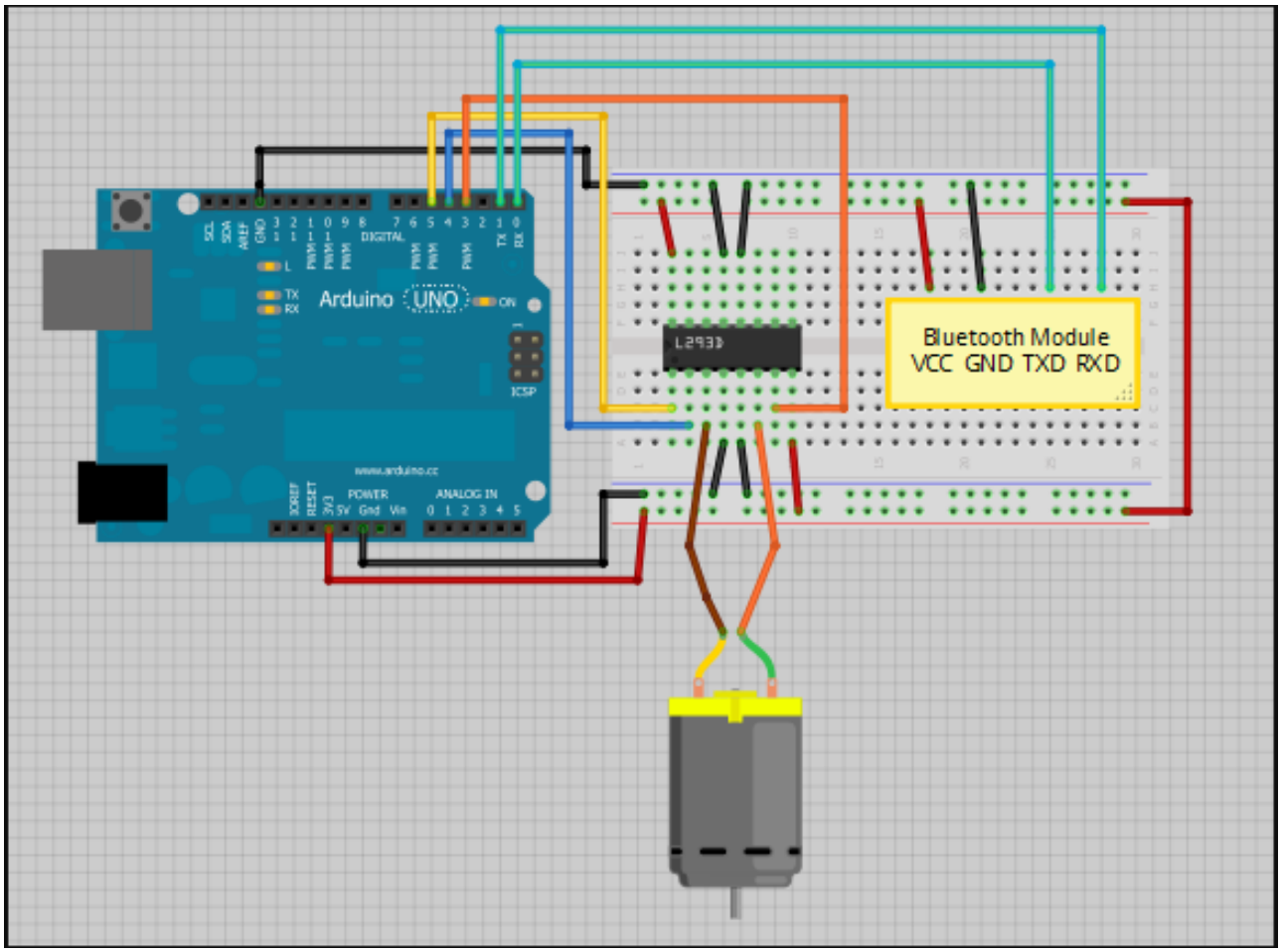
Projecte-1: Helicòpter



Required Equipment

- *Arduino UNO – read Best Arduino Starter Kits*
- *1x Bluetooth Module (for example: HC-05 or 06)*
- *1x Smartphone (any Android will work)*
- *BlueTerm application*
- *1x L293D IC*
- *1x DC motor*
- *1x Breadboard*
- *Jumper Cables*

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```
int motorPin1 = 3; // pin 2 on L293D IC
int motorPin2 = 4; // pin 7 on L293D IC
int enablePin = 5; // pin 1 on L293D IC
int state;
int flag=0;       //makes sure that the serial only prints once the state

void setup() {
  // sets the pins as outputs:
  pinMode(motorPin1, OUTPUT);
  pinMode(motorPin2, OUTPUT);
  pinMode(enablePin, OUTPUT);
  // sets enablePin high so that motor can turn on:
  digitalWrite(enablePin, HIGH);
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);
}

void loop() {
  //if some date is sent, reads it and saves in state
  if(Serial.available() > 0){
    state = Serial.read();
    flag=0;
  }
  // if the state is '0' the DC motor will turn off
  if (state == '0') {
      digitalWrite(motorPin1, LOW); // set pin 2 on L293D low
      digitalWrite(motorPin2, LOW); // set pin 7 on L293D low
      if(flag == 0){
        Serial.println("Motor: off");
        flag=1;
      }
  }
  // if the state is '1' the motor will turn right
  else if (state == '1') {
      digitalWrite(motorPin1, LOW); // set pin 2 on L293D low
      digitalWrite(motorPin2, HIGH); // set pin 7 on L293D high
      if(flag == 0){
        Serial.println("Motor: right");
        flag=1;
      }
  }
  // if the state is '2' the motor will turn left
  else if (state == '2') {
      digitalWrite(motorPin1, HIGH); // set pin 2 on L293D high
      digitalWrite(motorPin2, LOW); // set pin 7 on L293D low
      if(flag == 0){
        Serial.println("Motor: left");
        flag=1;
      }
  }
}
```