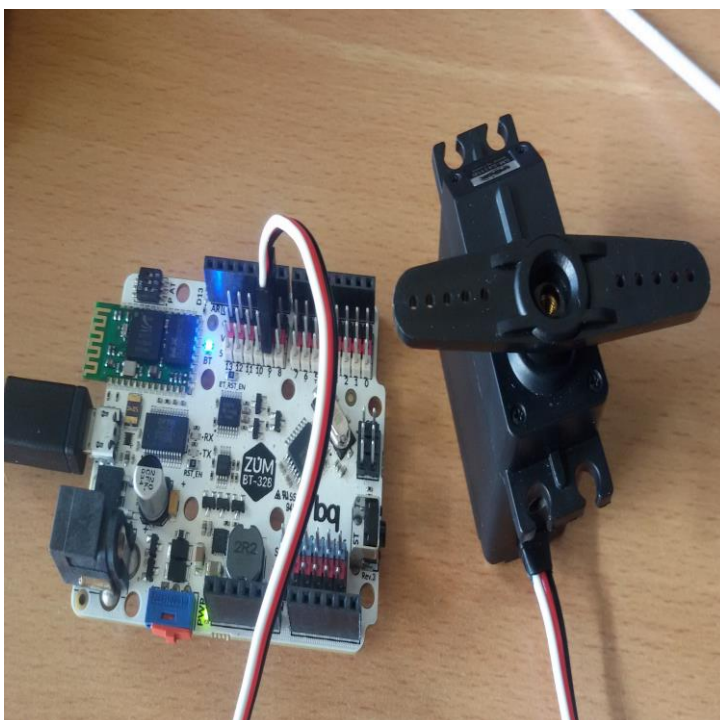
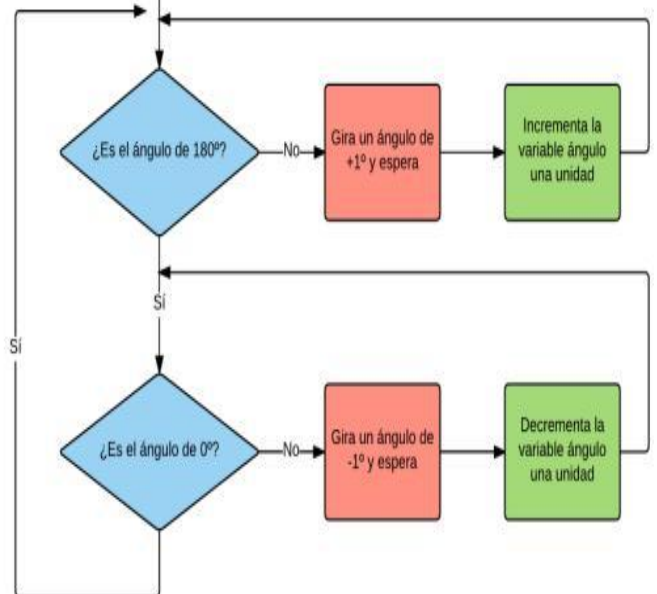
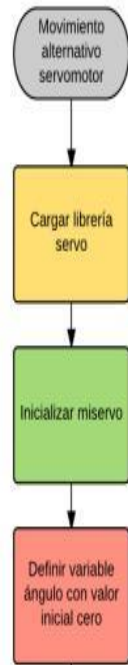
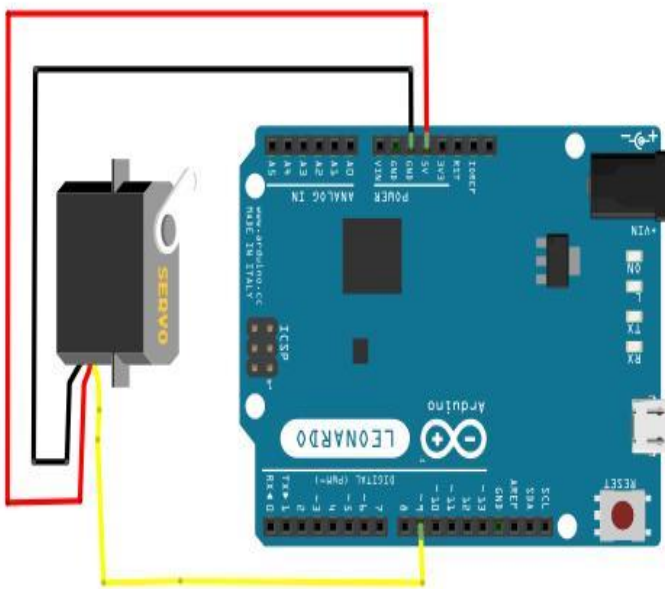


