**IMPORTANT NOTE:**

* + Make sure another Bluetooth device (like a smartphone or another computer) is paired with your machine. Change the Bluetooth address of the sender in the receiver.c file.
  + Replace the Bluetooth address of the sender in the receiver.c file.
  + char dest[18] = "60:E9:AA:46:FE:B4"; // Replace with the sender's MAC address

To run your Bluetooth messaging program that utilizes SQLite for message storage, follow these steps:

**Prerequisites**

1. **Linux System**: Ensure you're running this on a Linux system that supports Bluetooth. The program is designed to work with Linux Bluetooth stack (BlueZ).
2. **Install Required Packages**:
   * Ensure you have the necessary development libraries installed for Bluetooth and SQLite. You can typically install these using your package manager.

For example, on Ubuntu, you can run:

**sudo apt-get install libbluetooth-dev libsqlite3-dev**

**Compiling the Program**

1. **Save Your Code**: Save the provided code in a files named sender.c and receiver.c in separate systems.like sender.c program compile and run on a system receiver.c compile and run on another system.
2. **Compile the Program**: Open a terminal and navigate to the directory where your code is saved. Compile the program using gcc, linking the necessary libraries:

**gcc sender.c –o sender -lbluetooth -lsqlite3 -lpthread**

**gcc receiver.c –o receiver -lbluetooth -lsqlite3 -lpthread**

Here:

* + -o sender: Specifies the output executable name.
  + -o receiver: Specifies the output executable name.
  + -lbluetooth: Links the Bluetooth library.
  + -lsqlite3: Links the SQLite library.
  + -lpthread: Links the pthread library for multithreading.

**Running the Program**

1. **Run the Program**: Execute your compiled program

./sender

./receiver

1. **Send and Receive Messages**:
   * Once the program is running and a connection is accepted, you can start typing messages in the terminal to send. Received messages will be printed in the terminal.

**DATABASE :**

To open and interact with the SQLite database created by your Bluetooth messaging program (messages.db), you can use the SQLite command-line tool or any SQLite GUI tool. Here are both methods:

**Method 1: Using the SQLite Command-Line Tool**

1. **Install SQLite** (if not already installed):
   * On Ubuntu or Debian-based systems, run:

sudo apt-get install sqlite3

1. **Open the Database**:
   * In your terminal, navigate to the directory where the messages.db file is located (it will be in the same directory where you ran your program unless specified otherwise).
   * Run the following command to open the database:

**sqlite3 messages.db**

1. **Interact with the Database**:
   * After executing the command, you will see a prompt like sqlite>.
   * You can run SQL commands to interact with the database.
   * For example:
     + To view the contents of the MESSAGES table:

**SELECT \* FROM MESSAGES;**

To quit the SQLite command-line interface, you can use any of the following commands:

1. **Type this command:**

**.exit**:

1. **Type this command:**

**.quit**:

1. **Press Ctrl + D**: This is a shortcut for exiting the SQLite shell.

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