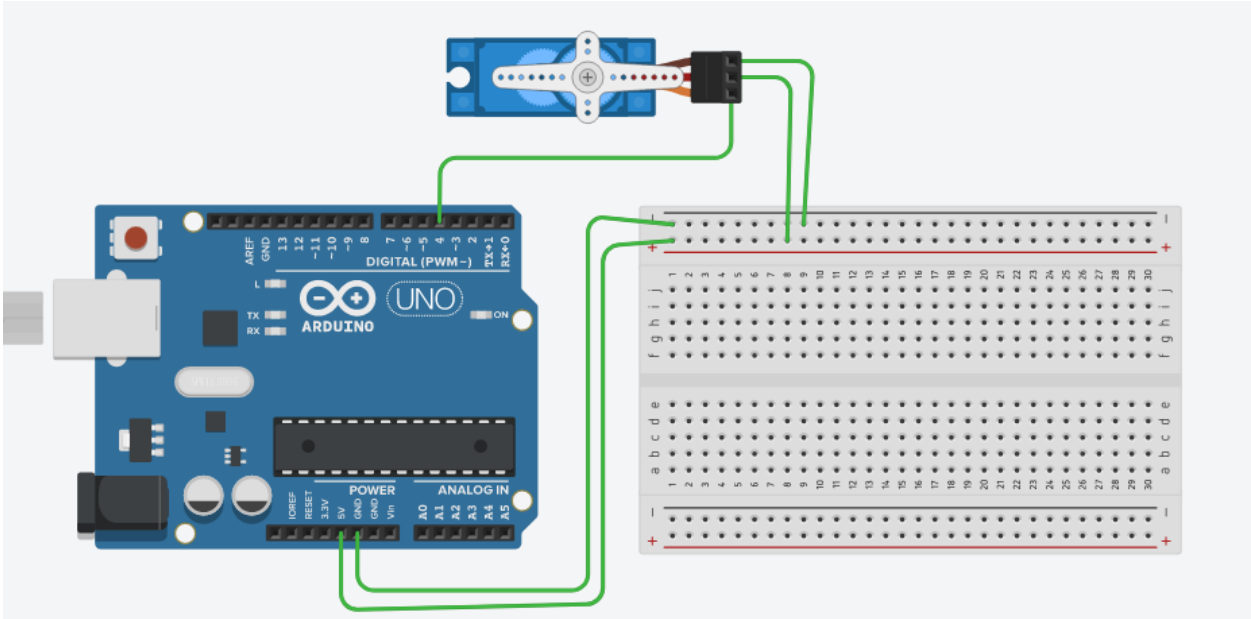
COMP 1045 Lab 10 - Motor control_LH

Circuit diagram: Please build the following circuit.



Level 1: Please copy and paste the code below to check your circuit.

```
#include <Servo.h>

Servo myservo;

int val;

void setup()
{
  myservo.attach(4);
  Serial.begin(9600);
}
void loop()
{
  myservo.write(180);
  delay(1500);
  myservo.write(0);
  delay(1500);
}
```

Level 2: Include two buttons where button 1(d2) will move the motor forward by 25% and button 2(d3) will move the motor backwards 25%.

Level 3: Add an RGB led to the circuit. Now have a different light colour appear at each of the motor positions(0,25,50,75,100). If the motor is at 100% and the user hits button 1(move forward) have the motor transition through all colours and position as it returns to 0%. Likewise if the motor is at 0% and the user hits button 2(move backwards) then the motor will hit all the colours and positions automatically as it moves to 100%.

Level 4: Create a Master-Slave setup of your level 3 code using two arduinos. The first(Master) arduino will have the two buttons. The Slave will have the motor and the LED. The functionality of the code should be the same as in level 3. Reference1