/\* Gasthon project

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\* main.ino

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\* IS3 - ENIB

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#include <OneWire.h>

#include <DallasTemperature.h>

#include <Servo.h>

#include "tools.hpp"

#define ONE\_WIRE\_BUS 3 // one wire sensors bus pin number

#define CANDLE\_SENSOR 0 // index of the sensor (1st sensor so index 0)

#define BURNING\_TEMP 26. // temperature threshold in deg celcius

// temperature sensor

OneWire oneWire{ONE\_WIRE\_BUS};

DallasTemperature sensors{&oneWire};

// ventilation management

tools::Ventilation ventilation{10, 11, 3000};

//---------------------------------------------------------------------------//

void setup()

{

Serial.begin(9600);

sensors.begin();

ventilation.begin();

}

//---------------------------------------------------------------------------//

void loop()

{

// request temperature to the sensor

sensors.requestTemperatures();

// get the temperature above the candle

float candleTemp = sensors.getTempCByIndex(CANDLE\_SENSOR);

if(candleTemp != -127. )

{

if(candleTemp >= BURNING\_TEMP) ventilation.set();

else ventilation.reset();

tools::displayTemp(candleTemp);

}

ventilation.run();

}