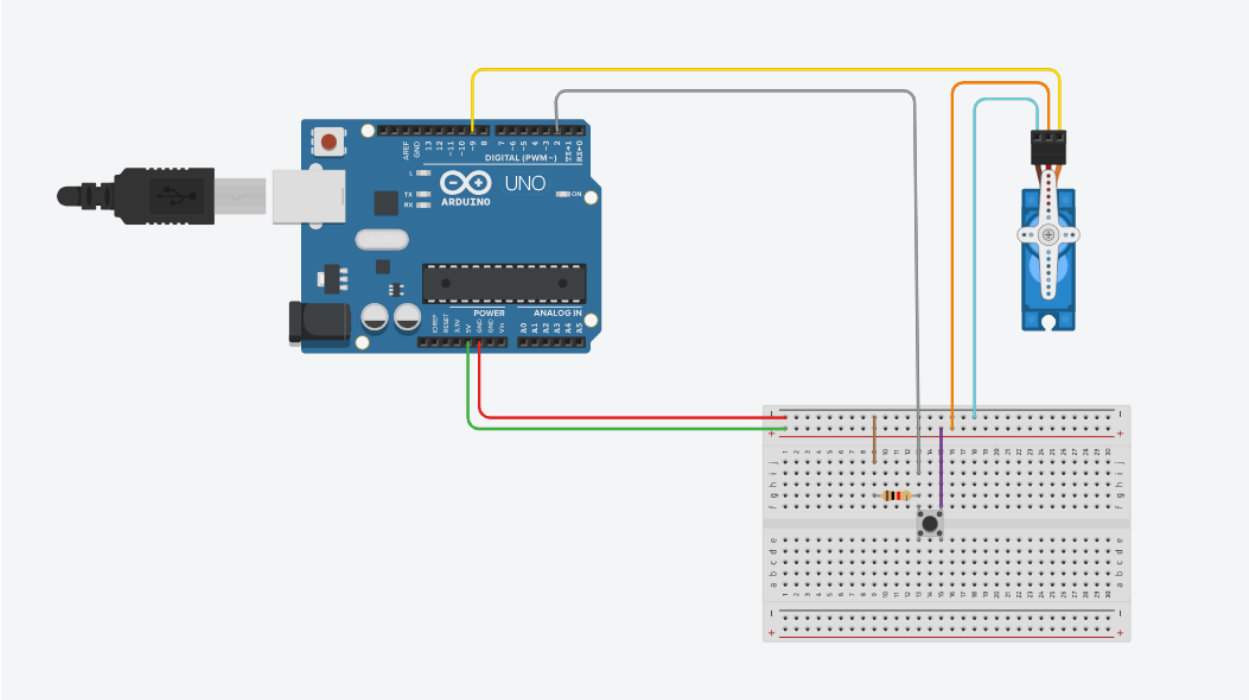
Workshop 1 – Le Tai Nhan– GCD210460 – GCD1102

1. Circuit (Schema)



2. Step by step finish all requirements

- Step 1: I will create code to shaft rod 90 degrees turn left and turn right.
- Step 2: Add the button to when we push button the shaft rod will action.
- Step 3: Next code will make the shaft rod action when we push it.

3. Sketch (codes) for this workshop

```
// C++ code
//
/*
  Sweep

  by BARRAGAN <http://barraganstudio.com>
  This example code is in the public domain.

  modified 8 Nov 2013  by Scott Fitzgerald
  http://www.arduino.cc/en/Tutorial/Sweep
*/

#include <Servo.h>

int pos = 0;
int buttonState = LOW;
int SERVO = 9;
int BUTTON = 2;
//Create an servo instance
Servo servo_9;

void setup()
{
  servo_9.attach(SERVO);
  servo_9.write(pos);
  pinMode(SERVO, OUTPUT);
```

```
 pinMode(BUTTON, INPUT);
 Serial.begin(9600);
}

void loop()
{
 // check button, read BUTTON pin,
 buttonState = digitalRead(BUTTON);
 Serial.println(buttonState);
 // if BUTTON pin high and servo_9.read()= 0, write servo to 90
 if (buttonState == HIGH && servo_9.read()== 0)
 {
  for (pos = 0; pos <= 90; pos += 1)
  {
  // tell servo to go to position in variable 'pos'
  servo_9.write(pos);
  // wait 15 ms for servo to reach the position
  delay(15); // Wait for 15 millisecond(s)
          }
  buttonState = 0;
 }
 // if BUTTON pin high and servo_9.read()= 90, write serve to 0
 if (buttonState == HIGH && servo_9.read()== 90)
 {
 for (pos = 90; pos >= 0; pos -= 1)
 {
  // tell servo to go to position in variable 'pos'
  servo_9.write(pos);
```

```
   // wait 15 ms for servo to reach the position
    delay(15); // Wait for 15 millisecond(s)
  }
    buttonState = 0;
  }
  Serial.println(servo_9.read());
}
```

4. Test evidence images