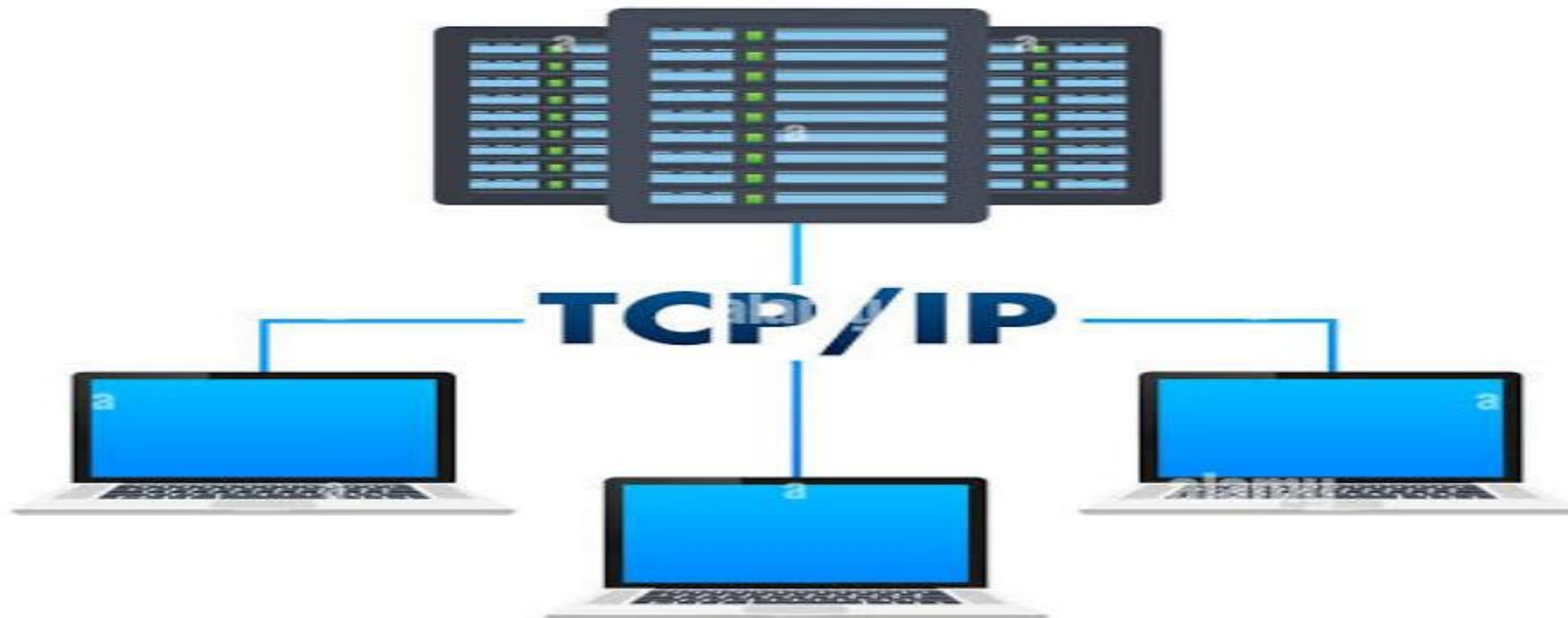


# TCP-BASED FILE TRANSFER PROTOCOL

A Reliable And Efficient Solution for Data Transfer



**Presented By:**  
**MD RONY RAHMAN**  
**BSSE-1509**  
**IIT,University Of Dhaka**

**Supervisor:**  
**Mohd. Zulfiquar Hafiz**  
**Professor**  
**IIT,Universirty Of Dhaka**

# Overview

- ▶ This project focuses on developing a **TCP-based file transfer protocol** that allows communication between a server and a client, providing functionalities like chat, file transfer, and secure communication through encryption.
- ▶ The ultimate goal is to create a robust and secure protocol for file transfer and communication, ensuring data reliability and privacy.

