

嵌入式系統期末報告

題目：聊天室暨OX遊戲

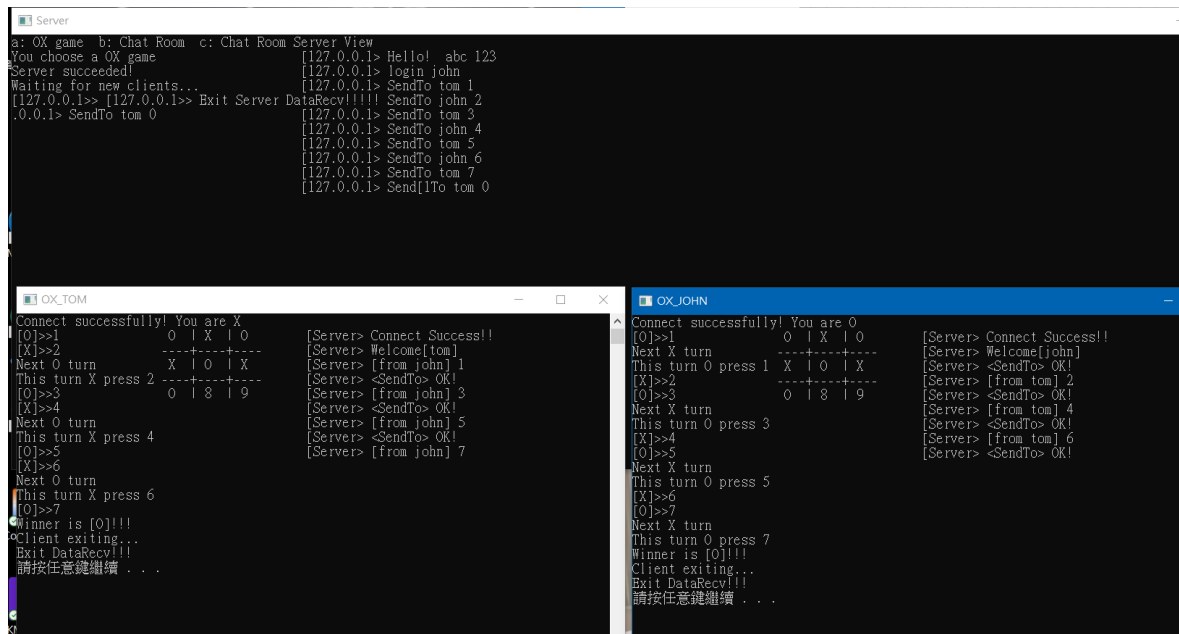
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程式功能說明

此程式共有三大主要功能，OX 遊戲、聊天室、官方端聊天室，在打開 Server 之後，可選擇要開啟哪一項功能，再開啟其對應之 Client 端，即可執行程式，OX 遊戲使用了 Circular Queue 的資料結構和有 GOTOXY 的功能(OX 棋位置固定)、聊天室(傳輸字串)，共三項加分功能。

