**CODE:**

#include <SPFD5408\_Adafruit\_GFX.h>    // Core graphics library  
#include <SPFD5408\_Adafruit\_TFTLCD.h> // Hardware-specific library  
#include <SPFD5408\_TouchScreen.h>  
#include <BlynkSimpleSerialBLE.h>  
#include <SoftwareSerial.h>  
SoftwareSerial SerialBLE(11,12); // RX, TX  
char auth[] = "BaJMseLrTQENE0HEqjbKYHkfqwY-OoW9";  
int rowIndex = 0;  
String msg  ;  
#define YP A1  // must be an analog pin, use "An" notation!  
#define XM A2  // must be an analog pin, use "An" notation!  
#define YM 7   // can be a digital pin  
#define XP 6   // can be a digital pin  
#define TS\_MINX 125  
#define TS\_MINY 85  
#define TS\_MAXX 965  
#define TS\_MAXY 905  
TouchScreen ts = TouchScreen(XP, YP, XM, YM, 300);  
#define LCD\_CS A3  
#define LCD\_CD A2  
#define LCD\_WR A1  
#define LCD\_RD A0  
// optional  
#define LCD\_RESET A4  
#define REDBAR\_MINX 80  
#define GREENBAR\_MINX 130  
#define BLUEBAR\_MINX 180  
#define BAR\_MINY 30  
#define BAR\_HEIGHT 250  
#define BAR\_WIDTH 30  
Adafruit\_TFTLCD tft(LCD\_CS, LCD\_CD, LCD\_WR, LCD\_RD, LCD\_RESET);  
#define BLACK   0x0000  
int BLUE = tft.color565(50, 50, 255);  
#define DARKBLUE 0x0010  
#define VIOLET 0x8888  
#define RED     0xF800  
#define GREEN   0x07E0  
#define CYAN    0x07FF  
#define MAGENTA 0xF81F  
#define YELLOW  0xFFE0  
#define WHITE   0xFFFF  
#define GREY   tft.color565(64, 64, 64);  
#define GOLD 0xFEA0  
#define BROWN 0xA145  
#define SILVER 0xC618  
#define LIME 0x07E0  
void drawHome()  
{  
  tft.fillScreen(WHITE);  
  tft.drawRoundRect(0, 0, 319, 240, 8, WHITE);     //Page border  
  tft.fillRoundRect(10, 30, 100, 40, 8, GOLD);  
  tft.drawRoundRect(10, 30, 100, 40, 8, WHITE);  //Dish1   
  tft.fillRoundRect(10, 80, 100, 40, 8, GOLD);  
  tft.drawRoundRect(10, 80, 100, 40, 8, WHITE);  //Dish2  
  tft.fillRoundRect(10, 130, 100, 40, 8, GOLD);   //Dish3  
  tft.drawRoundRect(10, 130, 100, 40, 8, WHITE);  
  tft.fillRoundRect(10, 180, 220, 40, 8, CYAN);  
  tft.drawRoundRect(10, 180, 220, 40, 8, WHITE); //Call Waiter  
  tft.fillRoundRect(130, 30, 100, 40, 8, GOLD);  
  tft.drawRoundRect(130, 30, 100, 40, 8, WHITE);  //Dish4  
  tft.fillRoundRect(130, 80, 100, 40, 8, GOLD);  
  tft.drawRoundRect(130, 80, 100, 40, 8, WHITE); //Dish5  
  tft.fillRoundRect(130, 130, 100, 40, 8, GOLD);  
  tft.drawRoundRect(130, 130, 100, 40, 8, WHITE); //Dish6  
  tft.fillRoundRect(10, 230, 220, 40, 8, MAGENTA);  
  tft.drawRoundRect(10, 230, 220, 40, 8, WHITE); //Bill  
  tft.fillRoundRect(10, 280, 220, 40, 8, GREEN);  
  tft.drawRoundRect(10, 280, 220, 40, 8, WHITE); //Bill  
  tft.setCursor(62, 0);  
  tft.setTextSize(3);  
  tft.setTextColor(LIME);  
  tft.print(" Menu");  
  tft.setTextSize(2);  
  tft.setTextColor(WHITE);  
  tft.setCursor(15, 37);  
  tft.print(" Dish1");  
  tft.setCursor(15, 87);  
  tft.print(" Dish2");  
  tft.setCursor(15, 137);  
  tft.print(" Dish3");  
  tft.setCursor(50, 187);  
  tft.print(" Call Waiter");  
  tft.setCursor(135, 37);  
