

Projet MEBARKIA AMMACHE

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LED ALLUME :

```
#define LED 6

// the setup function runs once when you press reset or power the board

void setup() {
    // initialize digital pin LED_BUILTIN as an output.
    pinMode(LED, OUTPUT);
}

// the loop function runs over and over again forever

void loop() {
    digitalWrite(LED, HIGH); // turn the LED on (HIGH is the voltage level)
    delay(2000);              // wait for a second
    digitalWrite(LED, LOW);   // turn the LED off by making the voltage LOW
    delay(2000);              // wait for a second
}
```

BOUTON PRESSE :

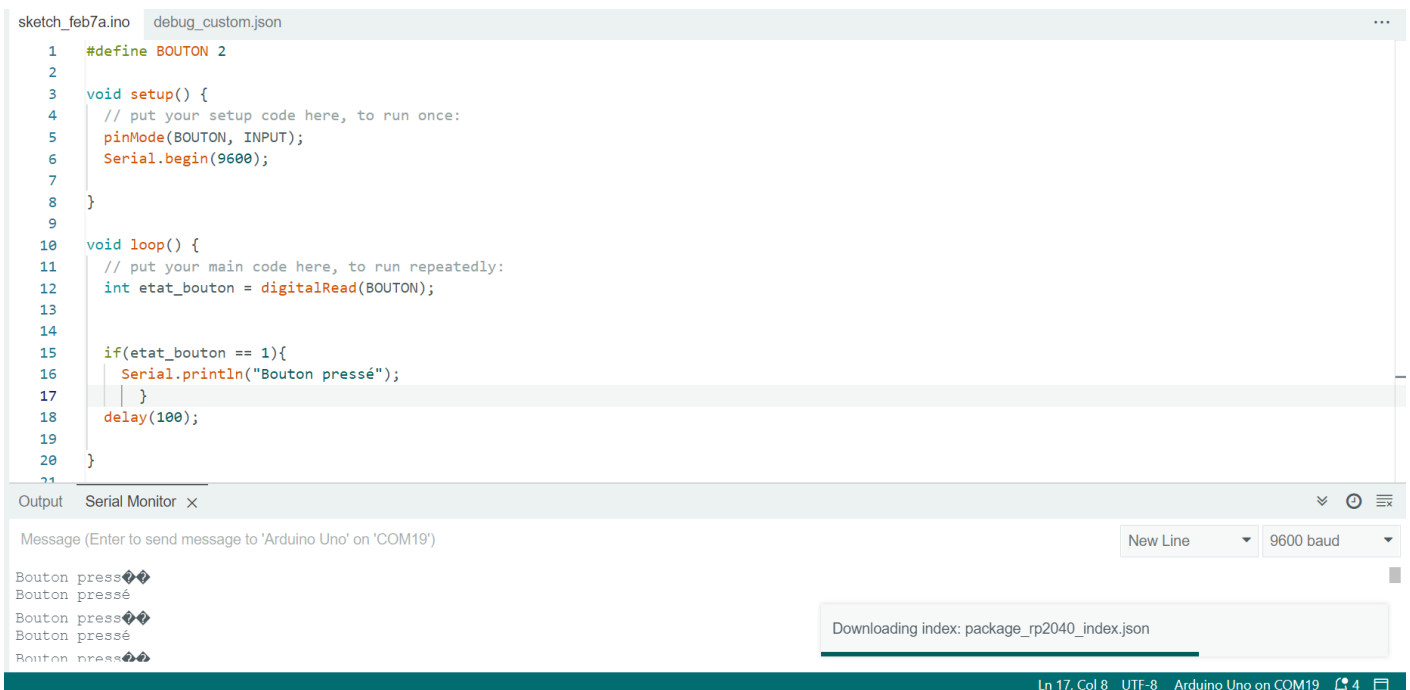
```
#define BOUTON 2

void setup() {
    // put your setup code here, to run once:
    pinMode(BOUTON, INPUT);
    Serial.begin(9600);
}
```

```
}
```

```
void loop() {  
  
    // put your main code here, to run repeatedly:  
  
    int etat_bouton = digitalRead(BOUTON);  
  
  
    if(etat_bouton == 1){  
  
        Serial.println("Bouton pressé");  
  
    }  
  
    delay(100);  
  
}
```

Application du code :



