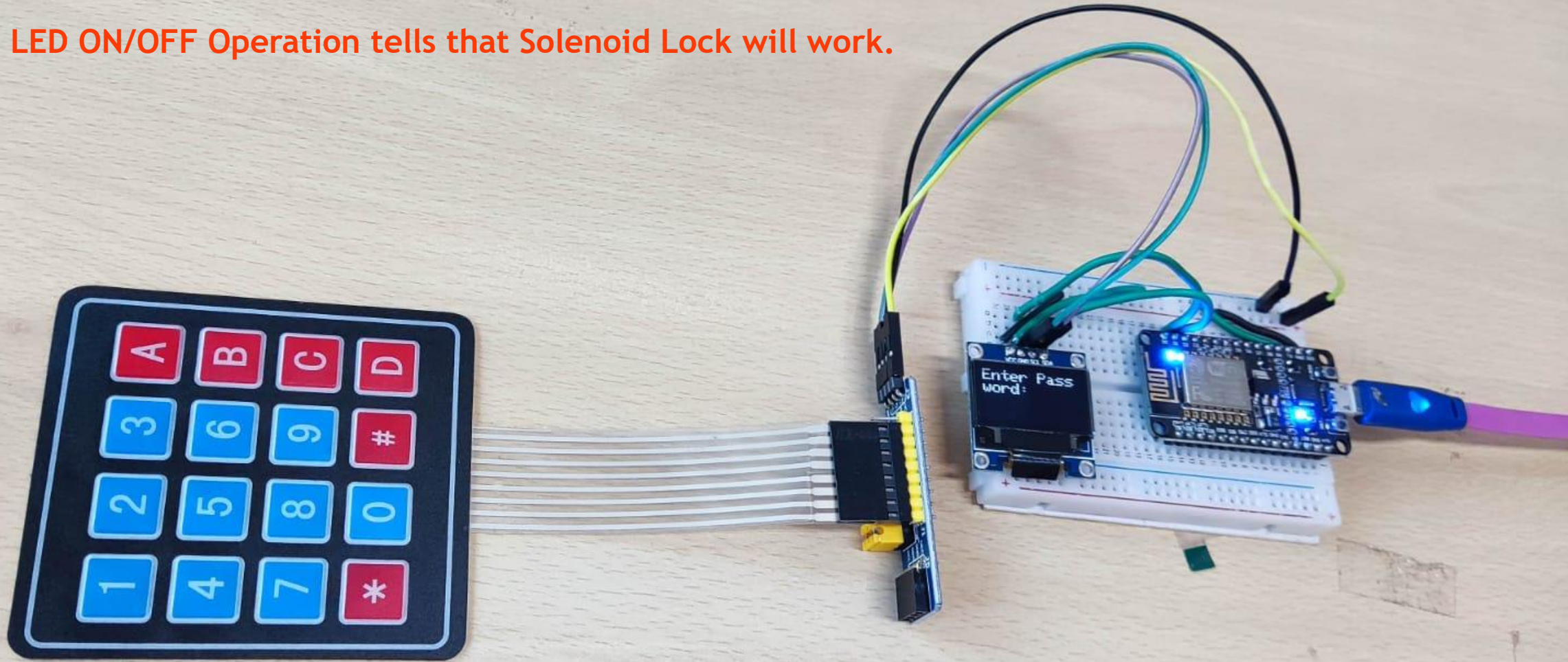


Digital Lock using Nodemcu, OLED Display with I2C keypad 4x4

Dinesh Kumar
ISRO Satellite Center
Bangalore

LED ON/OFF Operation tells that Solenoid Lock will work.




```

//Download Library
//http://www.mediafire.com/file/z9qzwmprwdo2ggj/Keypad-master.zip/file
//http://www.mediafire.com/file/wcdmj9bo27glp35/Keypad_I2C.zip/file
#include <Keypad_I2C.h>
#include <Keypad.h>
#include <Wire.h>
int temp;
int Rh;
int pressure;
#include <SPI.h>
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>

#define Password_Length 8

int signalPin = 16;

char Data[Password_Length];
char Master[Password_Length] = "123A456";
byte data_count = 0, master_count = 0;
bool Pass_is_good;
char customKey;

#define SCREEN_WIDTH 128
#define SCREEN_HEIGHT 64
#define OLED_RESET -1 // Reset pin
#define SCREEN_ADDRESS 0x3C
Adafruit_SSD1306 display(SCREEN_WIDTH, SCREEN_HEIGHT, &Wire,
OLED_RESET);
#define I2CADDR 0x20
const byte ROWS = 4;
const byte COLS = 4;
char keys[ROWS][COLS] = {
  {'1','2','3','A'},
  {'4','5','6','B'},
  {'7','8','9','C'},
  {'#','0','#','D'}
};
byte rowPins[ROWS] = {0, 1, 2, 3};
byte colPins[COLS] = {4, 5, 6, 7};
Keypad_I2C keypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS,
I2CADDR, PCF8574 );
void setup(){
Wire.begin();
keypad.begin( makeKeymap(keys) );
Serial.begin(9600);
pinMode(16, OUTPUT);
pinMode(2, OUTPUT);
if(!display.begin(SSD1306_SWITCHCAPVCC, SCREEN_ADDRESS)) {
Serial.println(F("SSD1306 allocation failed"));
for(;;) ; }
display.clearDisplay();
display.setTextSize(2);
display.setTextColor(WHITE);
display.setCursor(0,0);
display.println("B-12,J2 Road,JeevanBhimaNagar,Bangalore75");
display.display();
delay(2000);
}

```

```

void loop(){
display.clearDisplay();
display.setTextSize(2);
display.setTextColor(WHITE);
display.setCursor(0,0);
display.println("Enter Password:");
display.display();

```

```

char key = keypad.getKey();

```

```

if (key){
Data[data_count] = key;
display.setTextSize(2);
display.setTextColor(WHITE);
display.setCursor(data_count,28);
display.print(Data[data_count]);
display.display();
data_count++;
}

```

```

if(data_count == Password_Length-1){
display.clearDisplay();

```

```

if(!strcmp(Data, Master)){

display.print("Correct");
display.setTextSize(2);
display.setTextColor(WHITE);
display.setCursor(data_count,28);
display.display();
digitalWrite(signalPin, HIGH);
delay(5000);
digitalWrite(signalPin, LOW);
}
else{
display.clearDisplay();
display.setTextSize(2);
display.setTextColor(WHITE);
display.print("Incorrect");
display.display();
delay(1000);
}

```

```

// display.clearDisplay();
clearData();
}
}

```

```

void clearData(){
while(data_count !=0){
Data[data_count--] = 0;
}
return;
}

```