This program is a simple Java TCP Client / Server program which simulates information exchanging between two remote hosts communicating over the Internet. The server listens for any number of requests from multiple clients that have connected to connect to it.

A client program simulates N concurrent users that generate a series of requests (workload) towards the server. For each simulated user, the client program establishes a connection to the server. Each request is a simple *HELLO* (handshake) message. The message comprises of:

1. a "HELLO" string,
2. the client IP address & port, and
3. the simulated user-id [1...N].

Once the server receives the *HELLO* message, it immediately generates a *RESPONSE* message and sends it back to the client. The message comprises of:

1. a "WELCOME <user-id>" string and
2. a variable size payload of either 300KB or 2MB.

The client executes 10 concurrent simulated users, each of them transmits at least 300 requests (with a maximum of 400). When the above has been met, the user terminates its connection with the server.

During the simulation, the program tests the performance of the server and the inter-communication of hosts by measuring the following metrics:

- Communication latency
- Server Throughput
- Average CPU Load
- Average Memory Utilization