Concurrent Non-Blocking Priority Queue Implementation

CS 550 Advanced Operating System

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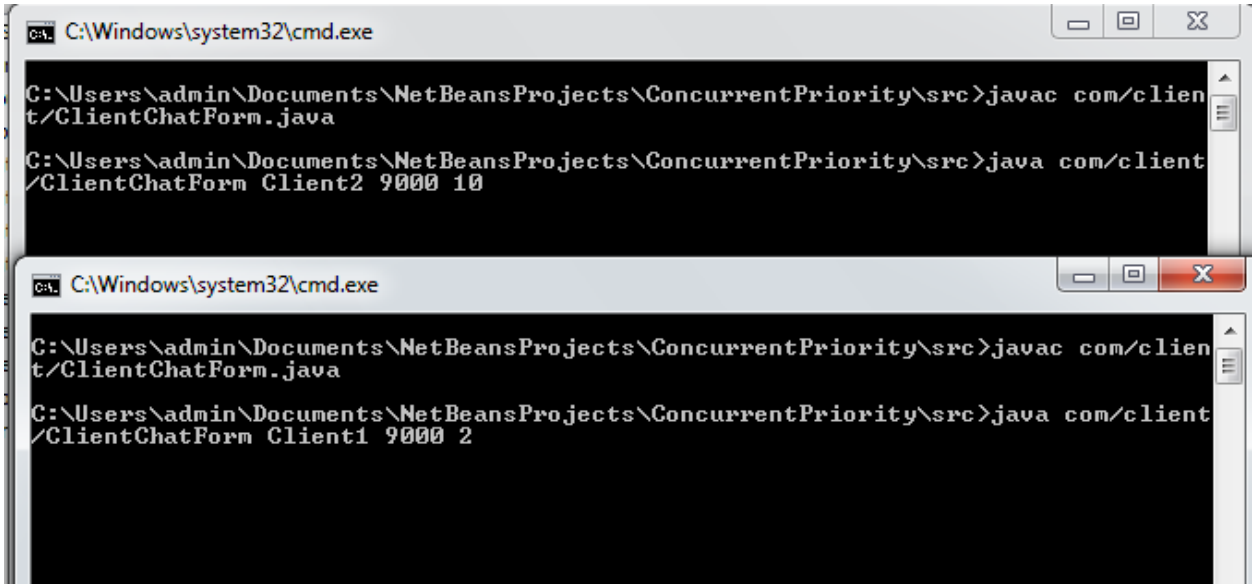
Output

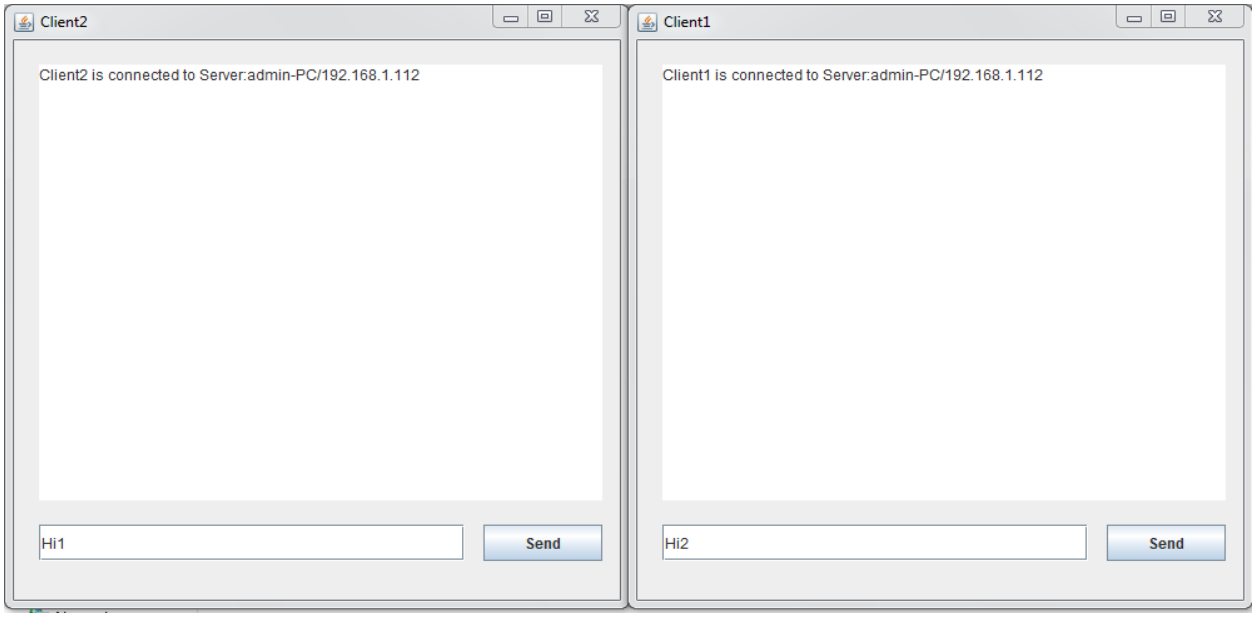
Step 1: Enter the number of Concurrent Clients to run in "config.properties" file.

