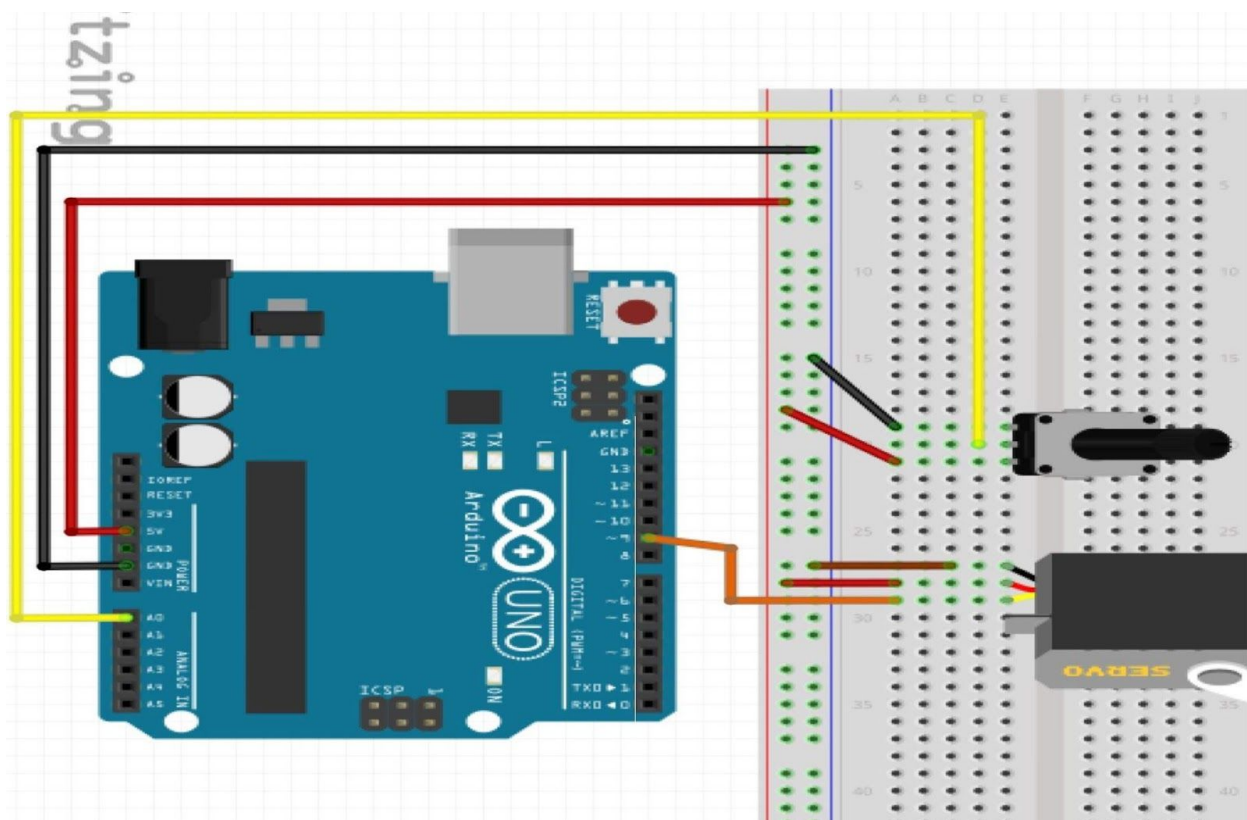




Exercise 5: Control servomotor with potentiometer

A *servomotor* is an actuator that rotates according to the position, velocity, and acceleration rate that you set. A *potentiometer* is a sensor that looks like a little metal knob. In this exercise, you'll program a servomotor to turn while you turn the knob of the potentiometer. This is the same as a volume knob from a powers amplifier. This technology powers functions as large as automatic gates and as small as remote-operated toys.

Step 1: Assemble the Arduino and breadboard.



Parts needed:

Arduino board



Bread board

1 potentiometer

1 servo motor

8 jumper wires



Step 2: Program the Arduino.

sketch_oct19a | Arduino 1.8.8 (Windows Store 1.8.19.0)

File Edit Sketch Tools Help

```
sketch_oct19a $
#include <Servo.h>                                //include servo library

Servo myservo;

int potpin = A0;                                //potentiometer to pin A0
int val;

void setup() {
  myservo.attach(9);                             //servo to pin 9
}

void loop() {
  val = analogRead(potpin);
  val = map(val, 0, 1023, 180, 0);                // cw or ccw now
  myservo.write(val);                             //with nob invert 0-1023 or 180-0
  delay(15);
}
```