Chester The Chat

User Manual

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Overview

Chester The Chat is a Qt-based UDP chat application for testing communication across a local network or between multiple instances on the same machine.

It is designed for:
- Developers testing UDP unicast or multicast protocols.
- Local area chat apps with minimal setup.
- Demonstrations of real-time socket programming.

Installation

Build the application using Qt and copy the exe file to a blank folder.
Run windeployqt from the Qt/X.X.X/bin folder and give it the full path to where ChesterTheChat.exe is located.
This will copy all the required libraries to Chesters folder.

Running the App

1. Launch the application.
2. Enter your username.
3. Configure network settings as needed.
4. Click **Connect**.
5. Type your message and press **Enter** or click **Send**.

Chat Features

- **Real-time messaging** over UDP.
- Message timestamps (UTC).
- Sent and received message logging.
- Chat history shown in the main text pane.

Networking Settings

Setting	Description
Local Interface	The local IP or "ANY" to bind to.
Local Port	Port to bind for receiving.
Multicast Address	Group address to send messages to.
Remote Port	Destination port for sending.
Multicast Toggle	Enables joining multicast groups.
Loopback Toggle	Enables message loopback from self.
TTL	Sets multicast time-to-live value.

Appearance & Stylesheets

- Load `.qss` files from the `../QStyleSheets` folder.
- Toggle background image via checkbox.
- Styles are applied live and saved per instance.

Using Multiple Instances

- Each instance gets a unique ID on startup (`instance_1`, `instance_2`, etc.).
- Settings are saved in individual `.ini` files in the same folder.
- This allows easy simulation of chat between users on a single machine.
IF ever you have issues open instances in proper sequence, close all open instances and then delete instance_ids.txt.

Troubleshooting

Issue	Solution
Cannot bind to socket	Check if the port is in use or blocked.
Cannot bind to socket	Ensure correct group address and TTL.
UI not updating on style change	Check that `.qss` files are valid.
Instance opening sequence out of order	Close all instances and delete instance_ids.txt

Screenshots

🖥️ Main Window

![Main Window](docs/screenshots/main_window.png)

🌐 Network Settings

![Network Tab](docs/screenshots/network_tab.png)

🎨 Style Sheet Selection

![Style Settings](docs/screenshots/styles.png)

> Replace placeholders with actual screenshots in `docs/screenshots/`.

Support

If you encounter bugs or have feature requests, open an issue on the GitHub repository.