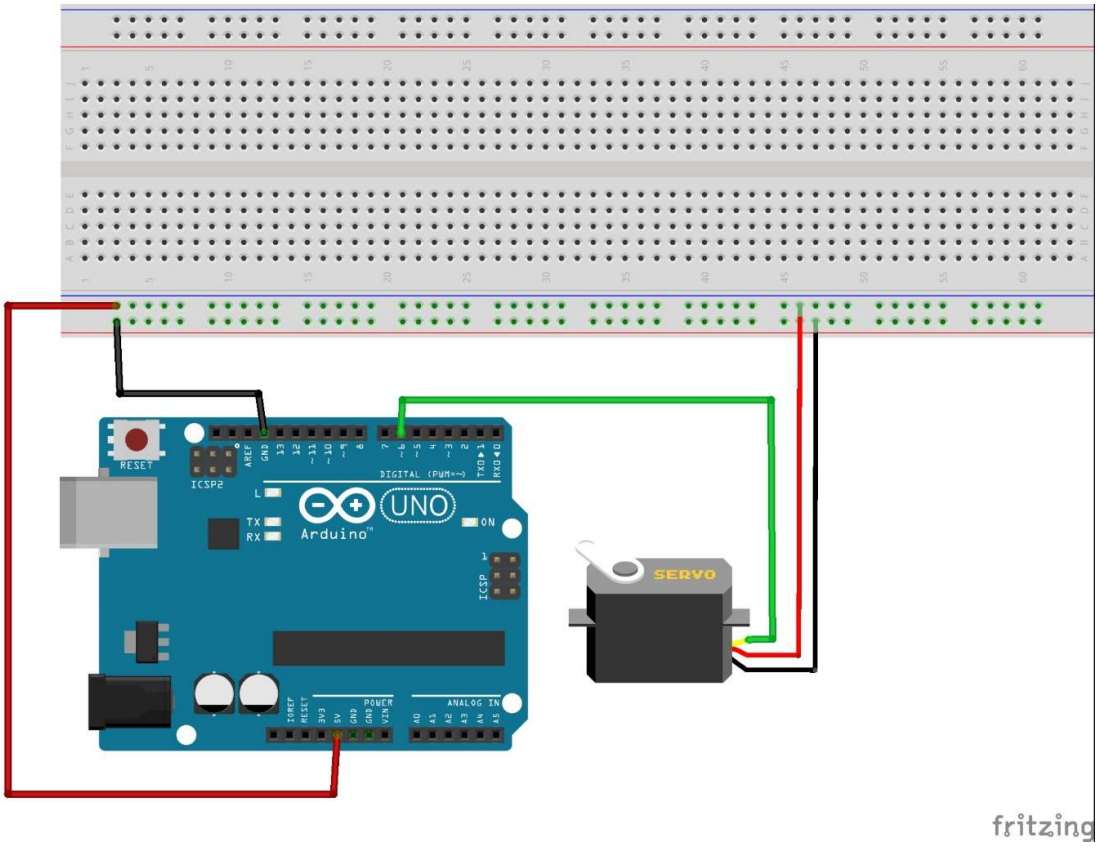
Servo Motor

1. Parts Required

Arduino Uno	1x
USB A-to-B Cable	1x
Breadboard	1x
Servo Motor	1x
Resistor	1
Jumper Wires	



2. Plugin Installed

- pyFirmata

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#Method 1

#Servo Motor.py

import time
from pyfirmata import Arduino, util

board = Arduino('COM6')  # Setting Up Board

iterator = util.Iterator(board)
iterator.start()

Xmotor = board.get_pin('d:6:s')  # Pin Information End

def setServoAngle(angle):
    print(Xmotor, angle)
    Xmotor.write(angle)
    time.sleep(0.015)

while True:
    for i in range(0, 180):
        setServoAngle(i)
    for i in range(180, 1,-1):
        setServoAngle(i)

# The user can enter the character y to continue this routine
or enter
# any other character to abort the loop:
#Continue or break the testing process
    i = input("Enter 'Y' to continue or Enter to quit): ")
    if i == 'y':
        pass
    else:
        #setServoAngle(myservo,0)
        board.exit()
        break

print("Program Exit")
board.exit()
```

```
#Method 2

#Servo Motor.py

from pyfirmata import SERVO
from time import sleep
import pyfirmata
from pyfirmata import Arduino, util

# setting up Arduino port
port = 'COM6'
board = Arduino(port)
iter = pyfirmata.util.Iterator(board)
iter.start()

XMotor = 7
board.digital[XMotor].mode = SERVO

# Custom angle to set Servo motor angle
def setServoAngle(pin, angle):
    board.digital[pin].write(angle)
    sleep(0.015)


while True:
    for i in range(0, 180):
        setServoAngle(XMotor, i)
    for i in range(180, 1,-1):
        setServoAngle(XMotor, i)

    i = input("Enter 'Y' to continue or Enter to quit): ")
    if i == 'y':
        pass
    else:
        #setServoAngle(myservo,0)
        board.exit()
        break
```