  tft.print(" Dish4");  
  tft.setCursor(135, 87);  
  tft.print(" Dish5");  
  tft.setCursor(135, 137);  
  tft.print(" Dish6");  
  tft.setCursor(85, 237);  
  tft.print(" Bill");  
  tft.setCursor(95, 295);  
  tft.print("Water");  
  //  delay(500);  
}  
int oldcolor, currentcolor, currentpcolour;  
void setup(void) {   
  tft.reset();  
  tft.begin(tft.readID());  
  tft.setRotation(2);  
  Serial.begin(9600);   
  Serial.println();  
  Serial.print("reading id...");  
  delay(500);  
  //Serial.println(tft.readID(), HEX);   
  tft.fillScreen(BLACK);  
  tft.setTextSize(3);  
  tft.setTextColor(WHITE);  
  tft.setCursor(50, 140);  
  tft.print("Loading...");  
  for (int i; i < 250; i++)  
  {  
    tft.fillRect(BAR\_MINY - 10, BLUEBAR\_MINX, i, 10, RED);  
    delay(0.000000000000000000000000000000000000000000000000001);  
  }  
  tft.fillScreen(BLACK);  
  drawHome();  
  pinMode(13, OUTPUT);  
 Blynk.virtualWrite(V0, "clr");   
}  
#define MINPRESSURE 10  
#define MAXPRESSURE 1000  
void transmit()  
{   
  SerialBLE.begin(9600);  
  Blynk.begin(SerialBLE, auth);  
  //Blynk.virtualWrite(V0, "clr");   
  Blynk.virtualWrite(V0, "add", rowIndex,msg, "T1");  
  rowIndex++;  
  Blynk.run();  
  }  
void loop()  
{  
  // Blynk.virtualWrite(V0, "clr");   
  digitalWrite(13, HIGH);  
  TSPoint p = ts.getPoint();  
  digitalWrite(13, LOW);  
  // if sharing pins, you'll need to fix the directions of the touchscreen pins  
  //pinMode(XP, OUTPUT);  
  pinMode(XM, OUTPUT);  
  pinMode(YP, OUTPUT);  
  //pinMode(YM, OUTPUT);  
  if (p.z > ts.pressureThreshhold)  
    {  
      p.x = map(p.x, TS\_MAXX, TS\_MINX, 0, 320);  
      p.y = map(p.y, TS\_MAXY, TS\_MINY, 0, 240);  
      //Serial.print("X:");  // I used this to get the accurate touch points for X and Y axis  
      //Serial.print(p.x);  
      //Serial.print("\n");  
      //Serial.print("Y:");  
      //Serial.print(p.y);        
      if (p.x > 30 && p.x < 70 && p.y > 130 && p.y < 230  && p.z > MINPRESSURE && p.z < MAXPRESSURE)  
      {  
        Serial.println("Dish1");  
        msg = "Dish1 Ordered";  
        transmit();  
        tft.fillRoundRect(10, 30, 100, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(10, 30, 100, 40, 8, GOLD);  
        tft.drawRoundRect(10, 30, 100, 40, 8, WHITE);  
        tft.setCursor(15, 37);  
        tft.println(" Dish1");  
        delay(70);  
        }  
      if (p.x > 80 && p.x < 120 && p.y > 130 && p.y < 230)  
      {  
        Serial.println("Dish2");  
        msg = "Dish2 Ordered";  
        transmit();  
        tft.fillRoundRect(10, 80, 100, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(10, 80, 100, 40, 8, GOLD);  
        tft.drawRoundRect(10, 80, 100, 40, 8, WHITE);  
        tft.setCursor(15, 87);  
        tft.println(" Dish2");  
        delay(70);        
      }  
      if (p.x > 130 && p.x < 170 && p.y > 130 && p.y < 230)  
      {  
        Serial.println("Dish3");  
        msg = "Dish3 Ordered";  