# Key Features

4

- ▶ Server-Client Communication
- ▶ Real-Time Chat
- ▶ File Transfer
- ▶ Encryption



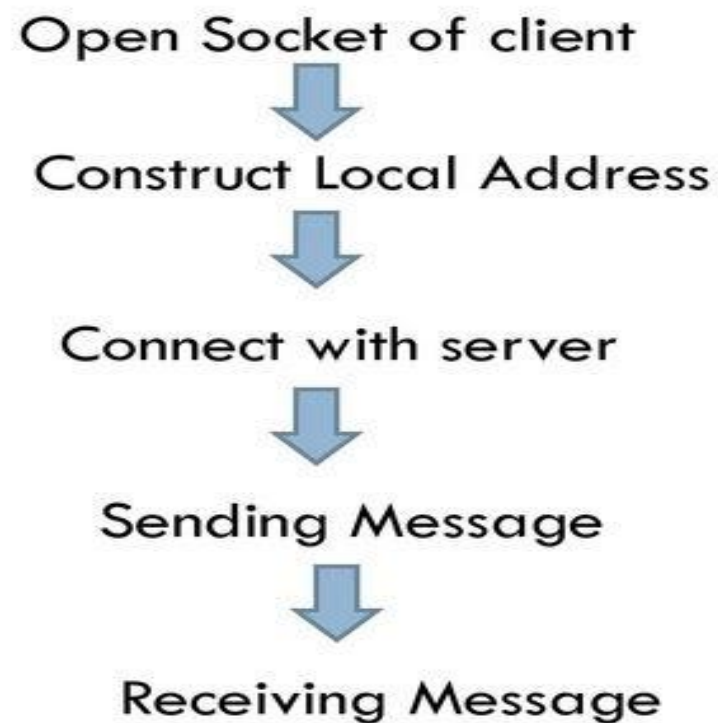
# Current Implementation

Server-client connection established via TCP.  
Real-time chat communication between the two or more.

## SERVER



## CLIENT





# Future Work

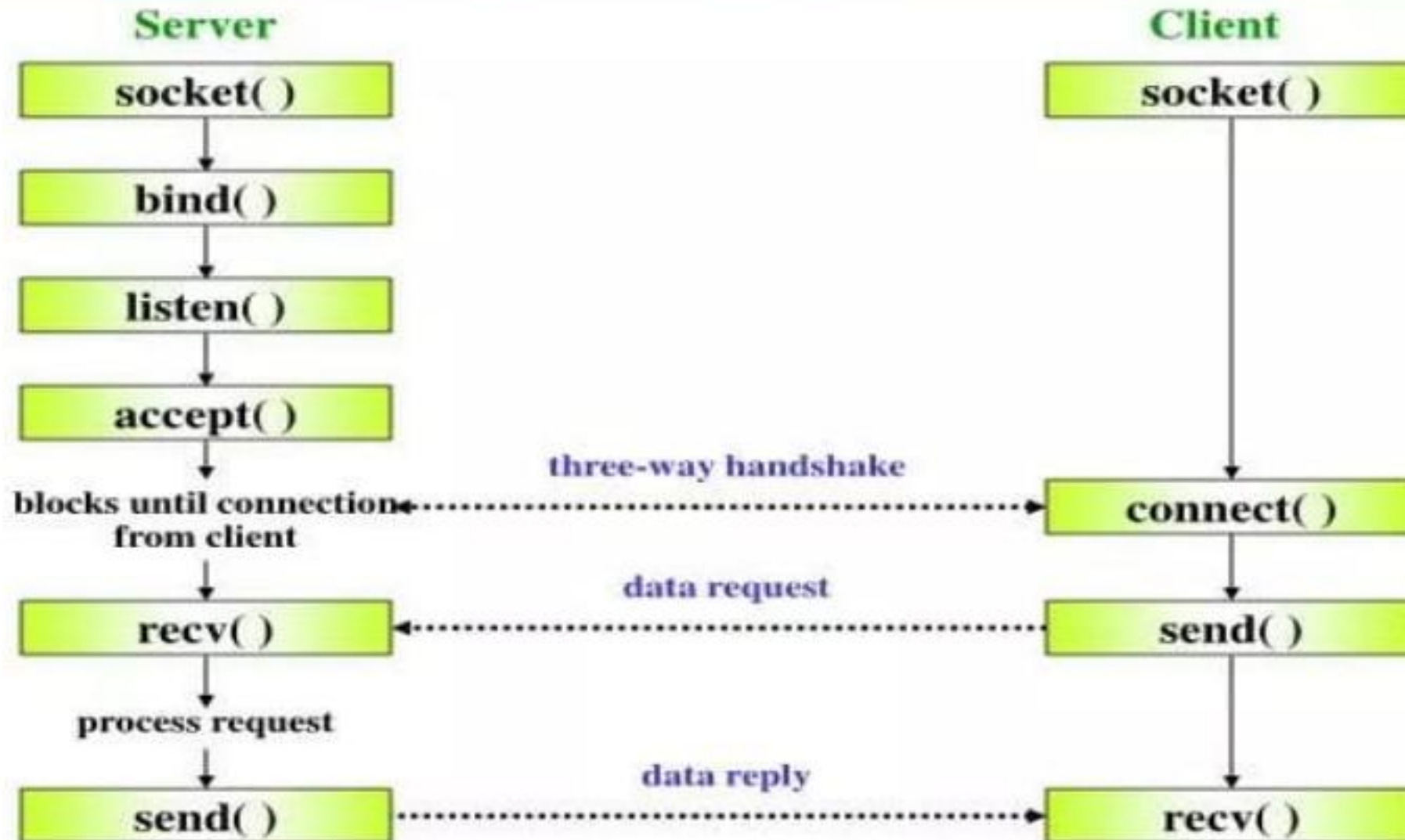
## File Transfer:

