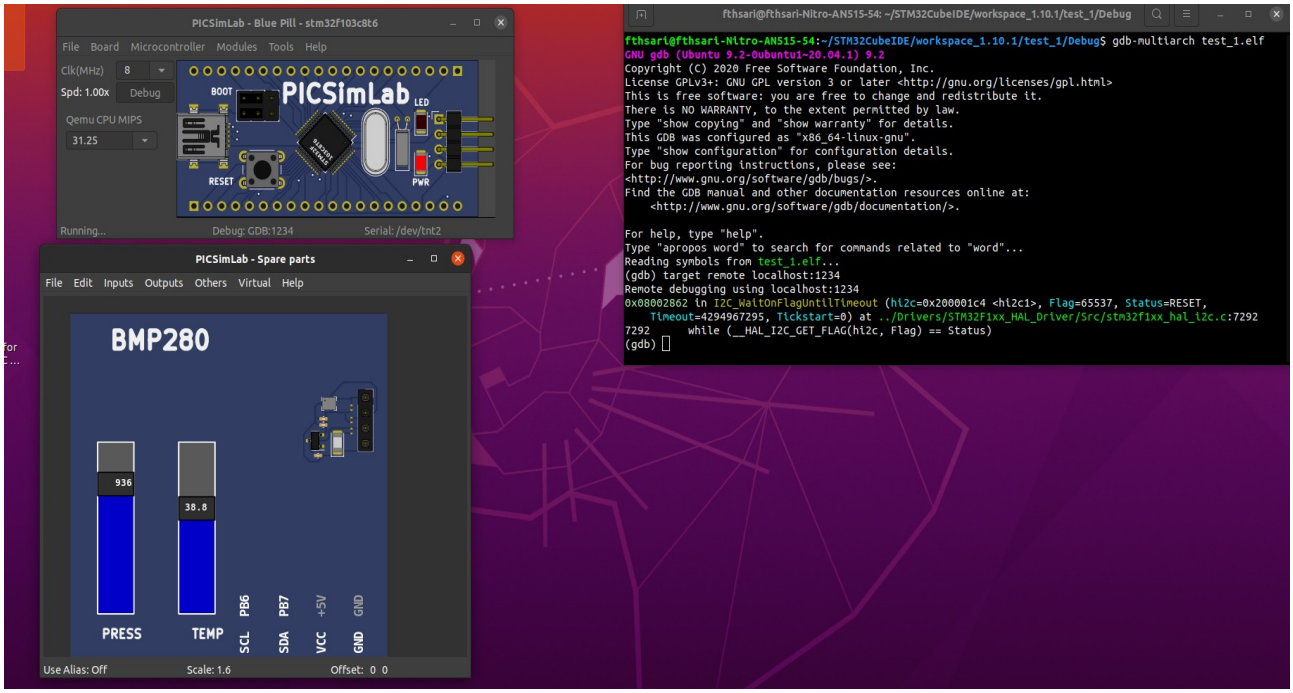
First of all, I used the stm32cubeIDE to work on Blue Pill and develop the codes. I made the pin definitions and clock settings of the microcontroller from this interface. I used an external crystal for the clock setting. I reserved the PC13 pin as gpio_out to light the led in the circuit for the test codes. PB6 and PB7 pins are set automatically for i2c.

I looked at the datasheet of the BMP280 sensor and after doing some research on the internet, I found preset libraries on GitHub. I made some changes on the libraries according to the features I will use, I changed some registers according to the final datasheet. I haven't had a problem so far.

I could not connect serial monitor via PICSimLab. I also tried it on my own Linux system, but I was stuck because I couldn't figure out some security settings. I uploaded the compiled codes to PICSimLab manually as a .bin file. I was able to handle the function that allows me to measure because of my exams.

Here, when I switched to the debug part, I got a flag error in the HAL library of I2c. I tried a lot, but I could not manage to work with the simulator device. I add the project file I created in Cube IDE to my report as it is.



I also attach the sensor datasheet I use to the report.