下圖為 OX 遊戲執行結果示範

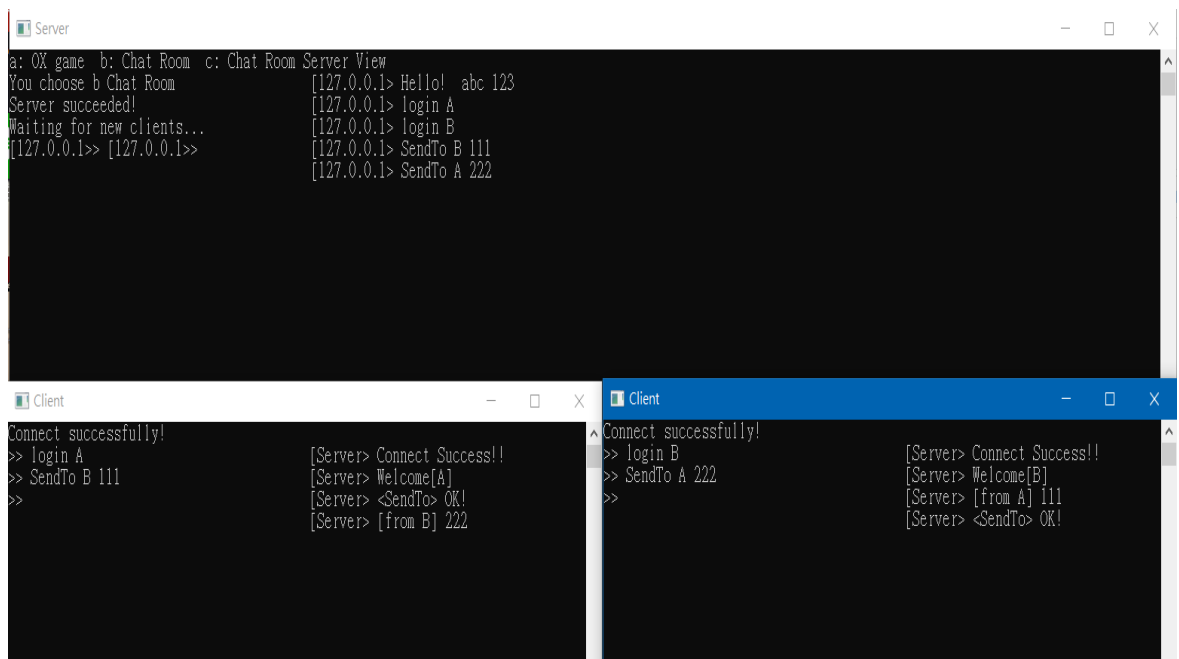


```
Server
a: OX game b: Chat Room c: Chat Room Server View
You choose a OX game
Server succeeded!
Waiting for new clients...
[127.0.0.1]> [127.0.0.1]> Exit Server DataRecv!!!
[127.0.0.1]> SendTo john 2
[127.0.0.1]> SendTo tom 3
[127.0.0.1]> SendTo tom 0
[127.0.0.1]> SendTo john 4
[127.0.0.1]> SendTo tom 5
[127.0.0.1]> SendTo john 6
[127.0.0.1]> SendTo tom 7
[127.0.0.1]> SendTo tom 0

OX_TOM
Connect successfully! You are X
[O]>>1 0 | X | 0
[X]>>2 -----
Next O turn X | 0 | X
This turn X press 2 -----
[O]>>3 0 | 8 | 9
[X]>>4 -----
Next O turn
This turn X press 4
[O]>>5 -----
[X]>>6 -----
Next O turn
This turn X press 6
[O]>>7 -----
Winner is [O]!!!
Client exiting...
Exit DataRecv!!!
請按任意鍵繼續...

OX_JOHN
Connect successfully! You are O
[O]>>1 0 | X | 0
Next X turn -----
This turn O press 1 X | 0 | X
[X]>>2 -----
[O]>>3 0 | 8 | 9
Next X turn -----
This turn O press 3
[X]>>4 -----
[O]>>5 -----
Next X turn -----
This turn O press 5
[X]>>6 -----
[O]>>7 -----
Next X turn -----
This turn O press 7
Winner is [O]!!!
Client exiting...
Exit DataRecv!!!
請按任意鍵繼續...
```