The screenshot shows the Arduino IDE interface. The top pane displays the code for sketch_feb7a.ino, which defines a button (BOUTON 2) and implements a loop that checks its state. If pressed, it prints "Bouton pressé" to the Serial Monitor and delays for 100ms. The bottom pane shows the Serial Monitor output, which displays "Bouton pressé" multiple times, indicating the button is being pressed repeatedly. The status bar at the bottom indicates the current line is 17, column 8, in UTF-8 encoding, and the board is an Arduino Uno on COM19.

```
sketch_feb7a.ino  debug_custom.json  ...  
1  #define BOUTON 2  
2  
3  void setup() {  
4      // put your setup code here, to run once:  
5      pinMode(BOUTON, INPUT);  
6      Serial.begin(9600);  
7  }  
8  
9  
10 void loop() {  
11     // put your main code here, to run repeatedly:  
12     int etat_bouton = digitalRead(BOUTON);  
13  
14  
15     if(etat_bouton == 1){  
16         Serial.println("Bouton pressé");  
17     }  
18     delay(100);  
19 }  
20  
21
```

Output Serial Monitor x

Message (Enter to send message to 'Arduino Uno' on 'COM19')

New Line 9600 baud

Bouton pressé
Bouton pressé
Bouton pressé
Bouton pressé
Bouton pressé

Downloading index: package_rp2040_index.json

Ln 17, Col 8 UTF-8 Arduino Uno on COM19 4

POTENTIOMETRE :

```
#define POT A0
```

```

void setup() {

    pinMode(POT, INPUT);

    Serial.begin(9600);

    // put your setup code here, to run once:

}

void loop() {

    // put your main code here, to run repeatedly:

    int valeur = analogRead(POT);

    Serial.print("Valeur du potentiometre :");

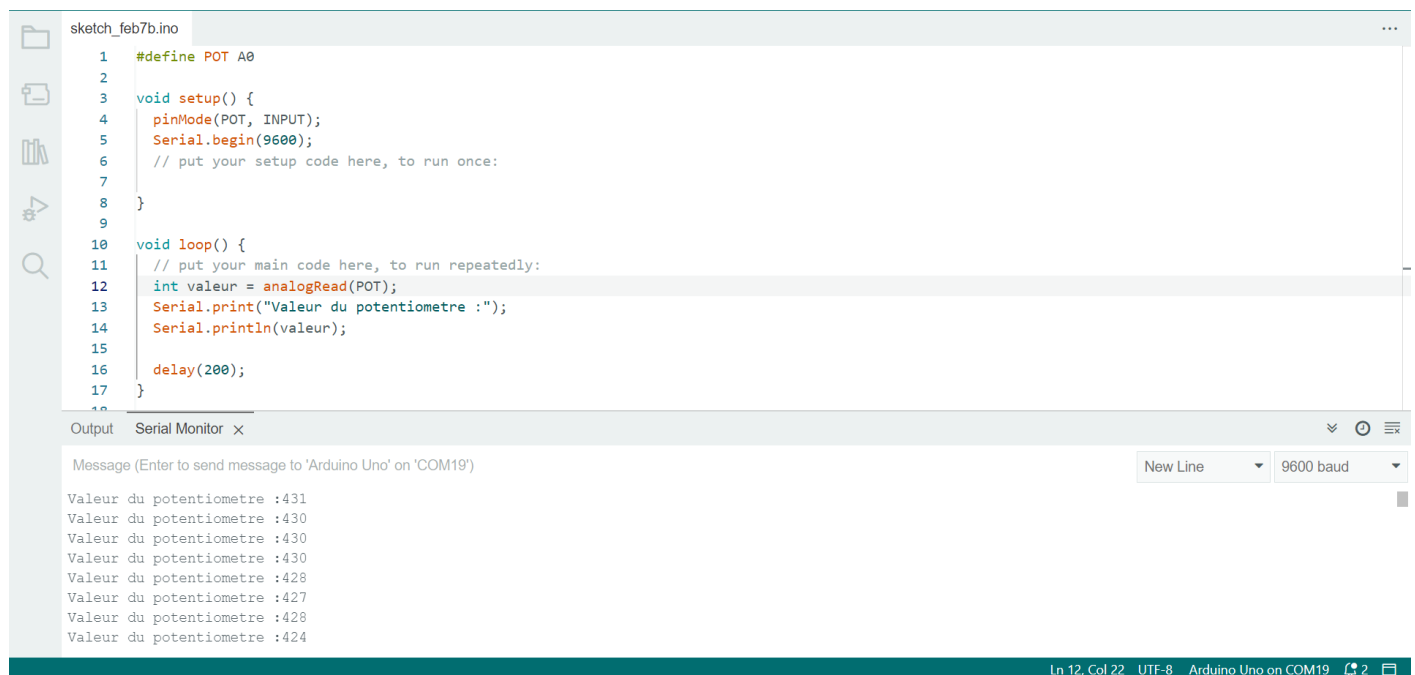
    Serial.println(valeur);

    delay(200);

}

```

Vérification du code:



The screenshot shows the Arduino IDE interface. The top pane displays the sketch 'sketch_feb7b.ino' with the following code:

```

1  #define POT A0
2
3  void setup() {
4      pinMode(POT, INPUT);
5      Serial.begin(9600);
6      // put your setup code here, to run once:
7  }
8
9
10 void loop() {
11     // put your main code here, to run repeatedly:
12     int valeur = analogRead(POT);
13     Serial.print("Valeur du potentiometre :");
14     Serial.println(valeur);
15
16     delay(200);
17 }