Implement file upload and download capabilities between the server and client. Ensure efficient and reliable file transfer, even for large files.

## Encryption:

Add encryption mechanisms (e.g., **AES** for symmetric encryption or **RSA** for asymmetric encryption) to ensure data security during communication and file transfer.

# TCP Client-Server Model





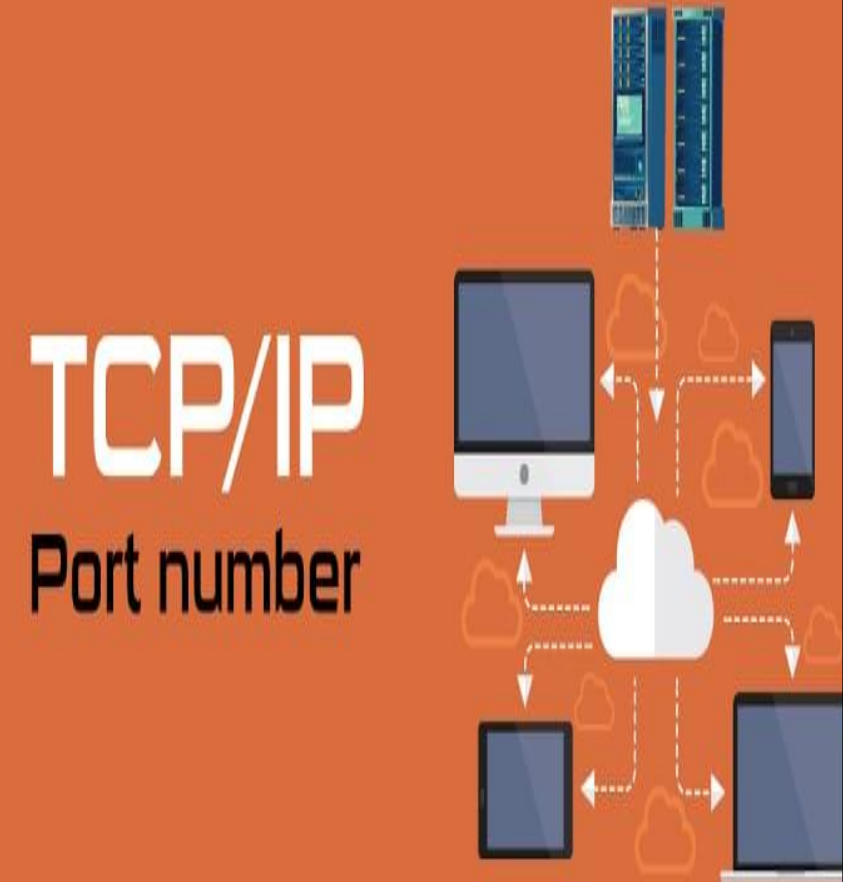
# Challenges and Solutions

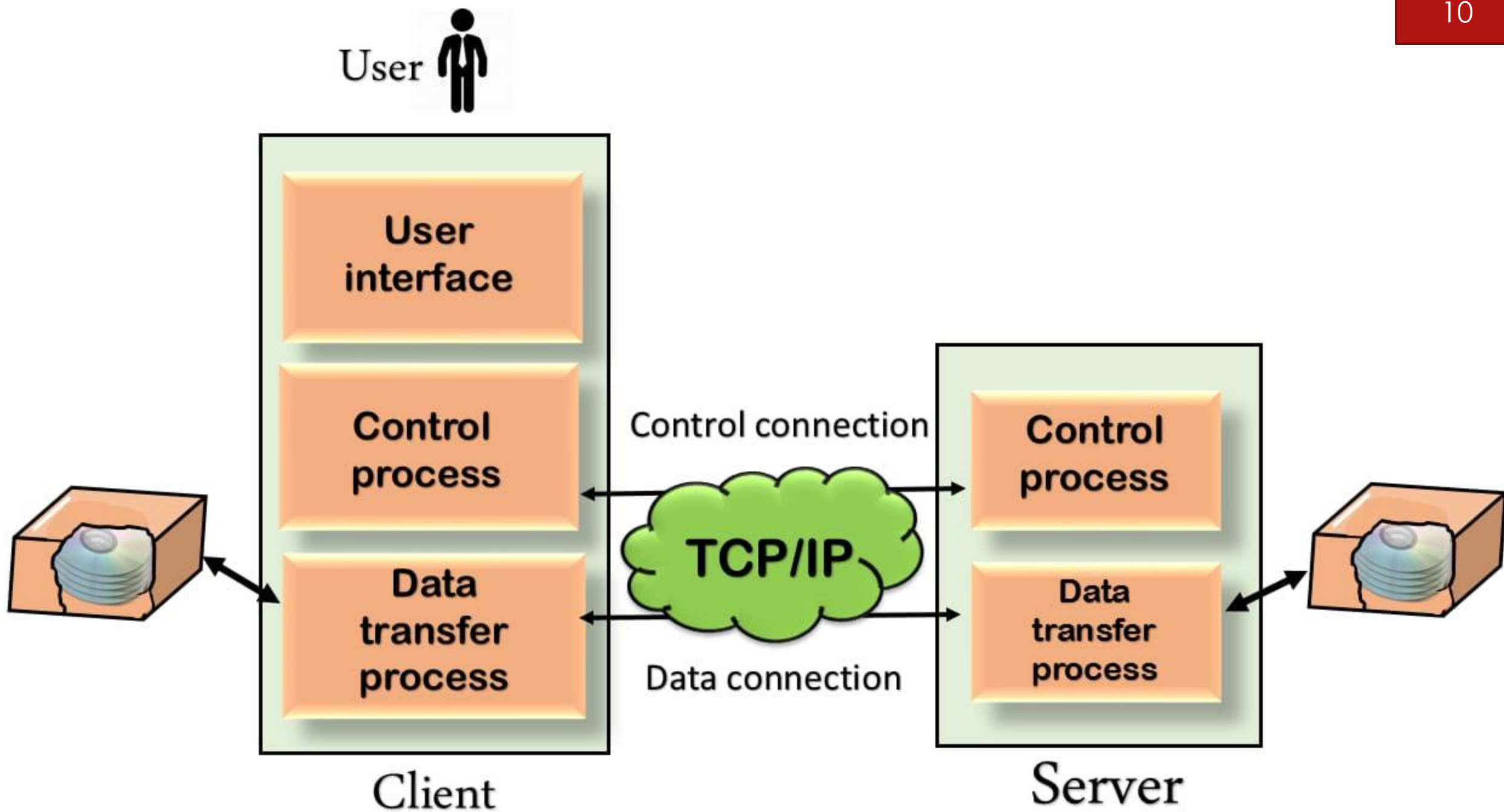
## Challenges:

1. Understanding TCP Basic
2. Socket Programming
3. File Handling
4. Packetization
5. Error Handling and Reliability
6. Concurrency
7. Security

## Solutions:

1. Learn TCP and Sockets
2. Break Down the Project
3. File Handling
4. Concurrency with Threads
5. Implement Security Later
6. Implement Chunking
7. Concurrency with Threads





# Contact:



<https://github.com/Rony1509/TPC-based-file-transfer>



[bsse1509@iit.du.ac.bd](mailto:bsse1509@iit.du.ac.bd)

# Final tips & takeaways

- ▶ Consistent rehearsal
  - ▶ Strengthen your familiarity
- ▶ Refine delivery style
  - ▶ Pacing, tone, and emphasis
- ▶ Timing and transitions
  - ▶ Aim for seamless, professional delivery
- ▶ Practice audience
  - ▶ Enlist colleagues to listen & provide feedback
- ▶ Seek feedback
- ▶ Reflect on performance
- ▶ Explore new techniques
- ▶ Set personal goals
- ▶ Iterate and adapt

Thank You !