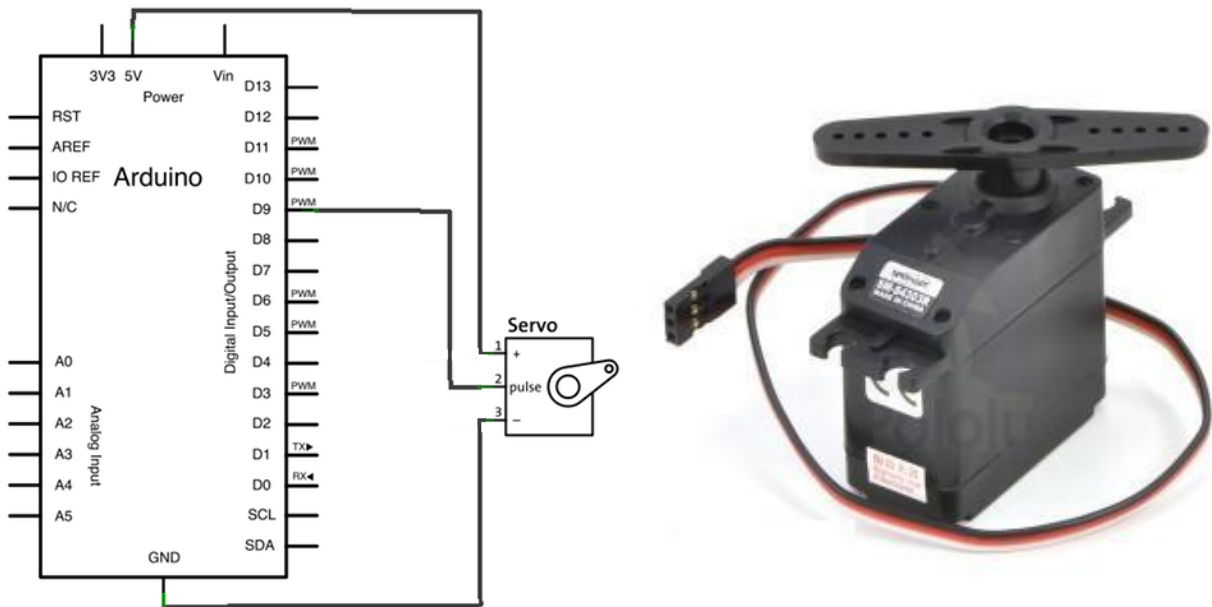
Practice 10 – Alternative motion of a servomotor

To perform this practice we will employ a servomotor and an Arduino board. It is about connecting it as indicated by the connection system that appears in the diagram and make the programming that will allow us to make the movement of 180° in one direction and then the same in the opposite direction.

A servomotor is a motor with a red wire that connects to the positive of the plate, in this case 5V, a black wire that is connected to ground or GND and a third white or yellow finish that will receive pulses with different widths that indicate the direction of rotation.

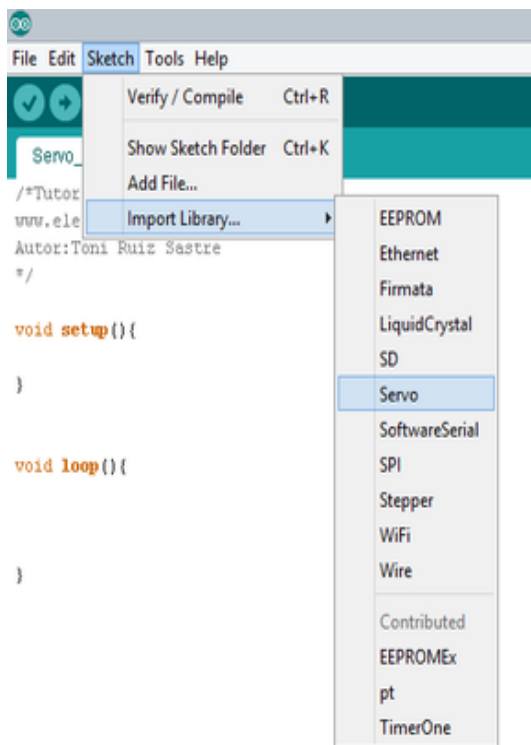
The sequence can be seen in the following flowchart:





The first step is to load the Arduino servo library that will allow us to work with instructions related to the servomotor, such as Servo, miservo.attach or miservo.write.

Once the library is loaded, the Arduino IDE instructions that will allow us to perform this sequence are the ones shown in the lower right image. As you can see the servo rotates first from 0 to 180° and then the other way around:



```

Servomotor

#include <Servo.h> // Se incluye la libreria servo
Servo miservo;    // Se crea un objeto servo llamado miservo
int angulo = 0;   // Se crea la variable entera angulo con valor i

void setup()
{
  miservo.attach(9); // Se conecta el servo al pin 9 digital
}

void loop()
{
  for(angulo = 0; angulo <= 180; angulo += 1)
  {
    miservo.write(angulo);
    delay(10);
  }
  for(angulo = 180; angulo >= 1; angulo -= 1)
  {
    miservo.write(angulo);
    delay(10);
  }
}

```