下圖為聊天室執行結果示範

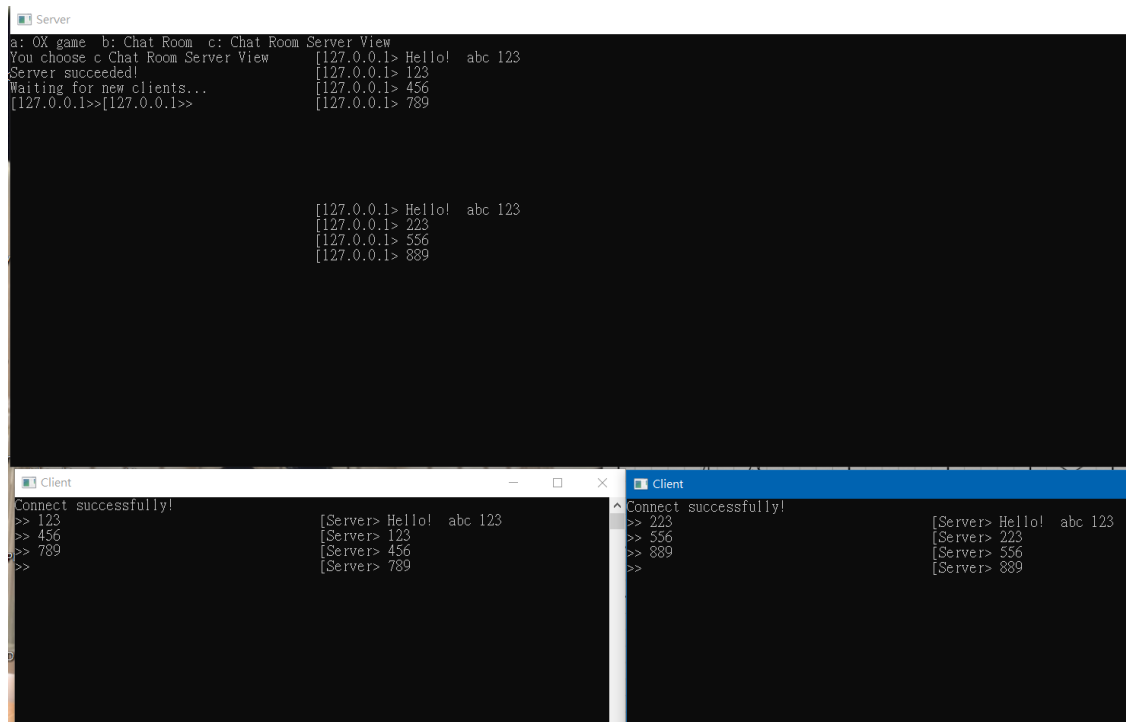


```
Server
a: OX game b: Chat Room c: Chat Room Server View
You choose b Chat Room
Server succeeded!
Waiting for new clients...
[127.0.0.1]> [127.0.0.1]>
[127.0.0.1]> SendTo B 111
[127.0.0.1]> SendTo A 222

Client
Connect successfully!
>> login A [Server> Connect Success!!
>> SendTo B 111 [Server> Welcome[A]
>> [Server> <SendTo> OK!
[Server> [from B] 222

Client
Connect successfully!
>> login B [Server> Connect Success!!
>> SendTo A 222 [Server> Welcome[B]
>> [Server> [from A] 111
[Server> <SendTo> OK!
```

