

# Hybrid Centralized and P2P Chat



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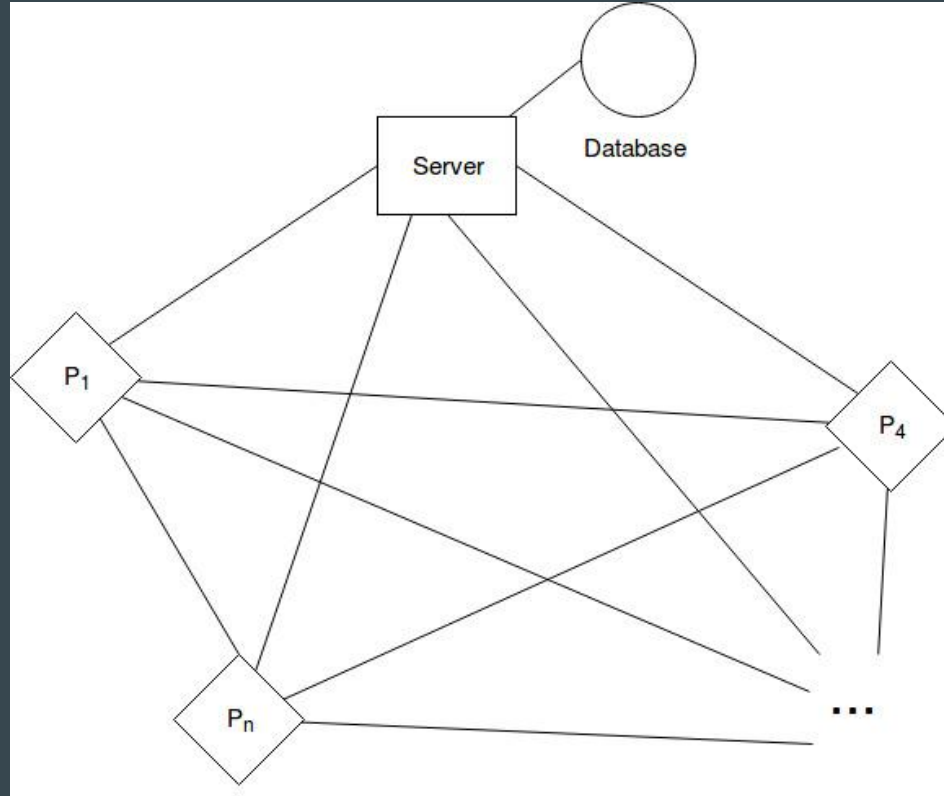
# Overview

- Centralized network
  - Mandatory centralized point
  - All the data must pass
  - E.g. Client - Server model
- Peer to peer (P2P)
  - Decentralized
  - Directly connected
  - E.g. Gnutella
- Hybrid centralized and P2P
  - Use both a server and direct P2P connection
- Implemented in C

# Main components

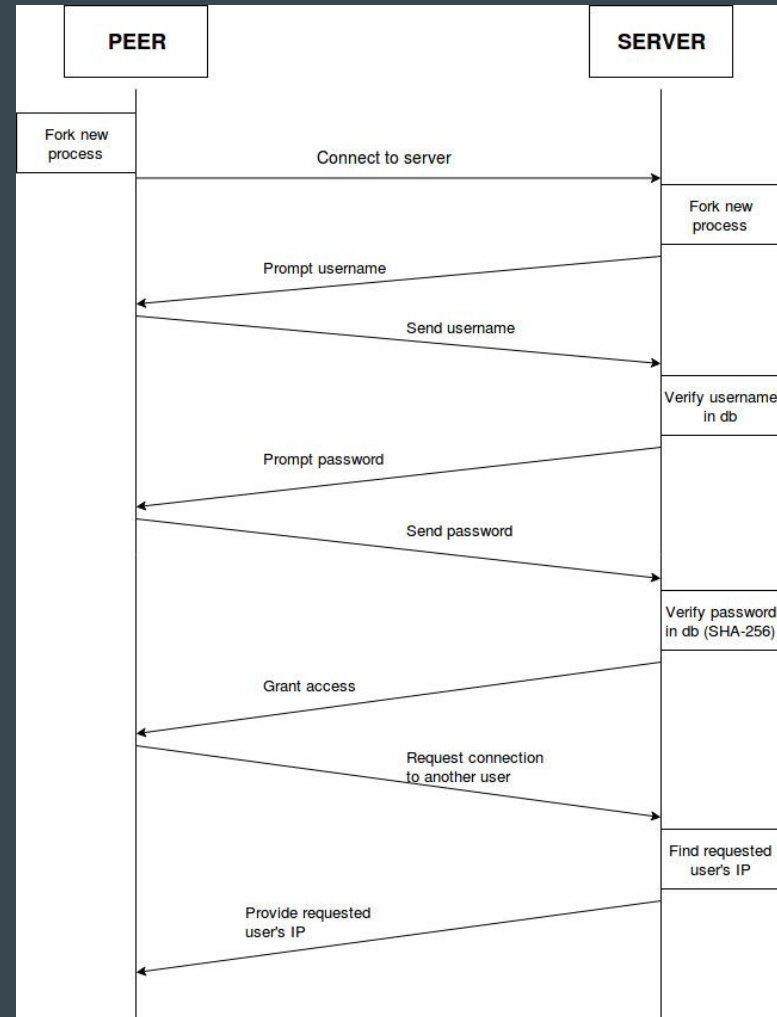
- Server
  - Sign in
  - User information
  - Query database
- Peers
  - Direct connection to all other peers
  - Socket
  - Send/receive messages

# Main components



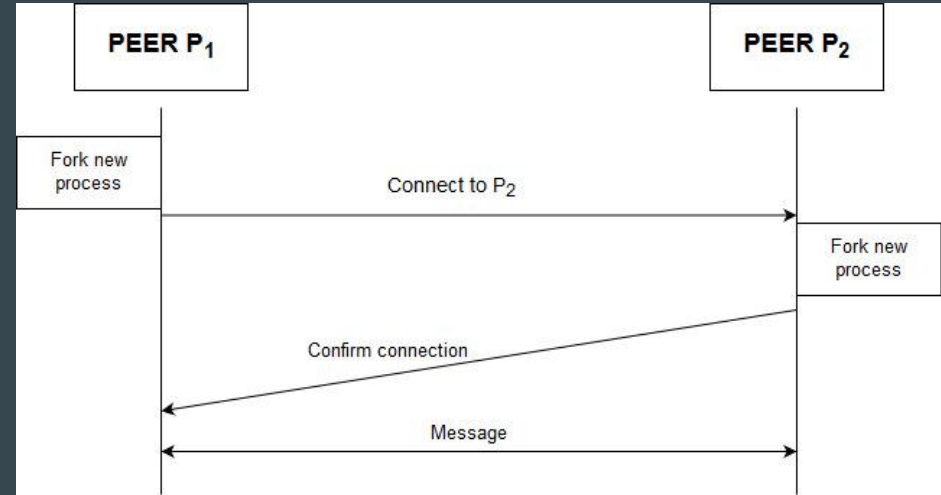
# Protocol

- Peer to server
  - Sign in
  - Request user's information



# Protocol

- Peer to peer
  - Direct connection from 1 peer to others
  - Send/receive messages



# Demonstration

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# Conclusion

- Pros
  - Fast
  - Fault-tolerant
  - Scalable
- Cons
  - Each peer needs to handle many processes

# Thank You

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