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1. 程式主題：命令列的線上即時聊天室
2. 撰寫的語言：C
3. 支援的作業系統：macOS、Ubuntu等等，不支援Windows
4. 程式如何操作，見下列步驟。
5. 或看Youtube demo，連結：<https://youtu.be/3FvHW3uzZA0>

第一步：解壓縮source code，使用terminal切換到該目錄再輸入make，會生出server.out跟client.out。

```
22:55 ~/c-chatroom [master|✓] $ make
gcc -O3 -Wall -c src/server.c
gcc -O3 -Wall -pthread -o server.out server.o
clang: warning: argument unused during compilation: '-pthread'
gcc -O3 -Wall -c src/client.c
gcc -O3 -Wall -c src/string.c
gcc -O3 -Wall -pthread -o client.out client.o string.o
clang: warning: argument unused during compilation: '-pthread'
22:55 ~/c-chatroom [master|...5] $
```

第二步：執行server.out，顯示的port需為8888，若有其他服務佔用會出錯。

```
22:55 ~/c-chatroom [master|...5] $ ./server.out
Start Server on: 0.0.0.0:8888
█
```

第三步：再開兩個或多個terminal視窗，執行client.out

```
23:00 ~/c-chatroom [master|...5] $ ./client.out
Please enter your name: Bob
Connect to Server: 127.0.0.1:8888
You are: 127.0.0.1:56255
> █
```

```
23:01 ~/c-chatroom [master|...5] $ ./client.out
Please enter your name: Zac
Connect to Server: 127.0.0.1:8888
You are: 127.0.0.1:56266
> █
```

第四步：在多個視窗切換，可以開始聊天了！Server那邊也會有聊天記錄。

```
23:00 ~/c-chatroom [master|...5] $ ./client.out
Please enter your name: Bob
Connect to Server: 127.0.0.1:8888
You are: 127.0.0.1:56255
Zac(127.0.0.1) join the chatroom.
> Hi! How are you?
> █
```

```
23:01 ~/c-chatroom [master|...5] $ ./client.out
Please enter your name: Zac
Connect to Server: 127.0.0.1:8888
You are: 127.0.0.1:56266
Bob: Hi! How are you? from 127.0.0.1
> █
```

```
22:55 ~/c-chatroom [master|...5] $ ./server.out
Start Server on: 0.0.0.0:8888
Client 127.0.0.1:56255 come in.
Bob(127.0.0.1)(4) join the chatroom.
Client 127.0.0.1:56266 come in.
Zac(127.0.0.1)(5) join the chatroom.
Send to sockfd 4: "Zac(127.0.0.1) join the chatroom."
Send to sockfd 5: "Bob: Hi! How are you? from 127.0.0.1"
█
```