下圖為官方端聊天室執行結果示範



The screenshot displays three terminal windows for a chat room application. The top window, titled 'Server', shows the server's startup sequence and initial client connections. It prompts the user to choose between 'OX game', 'Chat Room', and 'Chat Room Server View'. After selecting 'Chat Room Server View', it confirms 'Server succeeded!' and begins 'Waiting for new clients...'. It then receives three connections from 127.0.0.1 with IDs 123, 456, and 789, each sending a 'Hello!' message. The bottom-left window, titled 'Client', shows a successful connection to the server and the receipt of the 'Hello!' message from the server. The bottom-right window, also titled 'Client', shows a successful connection and the receipt of the 'Hello!' message from the server, along with the server's responses to the client's previous inputs (123, 223, 556, 889).

```
Server
a: OX game b: Chat Room c: Chat Room Server View
You choose c Chat Room Server View
Server succeeded!
Waiting for new clients...
[127.0.0.1]>[127.0.0.1]>
[127.0.0.1]> Hello! abc 123
[127.0.0.1]> 123
[127.0.0.1]> 456
[127.0.0.1]> 789

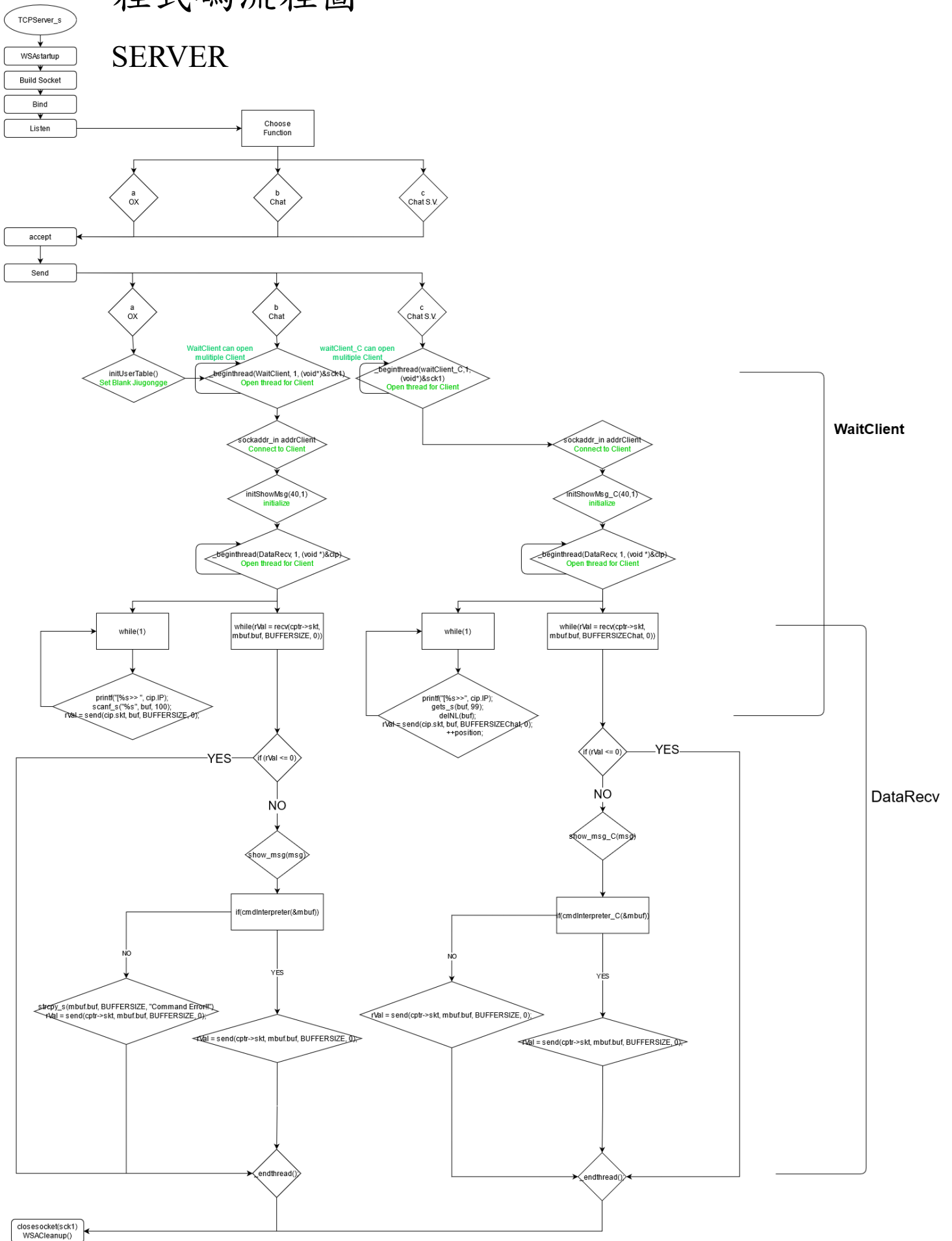
[127.0.0.1]> Hello! abc 123
[127.0.0.1]> 223
[127.0.0.1]> 556
[127.0.0.1]> 889

Client
Connect successfully!
>> 123 [Server> Hello! abc 123
>> 456 [Server> 123
>> 789 [Server> 456
>> [Server> 789

Client
Connect successfully!
>> 223 [Server> Hello! abc 123
>> 556 [Server> 223
>> 889 [Server> 556
>> [Server> 889
```

