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/*
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DELOARTS RESEARCH INC. 2017
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#### DESCRIPTION

This library is written for an 4-pin I2C monochrome display with a resolution of 128x64 pixels.

It's tested with the following display:

- 0,96" I2C OLED, Manufacturer: Heltec-Taobao

It is not tested with other displays, therefor I can't guarantee that it will work with another device.

English: <http://deloarts.com/en/scripts/arduino/oled-display/>

German: <http://deloarts.com/de/scripts/arduino/oled-display/>

Blog: <https://deloarts.wordpress.com/2015/06/17/oled-i%C2%B2c-128x64-monochrome-library/>

#### LICENSE

This library is licensed under the GNU GPLv3 (<https://www.gnu.org/licenses/gpl.html>) open source license.

Thus anybody is allowed to copy and modify the source code, provided all changes are open source too and the author is in knowledge of all changes.

This can happen either via eMail or directly on GitHub, in other words, on this repository.

#### MICROCONTROLLER

- Arduino Nano/UNO

- SDA -> A4

- SCL -> A5

- VCC -> 3.3-5V (depending on your display)

- GND -> Ground

```
*/
```

```
#ifndef OLED_data_H
```

```
#define OLED_data_H
```

```
#include <Arduino.h>
```

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

```
#define OLED_Max_X 128
```

```
#define OLED_Max_Y 64
```

```
#define OLED_ADDRESS 0x3C
```

```
#define I2C_400KHZ 1 // 0 to use default 100Khz, 1 for 400Khz
```

```
#define COMMAND_MODE 0x80
```

```
#define OLED_DATA_MODE 0x40
```

```
#define COMMAND_CHARGE_PUMP_SETTING 0x8d
```

```
#define COMMAND_CHARGE_PUMP_ENABLE 0x14
```

```
#define COMMAND_DISPLAY_OFF 0xAE
```

```
#define COMMAND_DISPLAY_ON 0xAF
```

```
#define COMMAND_BLACK_BACKGROUND 0xA6
```

```
#define COMMAND_WHITE_BACKGROUND 0xA7
```

```
#define COMMAND_SET_BRIGHTNESS 0x81
```

```
#define COMMAND_MIRROR_VERTICAL 0xA0 | 0x1
```

```
#define COMMAND_MIRROR_HORIZONTAL 0xC8
```

```
#define HORIZONTAL_ADDRESSING 0x00
```

```

#define PAGE_ADDRESSING 0x02

class Display
{
    public:
        byte addressingMode, px, py, font, fontSize, inv;
        boolean scroll;

        void init(boolean regulator);
        void sendCommand(byte command);
        void sendData(byte data);
        void printChar(char pChar, byte posX = 255, byte posY = 255);
        void printString(const char *data, byte posX = 255, byte posY =
255);
        void drawBitmap(const byte *bitmapArray, byte posX, byte posY, byte
width, byte height);
        void clear();
        void setCursor(byte posX, byte posY);
        void setBlackBackground();
        void setWhiteBackground();
        void setDisplayOff();
        void setDisplayOn();
        void setPageMode();
        void setHorizontalMode();
        void setBrightness(byte brightness);
        void setFont(byte type);
        void setFontSize(byte size);
};
extern Display lcd;
#endif

```