### **Assignment 7**

**Develop a mobile application that takes the user input and sends it to IoT device (ESP32). Display the received data on the OLED display.**

**Program:-**

#include <Wire.h>

#include <Adafruit\_GFX.h>

#include <Adafruit\_SSD1306.h>

#include "BluetoothSerial.h"

BluetoothSerial SerialBT;

#define SCREEN\_WIDTH 128

#define SCREEN\_HEIGHT 64

Adafruit\_SSD1306 display(SCREEN\_WIDTH, SCREEN\_HEIGHT, &Wire, -1);

void setup() {

Serial.begin(115200);

delay(2000);

Serial.println("device connected");

SerialBT.begin("ESP32test");

Serial.println("oled test");

if (!display.begin(SSD1306\_SWITCHCAPVCC, 0x3C)) {

Serial.println("SSD1306 allocation failed");

for (;;);

}

delay(2000);

display.clearDisplay();

display.setTextColor(WHITE);

}

void loop() {

char b;

if (Serial.available()) {

SerialBT.write(Serial.read());

}

if (SerialBT.available()) {

b = SerialBT.read();

Serial.print(b);

display.clearDisplay();

display.setTextSize(1);

display.setCursor(0, 0);

display.println("hi");

display.print(b);

display.display();

}

}

**Output:-**

