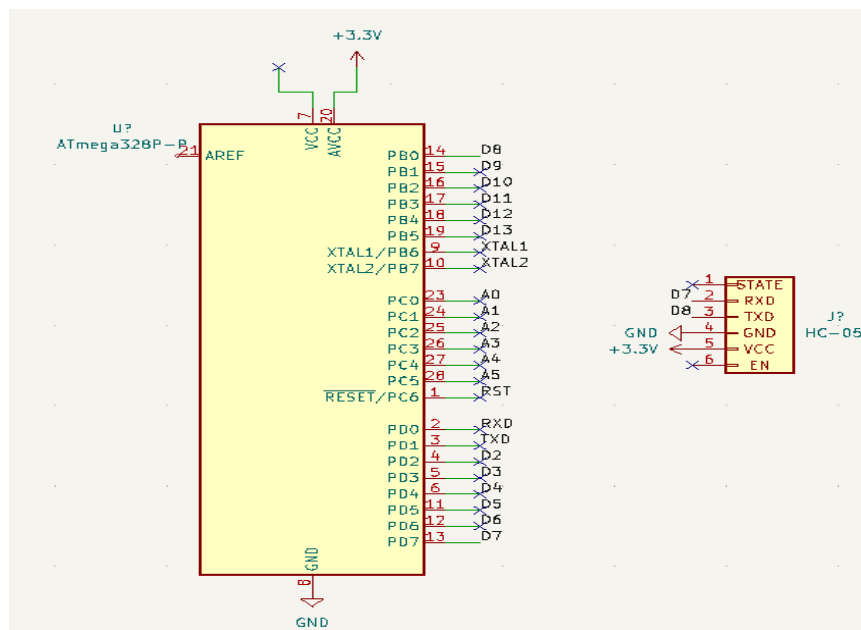


Bluetooth HC-05 module sensor Serial monitor interactive Report

Intro:

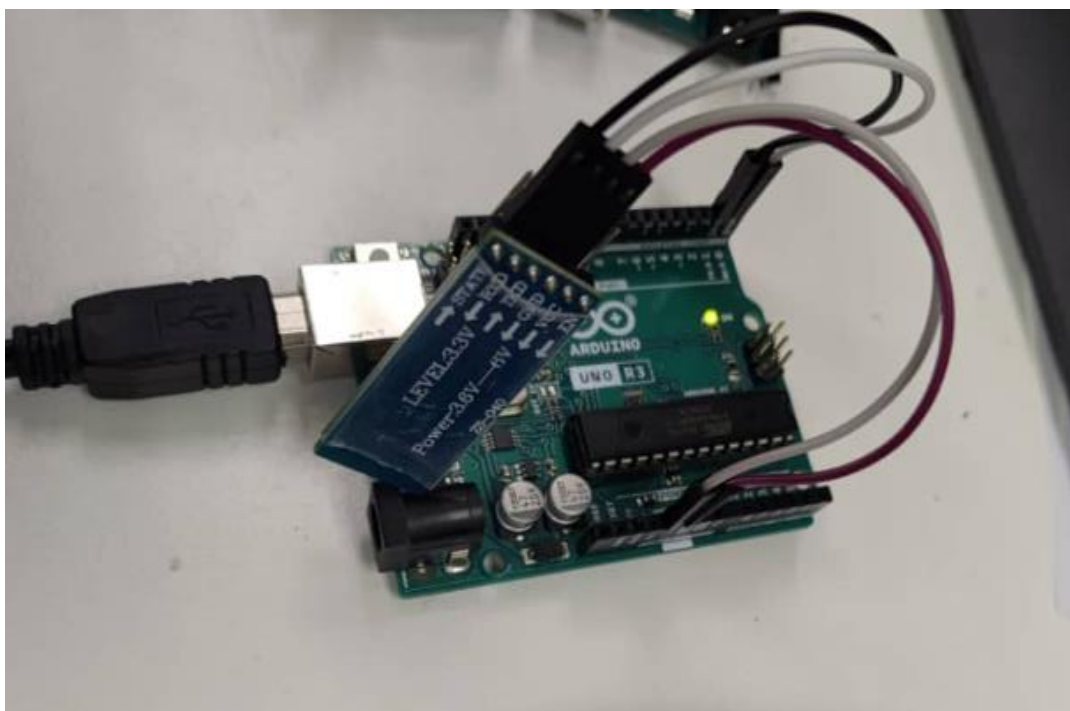
- This project call Bluetooth communication with the smartphone with the aid of Bluetooth hc-05 software application.
- Sort of code enable the communication between an Arduino Board and Bluetooth module.
- Arduino board receive the commands via Bluetooth and perform interfacing
- Image snip below show the 2d circuit connection design consist of:
 - ✓ HC-05 sensor module
 - ✓ Jumper x4
- The pin connection based on Arduino code int (receive)RX_pin = 8 and int (transmit) Tx_pin = 7;
 - ✓ GND – GND
 - ✓ Vcc – 3.3V
 - ✓ RX – D7
 - ✓ TX – D8



Code:

```
HC-05_bluetooth$  
#include <SoftwareSerial.h>  
  
int RX_pin = 7;  
int TX_pin = 8;  
SoftwareSerial BTserial(RX_pin, TX_pin);  
  
String BT_data;  
String Arduino_data;  
  
void setup() {  
  Serial.begin(9600);  
  BTserial.begin(9600);  
}  
  
void loop() {  
  if (BTserial.available()) {  
    BT_data = BTserial.readString();  
    Serial.println(BT_data);  
  }  
  
  if (Serial.available()) {  
    Arduino_data = Serial.readString();  
    BTserial.println(Arduino_data);  
  }  
}
```

- An instance of the SoftwareSerial class is created named BTserial, using the specified RX and TX pins.
- Instead code apply Software.serial, can also use Hardware.serial for Bluetooth communication on pin 0 and pin 1 on Arduino board.
- Image below show the real setup look like:



Final Result :

From the Arduino send to smartphone

HC-05_bluetooth | Arduino 1.8.13

File Edit Sketch Tools Help

HC-05_bluetooth

```
#include <SoftwareSerial.h>

int RX_pin = 8;
int TX_pin = 7;
SoftwareSerial BTSerial(RX_pin, TX_pin);

String BT_data;
String Arduino_data;

void setup() {
  Serial.begin(9600);
  BTSerial.begin(9600);
}

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  if (BTSerial.available()) {
    BT_data = BTSerial.readString();
    Serial.println(BT_data);
  }

  if (Serial.available()) {
    Arduino_data = Serial.readString();
    BTSerial.println(Arduino_data);
  }
}
```

COM8

data send from PC Arduino

data send from smartphone

☒ Autoscroll ☐ Show timestamp

No line ending 9600 baud Clear output

From the smartphone to Arduino IDE

HC-05_bluetooth | Arduino 1.8.13

File Edit Sketch Tools Help

HC-05_bluetooth

```
#include <SoftwareSerial.h>

int RX_pin = 8;
int TX_pin = 7;
SoftwareSerial BTSerial(RX_pin, TX_pin);

String BT_data;
String Arduino_data;

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  if (Serial.available()) {
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  }
}
```

COM8

data send from smartphone

☒ Autoscroll ☐ Show timestamp

No line ending 9600 baud Clear output