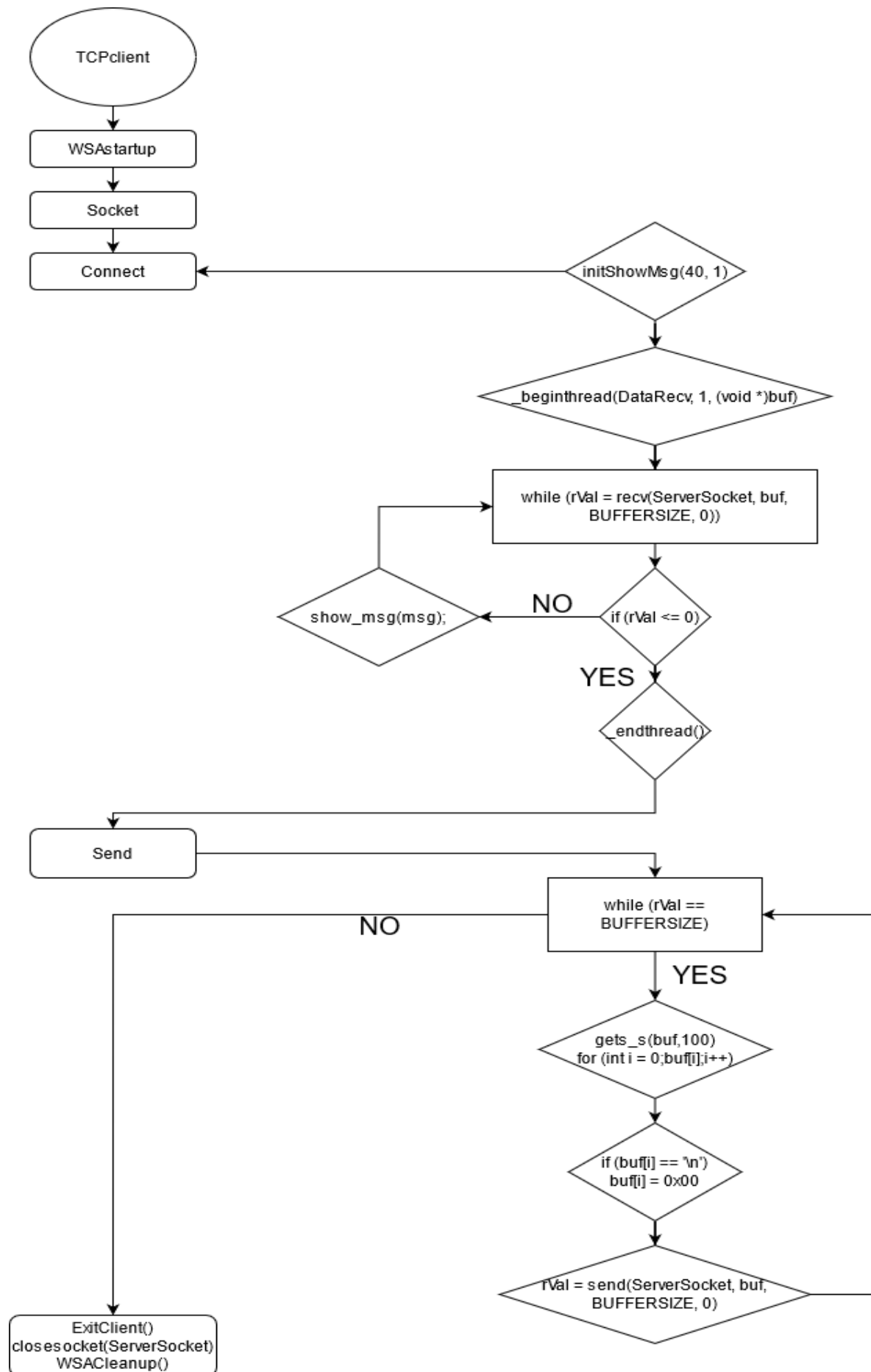
程式碼流程圖

SERVER



Client

1. 官方端聊天室 Client



2.OX 遊戲、聊天室 Client

