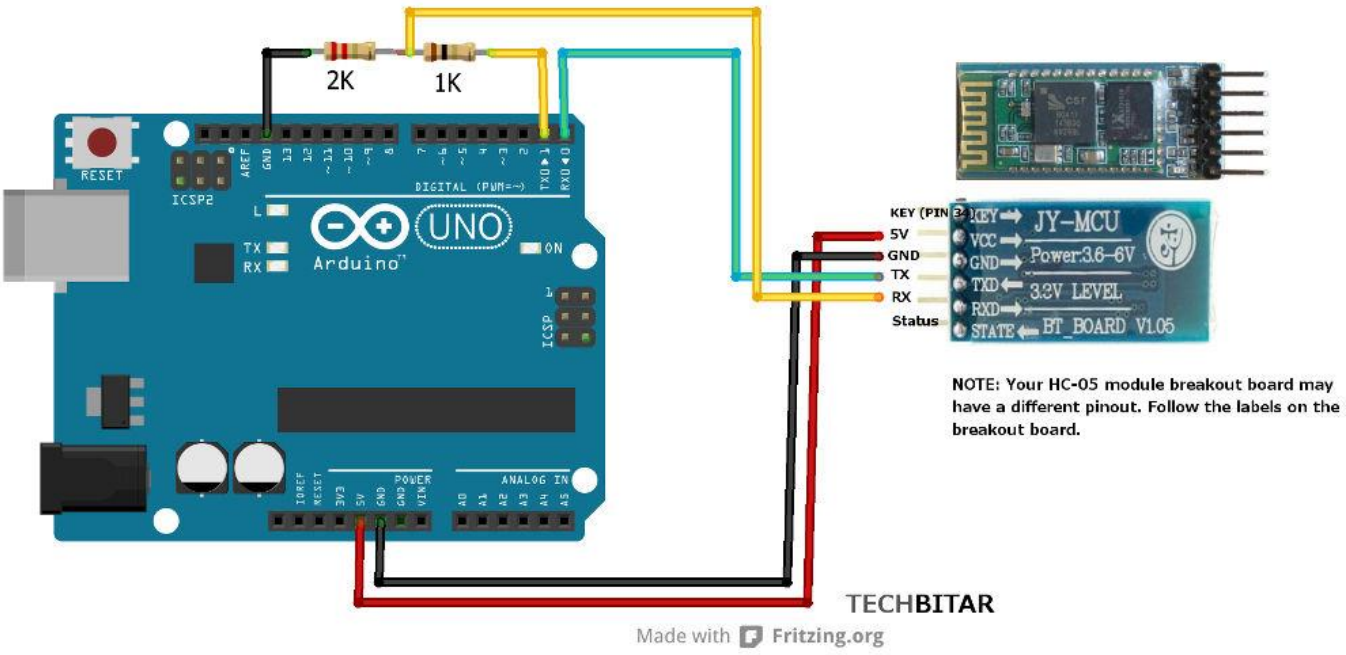
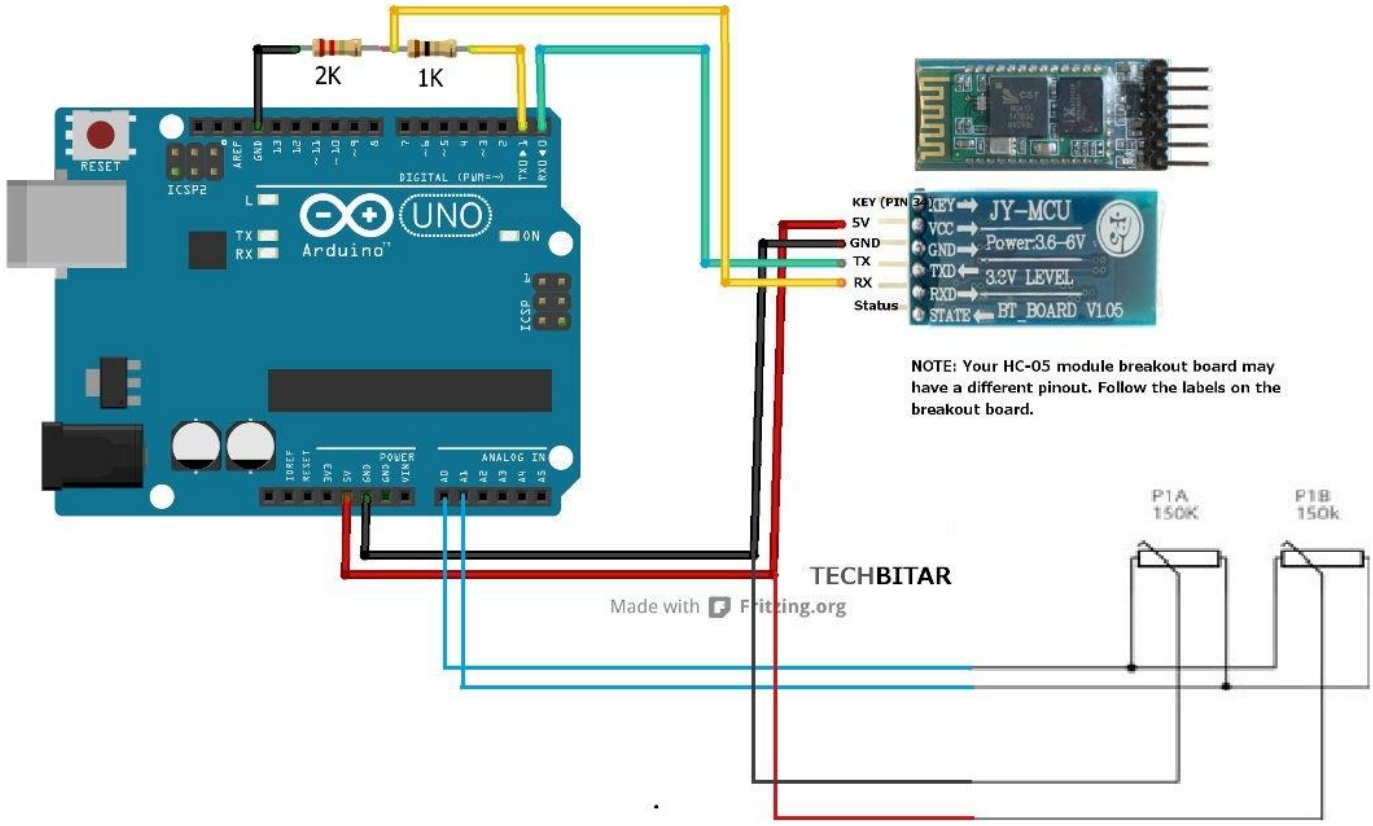
Bluetooth Joystick Example

