

I2C SDA-SCL Multiple Device Connection

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

```
int address_sensor1= 72; //binary equivalent is 1001000
```

```
int address_sensor2= 73; //binary equivalent is 1001001
```

```
void setup(){
```

```
Serial.begin(9600); //this creates the Serial Monitor
```

```
Wire.begin(); //this creates a Wire object
```

```
}
```

```
void loop(){
```

```
Wire.beginTransmission(address_sensor1); //Send a request to begin communication with the device at the specified address
```

```
Wire.write(0); //Sends a bit asking for register 0, the data register of the TC74 sensor
```

```
Wire.endTransmission(); //this ends transmission of data from the arduino to the temperature sensor
```

```
//this now reads the temperature from the TC74 sensor
```

```
Wire.requestFrom(address_sensor1, 1); //this requests 1 byte from the specified address
```

```
while(Wire.available() == 0);
```

```
int celsius1= Wire.read();
```

```
int fahrenheit1= round(celsius1 * 9.0/5.0 + 32.0);
```

```
Serial.print("Temperature sensor 1:");
```

```
Serial.print(celsius1);
```

```
Serial.print("degrees celsius ");
```

```
Serial.print(fahrenheit1);
```

```
Serial.print(" degrees Fahrenheit");
```

```
delay(2000);
```

```
Wire.beginTransmission(address_sensor2); //Send a request to begin communication with the device at the specified address
```

```
Wire.write(0); //Sends a bit asking for register 0, the data register of the TC74 sensor
```

```
Wire.endTransmission(); //this ends transmission of data from the arduino to the temperature sensor
```

```
//this now reads the temperature from the TC74 sensor
```

```
Wire.requestFrom(address_sensor2, 1); //this requests 1 byte from the specified address
```

```
while(Wire.available() == 0);
```

```
int celsius2= Wire.read();
```

```
int fahrenheit2= round(celsius2 * 9.0/5.0 + 32.0);
```

```
Serial.print("Temperature sensor 2:"); Serial.print(celsius2);
```

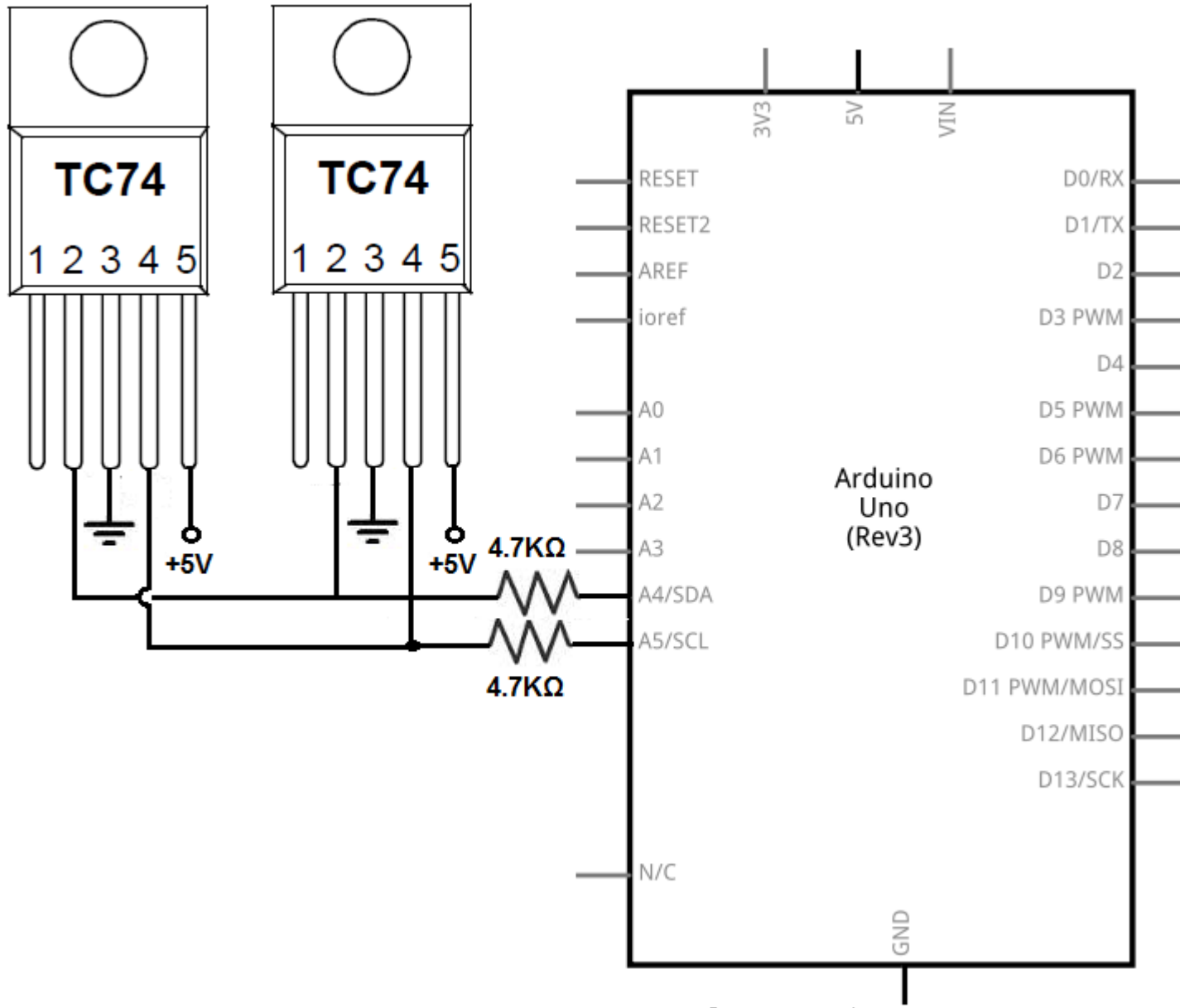
```
Serial.print("degrees celsius ");
```

```
Serial.print(fahrenheit2);
```

```
Serial.print(" degrees Fahrenheit");
```

```
delay(2000);
```

```
}
```



Circuit Connecting 2 I²C TC74 Temperature Sensors to an Arduino Microcontroller