        transmit();  
        tft.fillRoundRect(10, 130, 100, 40, 8, WHITE);   //rgb led  
        delay(70);  
        tft.fillRoundRect(10, 130, 100, 40, 8, GOLD);   //rgb led  
        tft.drawRoundRect(10, 130, 100, 40, 8, WHITE);   //rgb led  
        tft.setCursor(15, 137);  
        tft.print(" Dish3");  
        delay(70);    
      }  
      if (p.x > 180 && p.x < 220 && p.y > 10 && p.y < 230)  
      {  
        Serial.println("Call Waiter");  
        msg = "Calling Waiter";  
        transmit();  
        tft.fillRoundRect(10, 180, 220, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(10, 180, 220, 40, 8, CYAN);  
        tft.drawRoundRect(10, 180, 220, 40, 8, WHITE);  
        tft.setCursor(50, 187);  
        tft.print(" Call Waiter");  
        delay(70);  
      }  
      if (p.x > 30 && p.x < 70 && p.y > 10 && p.y < 110)  
      {  
        Serial.println("Dish4");  
        msg = "Dish4 Ordered";  
        transmit();  
        tft.fillRoundRect(130, 30, 100, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(130, 30, 100, 40, 8, GOLD);  
        tft.drawRoundRect(130, 30, 100, 40, 8, WHITE);  
        tft.setCursor(135, 37);  
        tft.print(" Dish4");  
        delay(70);  
      }  
      if (p.x > 80 && p.x < 120 && p.y > 10 && p.y < 110 )  
      {  
        Serial.println("Dish5");  
        msg = "Dish5 Ordered";  
        transmit();  
        tft.fillRoundRect(130, 80, 100, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(130, 80, 100, 40, 8, GOLD);  
        tft.drawRoundRect(130, 80, 100, 40, 8, WHITE);  
        tft.setCursor(135, 87);  
        tft.print(" Dish5");  
        delay(70);  
      }  
      if (p.x > 130 && p.x < 170 && p.y > 10 && p.y < 110)  
      {  
        Serial.println("Dish6");  
        msg = "Dish6 Ordered";  
        transmit();  
        tft.fillRoundRect(130, 130, 100, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(130, 130, 100, 40, 8, GOLD);  
        tft.drawRoundRect(130, 130, 100, 40, 8, WHITE);  
        tft.setCursor(135, 137);  
        tft.print(" Dish6");  
        delay(70);  
      }  
      if (p.x > 230 && p.x < 270 && p.y > 10 && p.y < 230)  
      {  
        Serial.println("Bill");  
        msg = "Customer Bill";  
        transmit();  
        tft.fillRoundRect(10, 230, 220, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(10, 230, 220, 40, 8, MAGENTA);  
        tft.drawRoundRect(10, 230, 220, 40, 8, WHITE);  
        tft.setCursor(85, 237);  
        tft.print(" Bill");  
        delay(70);  
      }  
      if (p.x > 280 && p.x < 320 && p.y > 10 && p.y < 230)  
      {  
        Serial.println("Water");  
        msg = "Water";  
        transmit();  
        tft.fillRoundRect(10, 280, 220, 40, 8, WHITE);  
        delay(70);  
        tft.fillRoundRect(10, 280, 220, 40, 8, GREEN);  
        tft.drawRoundRect(10, 280, 220, 40, 8, WHITE);  
        tft.setCursor(95, 295);  
        tft.print("Water");  
        delay(70);  
      }  
    }  
}