

Phase 1: Socket-Based Multi-Client Banking System

The system consists of **one server** and **three client applications** communicating via **TCP sockets**.

Server

Functionality:

- Authenticate client login credentials.
- Listen for client connections and handle incoming requests.
- Process client requests: balance check, withdrawal, deposit, transfer.
- Update client balances and transaction history.
- Broadcast updated balances and transaction history to all connected clients.

Sample Output:

```
Client Alice logged in successfully.  
Deposit: $500. New Balance: $5500.  
Transfer: $200 to Bob. Alice Balance: $5300, Bob Balance: $5200.
```

Client:

Functionality:

- Connect to server and establish communication.
- Send login credentials for validation.
- Send requests for balance check, withdrawal, deposit, transfer.
- Receive updates for account balance and transaction history.

Sample Output:

```
Login successful. Current Balance: $5000  
Deposit successful. New Balance: $5500
```