King Fahd University of Petroleum and Minerals

COE 427

Section 01

Riyadh Bank queue management Project phase 3

Distributed Systems – Term 241

To: Dr. Ayaz Khan

Name	ID
Abdulrahman Sharqawi	202182610
Basil Alashqar	202045700
Mohab Hussein	202182810
Faisal SaqAllah	202045600
Abdulaziz Alsayyari	202035480

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User Manual for Riyadh Bank Queue Management Distributed System Server

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Prerequisites

- **Ensure All IPs and Sockets Are Correctly Registered in html files:**
  - Verify that the IP addresses and socket information are accurately configured in the HTML code of the system.

```
        const peers = ['ws://192.168.8.141:3001', 'ws://192.168.8.178:3006', "ws://192.168.8.157:3004"]; // Peer WebSocket addresses
        const server = new WebSocket('ws://192.168.8.177:3003'); // Replace with the current device's address
```

- **Ensure All IPs and Sockets Are Correctly Registered in websocket server files:**

```
const port = 3003; // Port for Counters
    console.log(`Counters WebSocket server running on ws://192.168.8.177:${port}`);
console.log(`Counters WebSocket server listening on ws://192.168.8.177:${port}`);
```

Steps to Start the Distributed System Server

Step 1: Install WebSocket Library

1. Open a terminal and navigate to the project directory:

```
Copy code
Cd Desktop
Cd counters ## Note 1 to 6 should be counters, one should be display, and one should be index(kiosk)
This should appear:
PS C:\Users\rocja\Desktop\counters>
```

2. Install the WebSocket library using the following command:

```
Copy code in the correct file path
npm install ws
```

Step 2: Start the WebSocket Server

1. In the same terminal, start the WebSocket server:

```
Copy code in the correct path:
node websocket-server.js 3003
```

2. **Important:** Ensure each server instance has a unique socket number in the server code to avoid conflicts.

Step 3: Start the HTTP Server

1. Open another terminal and navigate to the same directory:

```
Copy code
Cd Desktop
Cd counters
PS C:\Users\rocja\Desktop\counters>
```

2. Start the HTTP server using Python:

```
Copy code
python -m http.server 8003
```

Important: Ensure each server instance has a unique socket number in the server code to avoid conflicts.

Additional Notes

1. **Server Uniqueness:**
   - Each server should have a unique WebSocket port (e.g., 3003, 3004, etc.) to ensure smooth communication between components.
2. **Network Configuration:**
   - Make sure all devices and servers are on the same network and that necessary ports (3003, 8003, etc.) are open and not blocked by firewalls.
3. **Testing:**
   - After setting up, test the system by accessing the HTML interface and verifying proper communication between servers and clients.

By following these steps, your Riyadh Bank Queue Management Distributed System should be ready for operation you just need to open the ip address with socket on each screen example `192.168.8.141:8001`.