Message Formats

Client

The Client message consists of 4 integer fields:

- Transaction_Type: This enumerated integer specifies the action type
  - 0 - Balance Inquiry, 1 - Deposit, 2 - Withdraw, 3 - Transfer
- Account_Number: This integer specifies the unique identifier of an account to access
- Amount: This integer denotes the amount (whole number) to be withdrawn/deposited/transferred
- Receiver_Number: In the event of a transfer, this integer denotes the unique ID of the account receiving the funds. Otherwise, it is a default value.

Client Goodbye Message

The client sends this 1 byte message when it closes the socket connection with the server.

- Goodbye Message: This one byte char* is sent to the server to notify that the client is disconnecting

Server

The server response message consists of 4 integer fields(16 bytes) total:

- Error_Type: This integer denotes the error code sent from the server
  - ERR_ACCOUNT_NONEXIST: Account does not exist, specified number is not an existing account
  - ERR_INVALID_TRANSACTION: Invalid request, specified request is not one of 0(inquiry), 1(deposit), 2(withdraw), 3(transfer)
  - ERR_INSUFFICIENT_FUNDS: Insufficient funds, during a withdrawal or transfer, the account losing money does not have enough to complete transaction
  - ERR_RECEIVER_NONEXIST: Receiver doesn't exist, Account number specified for the receiver of a transfer does not exist
  - ERR_WITHDRAW_SAVINGS: User tried to withdraw from savings account
- Account_Type: This enumerated integer denotes the type of account that was accessed
  - 0 - Checking, 1 - Savings
- Initial_Balance: This integer denotes the Balance of the account before any transaction takes place
- Post_Balance: This integer denotes the balance after the transaction takes place (defaults to 0 in the event of a balance inquiry)

Client Message

Each box is 4 bytes

Transaction Type	Account Number	Amount	Receiver Number

16 bytes total

<u>Client Goodbye Message</u>

Each box is 1 byte

Goodbye Message

1 byte total

<u>Server Message</u>

Each box is 4 bytes

Error Type	Account Type	Initial Balance	Post Balance

16 bytes total