1) connect your Arduino UNO to the HC-05 . the one in the picture is the JY-MCU HC-05 Bluetooth, which will ease the connection between the HC-05 board and Arduino UNO.



2) connect the Joystick, [read more about Arduino and joysticks.]



3) upload the following sketch to Arduino, the source code in **BluetoothJoystick** folder.

- when uploading the sketch you need to disconnect Rx and Vcc pins of the HC-05.

```
int joyPin1 = 0;            // slider variable connecetd to analog pin 0
int joyPin2 = 1;            // slider variable connecetd to analog pin 1
int value1 = 0;             // variable to read the value from the analog pin 0
int value2 = 0;             // variable to read the value from the analog pin 1
void setup() {
      // initializes digital pins 0 to 7 as outputs
 Serial.begin(9600);
}
```

```
//treatValue () will rescale analog read to a smaller scale just to ease explainning the idea

// the returned value will be from 0 to 8 where 4 when the joystick at it's steady state
 int treatValue(int data) {
  return (data * 9 / 1024) ;
 }

 void loop() {
  // reads the value of the variable resistor
  value1 = analogRead(joyPin1);
  // this small pause is needed between reading
  // analog pins, otherwise we get the same value twice
  delay(100);
  // reads the value of the variable resistor
  value2 = analogRead(joyPin2);

  value1 = treatValue(value1);
 value2 = treatValue(value2);

 Serial.println(String(value1) + String(value2));
 delay(100);
 }
```

4) after connecting to the Bluetooth Module using BtConnection.connect() method, you will be able to start reading the data that are coming from Arduino.

we are going to read each joystick value nearly in a scale from 0 to 8 , so when x = 4 and y =4 will mean the joystick is in the middle like its steady state.

- ReadJoystick.cs script contains the same code.

```
//C#

int[] joystickxy = new int[2];

   string BT;

   void start () {

      joystickxy[0] = 4;

      joystickxy[1] = 4;
```

```
}

void update() {

    string temp = BtConnection.read();

    if( temp.Length > 0)

        BT = temp;

    if ( BT.Length >= 2 ){

        joystickxy[0] = BT[0] - 48; // -48 used to convert char to int

        joystickxy[1] = BT[1] - 48;

    }// do whatever you want with these data
```