#include <LiquidCrystal.h>

/\*

- LCD's VSS -> Ground pin of Arduino

- LCD's VDD -> +5 V pin of Arduino

- LCD's V0 pin -> Center terminal of potentiometer

- LCD's RS pin -> Arduino's pin 12

- LCD's R/W pin-> Ground

- LCD's Enable (E) pin -> Arduino's pin 11

- LCD's D0, D1, D2 and D3 pins -> Not connected

- LCD's D4 pin -> Arduino's pin 5

- LCD's D5 pin -> Arduino's pin 4

- LCD's D6 pin -> Arduino's pin 3

- LCD's D7 pin -> Arduino's pin 2

\*/

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void setup() {

lcd.begin(16, 2); //number of column and rows

lcd.print("Time elpassed:");

}

void loop() {

lcd.setCursor(0,1); // cursor is put at first column of second row

lcd.print((String)(millis()/1000)+" sec.");

}

// Connect SCL pin of LCD to SCL pin of Arduino

// Connect SDA pin of LCD to SDA pin of Arduino

// Connect the VCC pin of LCD to +5 V of Arduino

// Connect the GND pin of LCD to ground of Arduino

int Address=0x27;

#include <Wire.h>

#include <LiquidCrystal\_I2C.h> //https://www.arduino.cc/reference/en/libraries/liquidcrystal-i2c/

LiquidCrystal\_I2C lcd(Address, 16, 2);

int i=0;

void setup() {

// put your setup code here, to run once:

lcd.init();

lcd.backlight(); //Turns on the backlight

//lcd.noBacklight(); //Turns off the backlight

}

void loop() {

// put your main code here, to run repeatedly:

lcd.setCursor(0,0); // (Column, Row)

i=i+1;

lcd.print((String)"i= "+i);

delay(1000);

lcd.setCursor(0,1);

lcd.print("Second Line...");

}

#include <EEPROM.h>

byte a=0;

int selection=0;

void setup()

{

Serial.begin(9600);

randomSeed(analogRead(A0));

Serial.println("1.Write to EEPROM");

Serial.println("2.Read EEPROM");

}

void loop(){

if (Serial.available()>0){

selection=Serial.parseInt();

if (selection==1){

a=random(255+1); //value of generated random number a is between 0 and 255.

EEPROM.update(0,a);

Serial.println((String)"\n"+a+" is written to the EEPROM...");

}

if (selection==2){

Serial.println((String)"Value of EEPROM at location 0 is: "+EEPROM.read(0)+".\n");

}

}

}

#include <EEPROM.h>

double a=1.23;

double b=45.67;

double c=890.12;

double readValue=0.00;

int selection=0;

int n=0;

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

Serial.println("Note that: a=1.23, b=45.67, c=890.12");

Serial.println();

Serial.println("Enter your command (1,2,3).1, reads a, 2 reads b and 3 reads c.");

Serial.println();

EEPROM.put(0,a);

EEPROM.put(sizeof(a),b);

EEPROM.put(sizeof(a)+sizeof(b),c);

}

void loop() {

// put your main code here, to run repeatedly:

if (Serial.available()>0){

selection=Serial.parseInt();

if (selection==1){

n=0;

EEPROM.get(n,readValue);

Serial.println((String)"Value stored at location 0 is: "+readValue+".");

};

if (selection==2){

n=sizeof(a);

EEPROM.get(n,readValue);

Serial.println((String)"Value stored at location "+n+" is: "+readValue+".");

};

if (selection==3){

n=sizeof(a)+sizeof(b);

EEPROM.get(n,readValue);

Serial.println((String)"Value stored at location "+n+" is: "+readValue+".");

};

}

}

//Download the library from https://www.arduino.cc/reference/en/libraries/i2c\_eeprom/

// See: https://github.com/RobTillaart/I2C\_EEPROM

#include "Wire.h"

#include "I2C\_eeprom.h"

byte x[]={0,1,2,3,4};

byte y[]={10,1,2,3,40};

byte z[]={0,0,0,0,0,0};

I2C\_eeprom ee(0x50, I2C\_DEVICESIZE\_24LC16);

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

ee.begin();

}

void loop() {

// put your main code here, to run repeatedly:

ee.writeBlock(0, (uint8\_t \*) &x, sizeof(x)); // Starts from location 0 and writes array x

ee.writeByte(5,7); //Writes 7 at location 5

for (int i=0;i<6;i++){

Serial.println((String)"At location "+i+" of EEPROM "+ee.readByte(i)+" is written.");

}

Serial.println();

ee.updateBlock(0, (uint8\_t \*) &y, sizeof(y));

for (int i=0;i<6;i++){

Serial.println((String)"At location "+i+" of EEPROM "+ee.readByte(i)+" is written.");

}

Serial.println();

ee.readBlock(0, (uint8\_t \*) &z, 6);

for (int i=0;i<6;i++){

Serial.println((String)"z("+i+")= "+z[i]+" is written.");

}

Serial.println();

ee.setBlock(0,1, 6); //Writes 1 in the first 6 locations

for (int i=0;i<6;i++){

Serial.println((String)"At location "+i+" of EEPROM "+ee.readByte(i)+" is written.");

}

delay(60000);

}

#include "Wire.h"

#include "I2C\_eeprom.h"

float x=12.34;

float y=0;

I2C\_eeprom ee(0x50, I2C\_DEVICESIZE\_24LC16);

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

ee.begin();

ee.setBlock(0,0,sizeof(x));

ee.writeBlock(0,(uint8\_t \*) &x, sizeof(x));

}

void loop() {

// put your main code here, to run repeatedly:

ee.readBlock(0,(uint8\_t \*) &y, sizeof(y));

Serial.println(y);

delay(10000);

}

#include "Wire.h"

#include "I2C\_eeprom.h"

I2C\_eeprom ee(0x50, I2C\_DEVICESIZE\_24LC16);

struct measurement{

float temp;

int pressure;

char\* location;

};

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

ee.begin();

ee.setBlock(0,0,sizeof(measurement));

}

void loop() {

// put your main code here, to run repeatedly:

measurement m1;

measurement m2;

m1.temp=32.7;

m1.pressure=12;

m1.location="Inside the city.";

ee.writeBlock(0, (uint8\_t \*) &m1, sizeof(m1));

ee.readBlock(0, (uint8\_t \*) &m2, sizeof(m2));

Serial.println((String)"m2.temp="+m2.temp);

Serial.println((String)"m2.pressure="+m2.pressure);

Serial.println((String)"m2.location="+m2.location);

Serial.println("-----");

delay(10000);

}