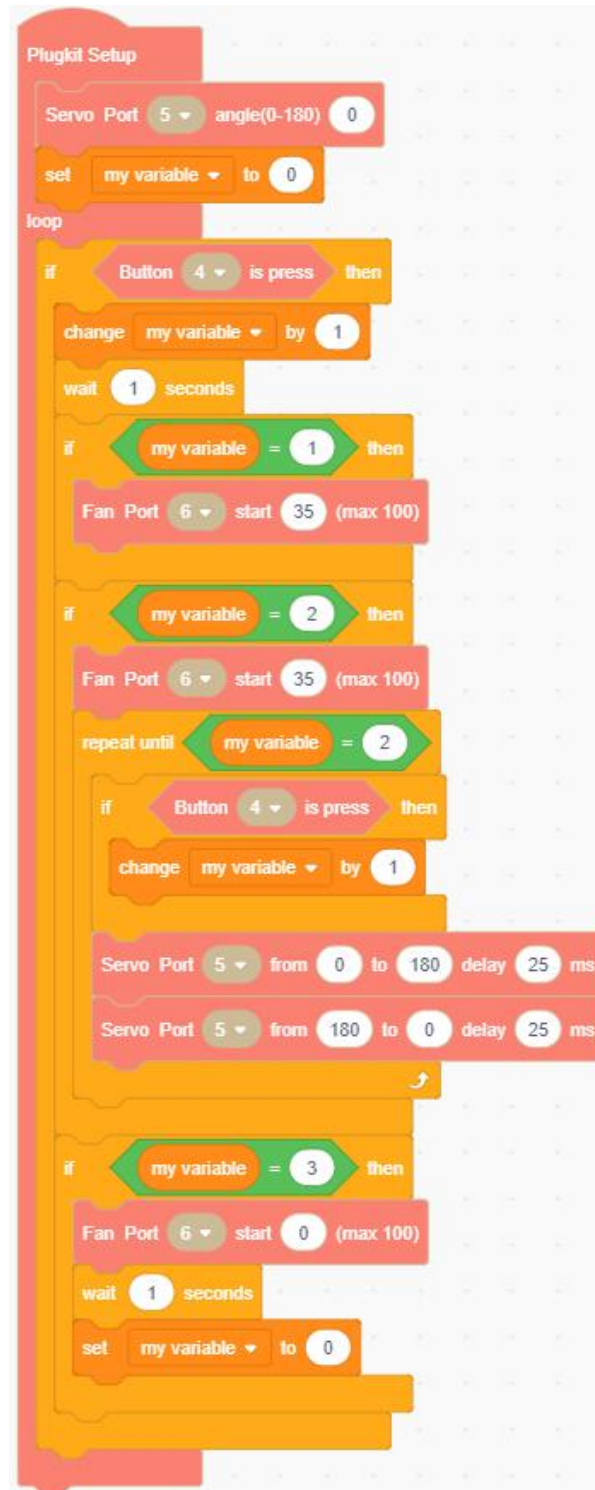
When the red button is pressed for the second time, the fan exits the shaking mode and the servo turns to 0°.

When the red button is pressed for the third time, the servo turns to 90°.

When the red button is pressed for the fourth time, the servo turns to 180°.

**Expand:** When the button is pressed, the fan will rotate. Press the button to switch the mode.

Mode 1 is no-shake mode. Mode 2 is head-shake mode. Mode 3 is stop mode. Note: we need to press and hold the button to exit the shake mode during the shake



In addition, you can increase the fan speed in multiple gears, or expand other experiments by yourself.