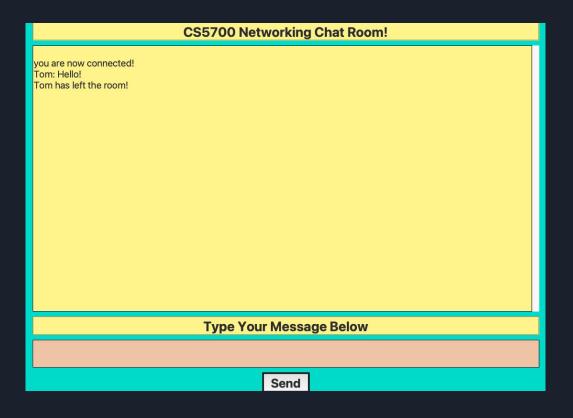# Instant Messaging!

Akshay Rao
https://github.com/akshayrao96/chat-program

Introduction

What is my final project?

- Instant Messaging Chat Program
- Developed in Python, using client-server socket connections

Demonstration

CS5700 Networking Chat Room!

you are now connected!
Tom: Hello!
Tom has left the room!

Type Your Message Below

Send

Significance

- I was interested in real-time chat messaging
- Exploring complexities between server client communication
- Functional chat room with server hosting and multi-client support
- Use of threading to scale server with many clients
- Rudimentary model for complex messaging systems

Features and Design

- server.py - Manages client connections, localhost, listens on port 9000, broadcasts
- client.py - Simple client for logic and testing. Modular
- Chat-client.py - Advanced client with GUI, mimics real-world chat application

Server

```
Server is running..
connection is established with ('127.0.0.1', 55182)
```

Client

CS5700 Networking Chat Room!

you are now con | you are now connected!
User1 has joined the room!
Tom: Hello!

Type Your Message Below

Send

Client

Features:

- Graceful quitting (close chat, or type "quit")
- Functionality, server health

Testing

Step by step robust approach:

- Server
- Client - connection with server
- Client - connection, broadcasting messages
- Multithreaded, GUI

Conclusion

- Learning tool for real-time communication systems
- Importance of efficient message handling, broadcasting
- Networking principles

Reflection

- Python - emphasis on program flow
- Challenging to implement features without breaking the existing platform
- Importance of iterative development and testing

Thank you!!