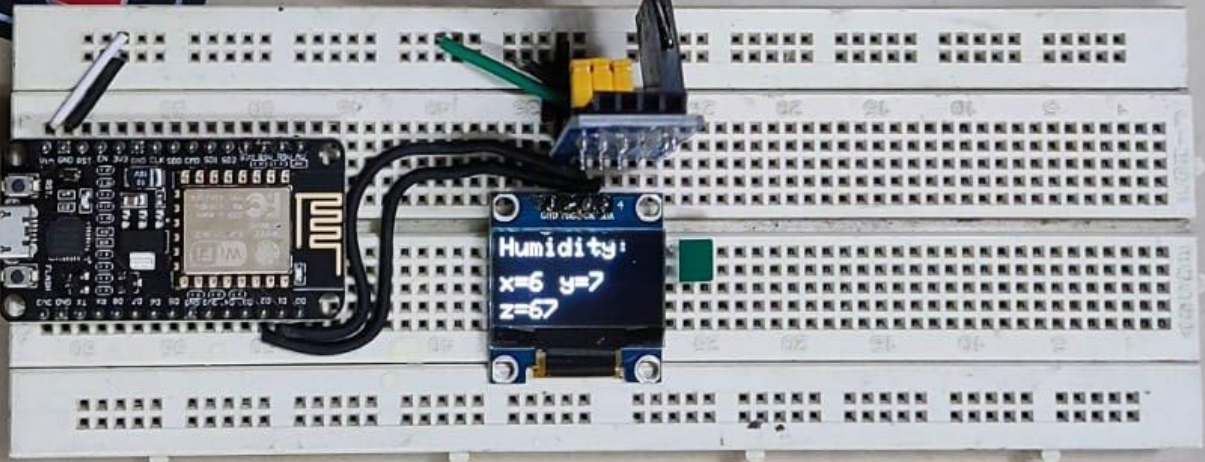


KYEPAD 4 X 4 VIA I2C TWO  
DIGIT DATA ENTRY &  
DISPLAYING IN OLED USING  
NODEMCU

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### Switch Case Coding

1. X++
  2. X--
  3. Y++
  4. Y--
  5.  $Z = 10 * X + Y$
- Z can take value for any two digit decimal parameter entry.



```
#include <Keypad_I2C.h>
#include <Keypad.h>
#include <Wire.h>

float humidity;
#include <SPI.h>
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>
#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);
int x=0,y=0,d=0,z =0,count = 0,count1 = 0;
#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 );
Keypad_I2C keypad1( makeKeymap(keys), rowPins, colPins, ROWS, COLS, I2CADDR, PCF8574 );
```

```
void setup(){
Wire.begin();
keypad.begin( makeKeymap(keys) );
Serial.begin(9600);
if(!display.begin(SSD1306_SWITCHCAPVCC, SCREEN_ADDRESS)) {
Serial.println(F("SSD1306 allocation failed"));
for(;;); }
display.clearDisplay();
}
void loop()
{
int key1 = keypad.getKey();
int x = key1 - '0';
display.setTextSize(2);display.setTextColor(WHITE);display.setCursor(0,0);display.print("Humidity:");
display.display();
switch(x){
case 1:
count++; d = count; display.clearDisplay();display.setTextSize(2);display.setTextColor(WHITE);display.setCursor(0,28);display.print("x=");
display.print(d);display.display(); break;
case 2:
count--; d = count; display.clearDisplay();display.setTextSize(2);display.setTextColor(WHITE);display.setCursor(0,28);display.print("x=");
display.print(d);display.display(); break;
case 3:
count1++; y = count1;display.clearDisplay();display.setTextSize(2);display.setTextColor(WHITE);display.setCursor(0,28);display.print("x=");
display.print(d);display.setCursor(50,28);display.print("y=");display.print(y);display.display(); break;
case 4:
count1--; y = count1;display.clearDisplay();display.setTextSize(2);display.setTextColor(WHITE);display.setCursor(0,28);display.print("x=");
display.print(d);display.setCursor(50,28);display.print("y=");display.print(y);display.display(); break;
case 5:
z = 10 * d + y;
display.clearDisplay();display.setTextSize(2);display.setTextColor(WHITE); display.setCursor(0,28);display.print("x=");
display.print(d);display.setCursor(50,28);display.print("y=");display.print(y);
display.setCursor(0,50);display.print("z=");display.print(z);display.display(); break;
}
}
```