4. Connecting the Solenoid Lock

- **Power the Solenoid Lock**:
  - Connect the positive terminal of the solenoid lock to the NO (Normally Open) terminal of the relay.
  - Connect the common (COM) terminal of the relay to the positive terminal of your 12V power supply.
  - Connect the negative terminal of the solenoid lock to the negative terminal of your 12V power supply.
- **Power Supply**: Ensure the 12V power supply is correctly connected to the solenoid lock using a DC barrel jack adapter if necessary.

5. Powering the Raspberry Pi

- Use the Raspberry Pi's dedicated power supply (5V) and ensure it's not powered from the same 12V supply as the solenoid lock.

Summary of Connections:

1. **Camera Module**: Connected to the CSI port on the Raspberry Pi.
2. **Relay Module**:
   - VCC to 5V on Raspberry Pi.
   - GND to GND on Raspberry Pi.
   - IN to GPIO 17 on Raspberry Pi.

Hardware Components and Connections

1. Components List

- **Raspberry Pi 3 or 4**
- **Raspberry Pi Camera Module**
- **Relay Module**
- **Solenoid Lock (12V)**
- **12V Power Supply**
- **DC Barrel Jack Adapter**
- **Jumper Wires**

2. Connecting the Raspberry Pi Camera Module

- **Attach the Camera**: Connect the camera module to the Raspberry Pi's camera interface (CSI) slot.
- **Ensure Proper Alignment**: The blue side of the ribbon cable should face the Ethernet port, and the shiny contacts should face the HDMI port.

3. Relay Module Connection

- **Relay Pinout**: The relay module typically has three pins:
  - **VCC**: Connect to 5V on the Raspberry Pi.
  - **GND**: Connect to a ground (GND) pin on the Raspberry Pi.
  - **IN**: Connect to GPIO pin 17 on the Raspberry Pi (or another GPIO pin if preferred).