ESP32 as incrementor in serial

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***Abstract*—This manual shows how to establish serial communication between Raspberry Pi and ESP32 chip.**

1 Components

Components	Value	Quantity
Raspberry Pi	Model 3B/B+	1
ESP-Wroom-32	Dev Module	1
Jumper Wires	Female-Female	4
RPi adaptor		1

2 Serial incrementor

Problem 2.1. Flash the code from

https://github.com/Dishank422/EE3900/tree/main/rpi_esp/codes/incr.ino

onto the ESP32 Dev Module using Arduino IDE.

Problem 2.2. Connect the pins of RPi and ESP32 according to table 2.2 and figure 2.2.

RPi	ESP32
5V	5V
GND	GND
TX	RX
RX	TX

TABLE 2.2: RPi-ESP Connections

Problem 2.3. Setup Raspberry pi and open a terminal in it. Run the following command in the terminal.

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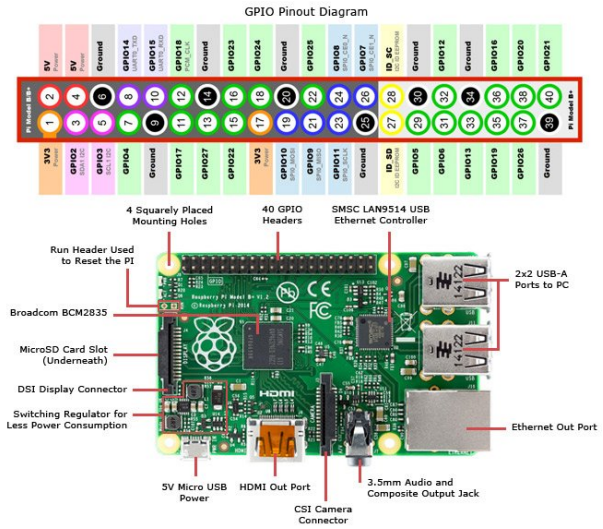

Fig. 2.2: RPi pinout

```
sudo raspi−config
```

A GUI menu will open like in figure 2.3. Go to

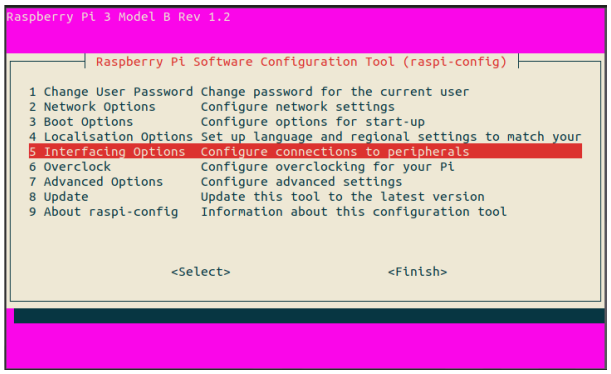

Fig. 2.3: Raspi config

interfacing options > **Serial**. Turn off login shell over serial and enable serial port hardware. Reboot.

Problem 2.4. Download code from

https://github.com/Dishank422/EE3900/tree/main/rpi_esp/codes/send_receive.py

Compile the code in terminal.