

SnakeServer.py

```
1 import socket
2 import threading
3 import time
4
5 # List to store connected client sockets
6 client_sockets = []
7
8 IP, PORT = '192.168.20.69', 9999
9
10 def handle_client(client_socket):
11     global client_sockets
12
13     try:
14         while True:
15             data = client_socket.recv(1024)
16             if not data:
17                 break
18
19             # Process the received data
20             processed_data = f'P{client_sockets.index(client_socket)}|{data.decode("utf-8")}'
21
22             sendable_data = processed_data.encode('utf-8')
23             # Send the processed data back to the client(s)
24             client_socket.send(sendable_data)
25
26             # Send data to all connected clients
27             print(f'Player {client_sockets.index(client_socket)}: {processed_data}')
28             send_to_all(sendable_data, client_socket)
29
30     except Exception as e:
31         print(f'Error: {e}')
32
33     finally:
34         # Remove the client socket from the list when done
35         client_sockets.remove(client_socket)
36         client_socket.close()
37
38 def send_to_all(message, sender_socket):
39     global client_sockets
40
41     # Iterate through the list of connected clients and send data to each one
42     for client_socket in client_sockets:
43         # Avoid sending the data back to the sender
44         if client_socket != sender_socket:
45             try:
46                 client_socket.send(message)
47             except Exception as e:
48                 print(f'Error sending data to a client: {e}')
49                 # Remove the client socket from the list if an error occurs
50                 client_sockets.remove(client_socket)
51                 client_socket.close()
52
53 def start_server():
54     global client_sockets
55
56     server_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
57     server_socket.bind((IP, PORT))
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57     server_socket.listen(5)
58     print(f'[*] Listening on {IP}:{PORT}')
59
60     try:
61         while True:
62             client_socket, addr = server_socket.accept()
63             print(f'[*] Accepted connection from {addr[0]}:{addr[1]}')
64
65             # Add the new client socket to the list
66             client_sockets.append(client_socket)
67             client_socket.send(f'you|P{client_sockets.index(client_socket)}'.encode('utf-8'
68 ))
69
70             if len(client_sockets) == 2:
71                 time.sleep(0.5)
72                 client_socket.send('start|info'.encode('utf-8'))
73                 send_to_all('start|info'.encode('utf-8'), client_socket)
74                 update_handler = threading.Thread(target=update_loop, args=())
75                 update_handler.start()
76                 client_handler = threading.Thread(target=handle_client, args=(client_socket,))
77                 client_handler.start()
78
79             except KeyboardInterrupt:
80                 print('[*] Server shutting down.')
81
82                 # Close all client sockets before shutting down the server
83                 for client_socket in client_sockets:
84                     client_socket.close()
85
86                 server_socket.close()
87
88 def update_loop():
89     while True:
90         send_to_all('update|info'.encode('utf-8'), None)
91         time.sleep(0.1)
92
93 if __name__ == '__main__':
94     start_server()
```