Display control through ESP32 using Arduino Framework

G V V Sharma*

Contents

Abstract—This document shows how to implement a decade counter using the Arduino framework on ESP32.

1 Software

All codes used in this document are available at the following link.

```
https://github.com/gadepall/ugv/tree/main/codes/sevenseg
```

Install "Arduino & ESP32 Bluetooth Controller App - Dabble" from

```
https://play.google.com/store/apps/details?id=io.dabbleapp
```

2 Setup

2.1. Fig.2.1.2 shows all the pins of the ESP32. Connect the pins of the display in Fig. 2.1.1 to the ESP32 using Table 2.1.1. The COM pin should be connected to 3.3V through a resistor.

2.2. Now execute the following code using platformio

```
codes/ble-dabble/src/main.cpp
```

Flash firmware.bin obtained upon execution of the above code to the ESP32.

2.3.

2.4. Now display the numbers 0-4 on the seven segment display using the dabble app as shown in Fig. 2.4.1

Display	ESP32
a	32
b	33
c	25
d	26
e	27
f	14
g	12
COM	3.3 V

TABLE 2.1.1: Display-ESP32 connection.

*The author is with the Department of Electrical Engineering, IIT Hyderabad, 502285. email:gadepall@ee.iith.ac.in

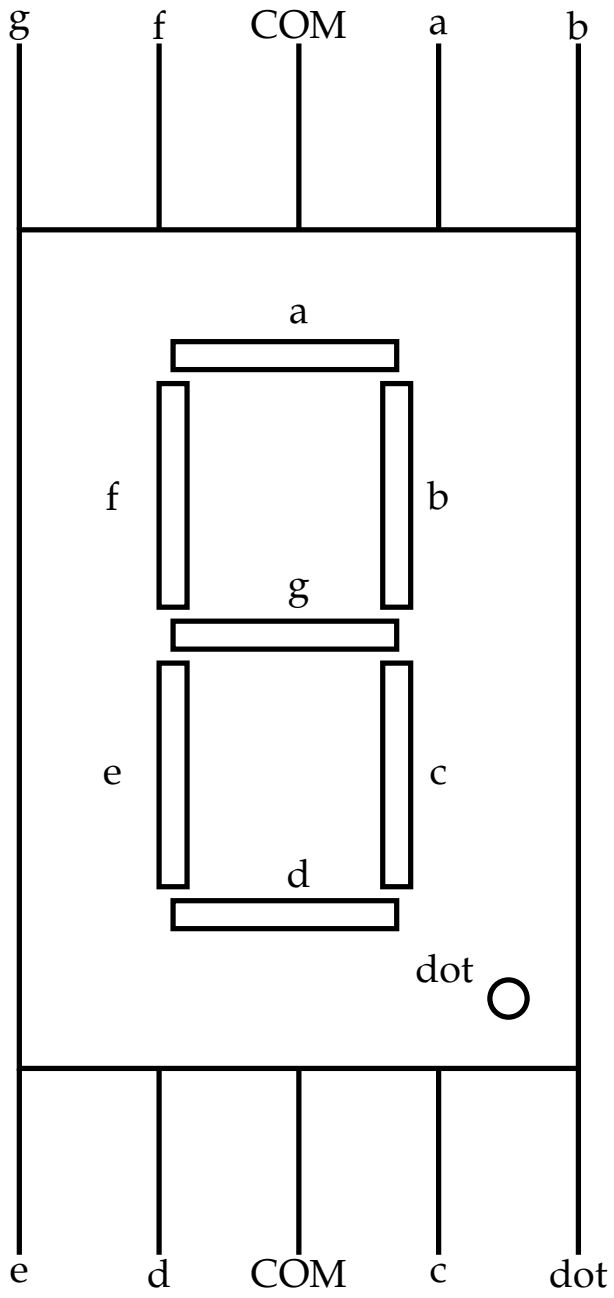

Fig. 2.1.1: Seven Segment Display

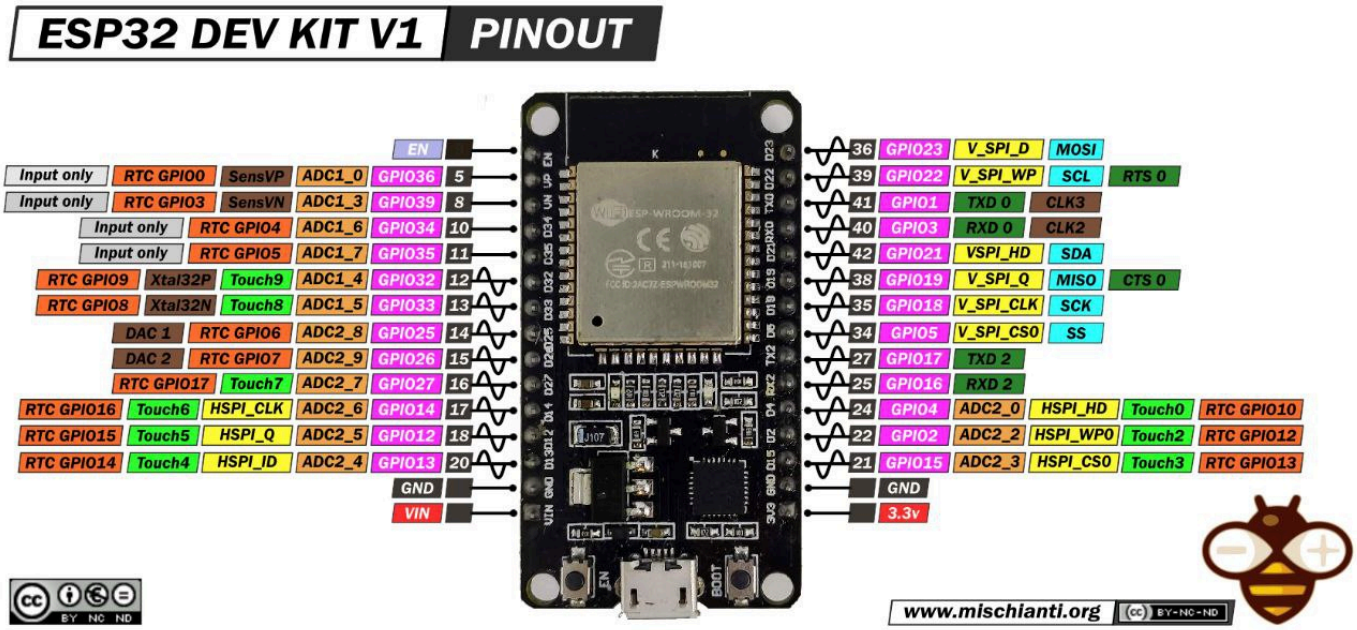

Fig. 2.1.2: Pin Diagram. Note that the pin diagram may vary depending upon the ESP32 variant.

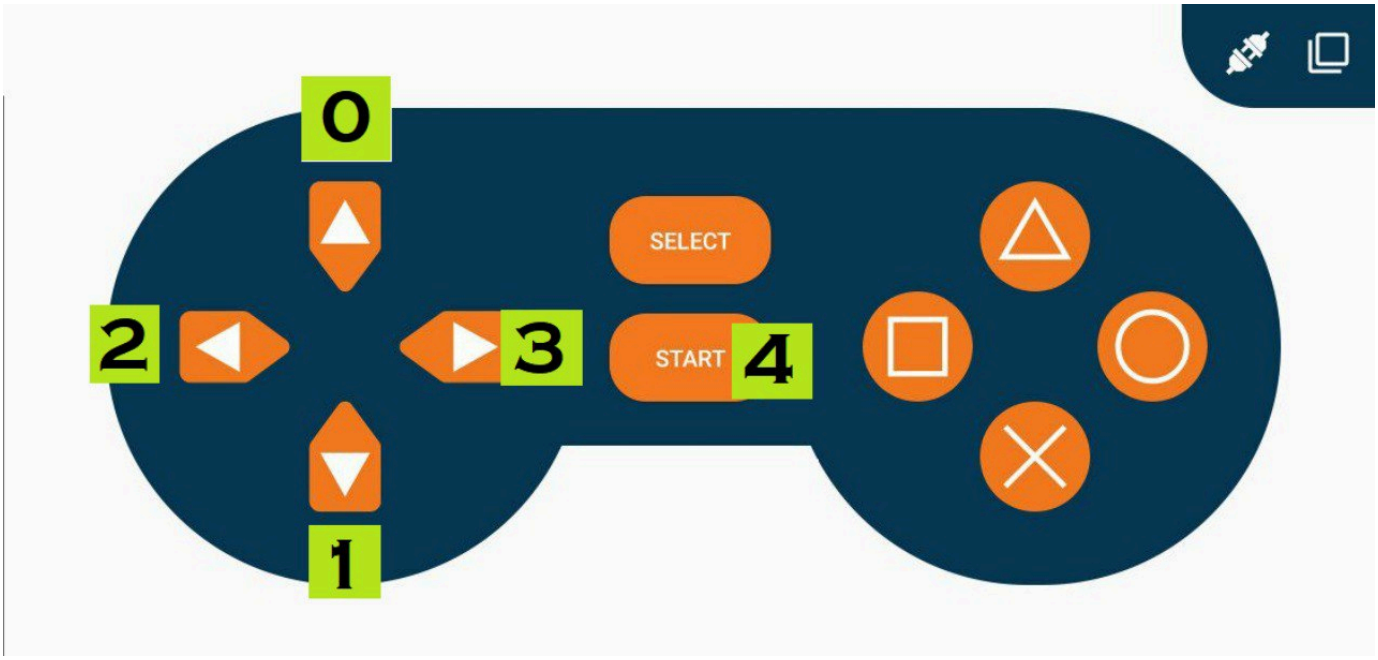

Fig. 2.4.1: Dabble app to control the display over bluetooth