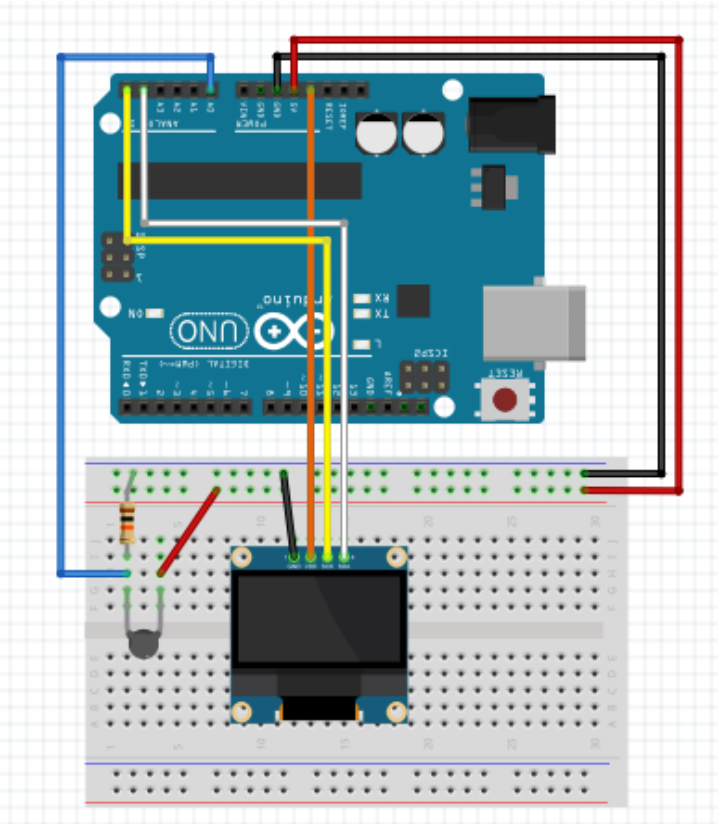
STEMKRAF - ARDUINO
https://github.com/teaksoon/stemkraf

```
Program: mini_p_oled_thermometer
  (1/2): OLED Thermometer
       :
       : by TeakSoon Ding for STEMKRAF (OCT-2021)
```



Hardware:
Arduino Uno x1
Solderless Breadboard x1
Jumper Wires

Thermistor 10Kohm BETA=3380 x1
Resistor 10Kohm x1

SSD1306 OLED i2c 64x128pixel x1

OLED Thermometer

This project uses Thermistor to read temperature and display the temperature on an OLED Screen. This is very small and simple project but it is a fully functional Thermometer with OLED Display

Thermistor is a type of Resistor that can change its resistance value when the temperature that it is exposed to changes.

There are a few things you need to know before we can use our Thermistor.

Thermistor have two values (**Resistance Value** and **Beta Value**) We need to know both of them before we can use it.

Resistance Value will be the same as the Resistor paired with it
Example: a 10Kohm Thermistor must be used with a 10Kohm Resistor

Make sure we have the **Beta value** for this Thermistor (given by the factory). We need this for temperature calculation.

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```
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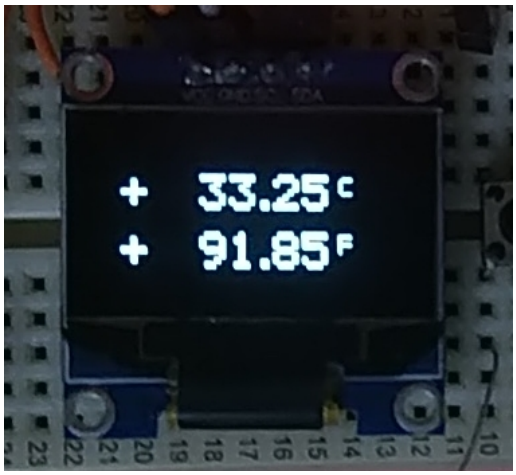
This program uses functions from the LIBSK OLED Library, we need to install the LIBSK OLED Library into our Arduino IDE Software before we can upload this Program.

1. Find [Program Folder] from the Arduino IDE Software,
- "File|Preferences|Sketchbook Location: [Program Folder]"
2. Use the Computer File Browser,
- Look for existing folder "libraries" inside the [Program Folder]
3.Inside the "libraries" folder,
- Create a new folder named "libsk_oled"
4.Copy "libsk_c_oled.h" file into the newly created "libsk_oled" folder.
DONE!!!

- You can now Upload this program with the Arduino IDE Software
- Watch the OLED Screen



Based on the room temperature, the thermistor on Arduino pin A0 will make different resistor value on pin A0, causing different readings on A0.

Our program will use pin Value from pin A0 and calculate the temperature and display them on the OLED Screen. The formula to calculate Temperature from Thermistor is in this Program source code.