

Celsius Out - Arduino sketch to read output from a BMP280 atmospheric temperature

```
// Arduino sketch to read output from a BMP280 atmospheric temperature/pressure sensor
// and display it every 2 seconds on the Serial Monitor and on a 2-line LCD shield with
// temperature in Celsius "C" and pressure in hectoPascals "kPa".
```

```
#include <Wire.h>
```

```
#include <Adafruit_Sensor.h>
```

```
#include <Adafruit_BMP280.h>
```

```
#include <LiquidCrystal.h>
```

```
// Create an instance of the BMP280 sensor
```

```
Adafruit_BMP280 bmp;
```

```
// Create an instance of the LCD, specify the pins connected to RS, EN, D4, D5, D6, D7
```

```
LiquidCrystal lcd(8, 9, 4, 5, 6, 7);
```

```
void setup() {
```

```
  // Initialize serial communication
```

```
  Serial.begin(9600);
```

```
  // Initialize the BMP280 sensor
```

```
  if (!bmp.begin(0x76)) {
```

```
    Serial.println("Could not find a valid BMP280 sensor, check wiring!");
```

```
    while (1);
```

```
  }
```

```
  // Initialize the LCD
```

```
lcd.begin(16, 2);  
lcd.print("BMP280 Sensor");  
}  
  
void loop() {  
  // Read temperature from BMP280 sensor  
  float temperature = bmp.readTemperature();  
  
  // Read pressure from BMP280 sensor  
  float pressure = bmp.readPressure();  
  
  // Print data to serial monitor  
  Serial.print("Temperature = ");  
  Serial.print(temperature);  
  Serial.println(" C");  
  
  Serial.print("Pressure = ");  
  Serial.print(pressure / 100.0F);  
  Serial.println(" hPa");  
  
  // Print data to the LCD  
  lcd.setCursor(0, 0);  
  lcd.print("Temp: ");  
  lcd.print(temperature);  
  lcd.print(" C");
```

```
lcd.setCursor(0, 1);  
lcd.print("Pres: ");  
lcd.print(pressure / 100.0F);  
lcd.print(" hPa");  
  
// Wait for 2 seconds before repeating  
delay(2000);  
}
```