```

The bottom pane shows the 'Serial Monitor' window, which is set to 'COM19' and '9600 baud'. It displays the following output:

```

Message (Enter to send message to 'Arduino Uno' on 'COM19')
Valeur du potentiometre :431
Valeur du potentiometre :430
Valeur du potentiometre :430
Valeur du potentiometre :430
Valeur du potentiometre :428
Valeur du potentiometre :427
Valeur du potentiometre :428
Valeur du potentiometre :424

```

TEMPERATURE :

```
#include "Sseed_SHT35.h"
```

```
/*SAMD core*/

#ifdef ARDUINO_SAMD_VARIANT_COMPLIANCE

    #define SDAPIN 20

    #define SCLPIN 21

    #define RSTPIN 7

    #define SERIAL SerialUSB

#else

    #define SDAPIN A4

    #define SCLPIN A5

    #define RSTPIN 2

    #define SERIAL Serial

#endif

SHT35 sensor(SCLPIN);

void setup()

{

    SERIAL.begin(115200);

    delay(10);

    SERIAL.println("serial start!!");

    if(sensor.init())

    {

        SERIAL.println("sensor init failed!!!");

    }

    delay(1000);

}

void loop()
```

```

{

    u16 value=0;

    u8 data[6]={0};

    float temp,hum;

    if(NO_ERROR!=sensor.read_meas_data_single_shot(HIGH_REP_WITH_STRCH,&temp,&hum))

    {

        SERIAL.println("read temp failed!!");

        SERIAL.println("    ");

        SERIAL.println("    ");

        SERIAL.println("    ");

    }

    else

    {

        SERIAL.println("read data :");

        SERIAL.print("temperature = ");

        SERIAL.print(temp);

        SERIAL.println(" ? ");

        SERIAL.print("humidity = ");

        SERIAL.print(hum);

        SERIAL.println(" % ");

        SERIAL.println("    ");

        SERIAL.println("    ");

        SERIAL.println("    ");

    }

    delay(1000);

}

```

APPLICATION DU CODE :

```
basic_demo.ino
28  * OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
29  * THE SOFTWARE.
30  */
31
32  #include "Sseeed_SHT35.h"
33
34
35  /*SAMD core*/
36  #ifdef ARDUINO_SAMD_VARIANT_COMPLIANCE
37      #define SDAPIN  20
38      #define SCLPIN  21
39      #define RSTPIN  7
40      #define SERIAL SerialUSB
41  #else
42      #define SDAPIN  A4
43      #define SCLPIN  A5
44      #define RSTPIN  2
45      #define SERIAL Serial1
46  #endif
47
48  void setup() {
49      pinMode(LED, OUTPUT);
50      Serial.begin(115200);
51  }
52
53  void loop() {
54      read data :
55      temperature = 22.87 °C
56      humidity = 46.59 %
57  }
```

LED S'ALLUME EN FONCTION DE LA TEMPERATURE :

```
#include "Sseeed_SHT35.h"

#define LED 6

/*SAMD core*/

#ifdef ARDUINO_SAMD_VARIANT_COMPLIANCE

    #define SDAPIN  20

    #define SCLPIN  21

    #define RSTPIN  7

    #define SERIAL SerialUSB

#else

    #define SDAPIN  A4

    #define SCLPIN  A5
```

```

#define RSTPIN 2

#define SERIAL Serial

#endif

SHT35 sensor(SCLPIN);

void setup()
{
    SERIAL.begin(115200);

    delay(10);

    SERIAL.println("serial start!!");

    if(sensor.init())
    {
        SERIAL.println("sensor init failed!!!");
    }

    delay(1000);

    pinMode(LED, OUTPUT);
}

void loop()
{
    u16 value=0;

    u8 data[6]={0};

    float temp,hum;

    if(NO_ERROR!=sensor.read_meas_data_single_shot(HIGH_REP_WITH_STRCH,&temp,&hum))
    {
        SERIAL.println("read temp failed!!");

        SERIAL.println(" ");

        SERIAL.println(" ");

        SERIAL.println(" ");
    }
}

```

```

}

else
{
    SERIAL.println("read data :");

    SERIAL.print("temperature = ");

    SERIAL.print(temp);

    if (temp >25){

        digitalWrite(LED, HIGH);  // turn the LED on (HIGH is the voltage level)

        delay(2000);

    }

    SERIAL.println(" ? ");


    SERIAL.print("humidity = ");

    SERIAL.print(hum);

    SERIAL.println(" % ");


    SERIAL.println("    ");

    SERIAL.println("    ");

    SERIAL.println("    ");

}

delay(1000);

}

```

Revision #5

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