Step 2: Run the server from Command Prompt using batch File.

Step 3: Run the Concurrent Clients from same or multiple machines as follows.



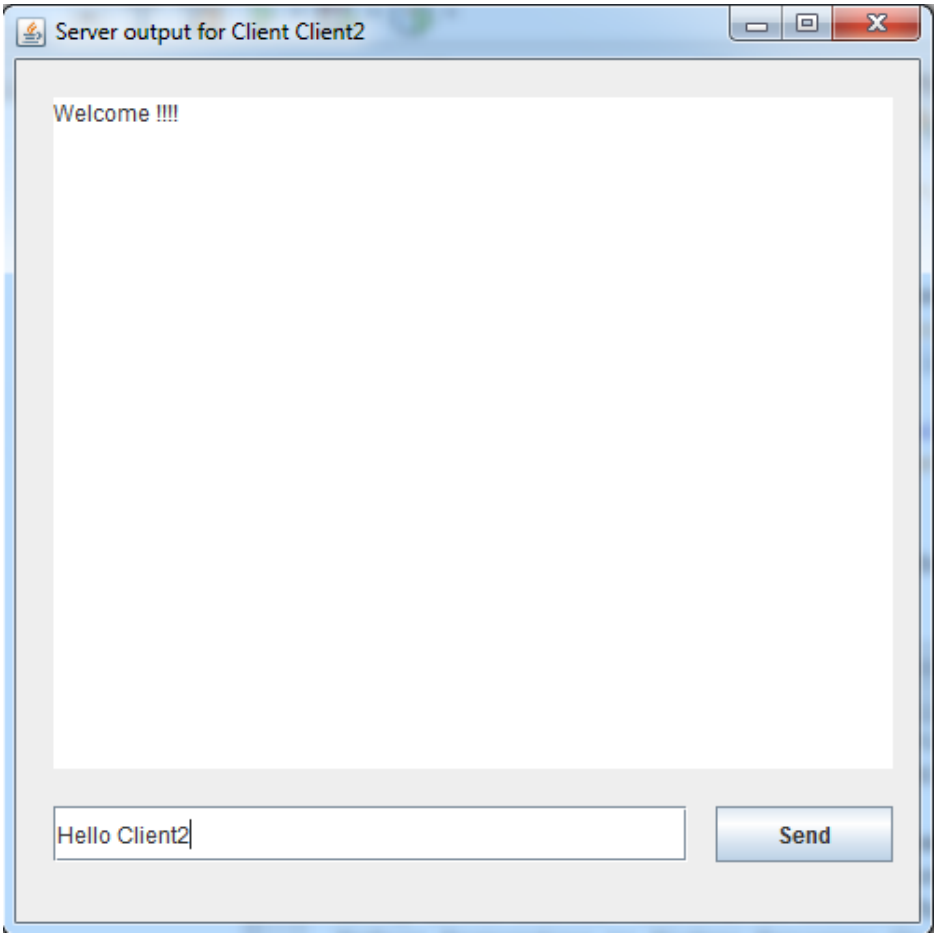
Step 3: Interact with the server by sending the message at the same time.



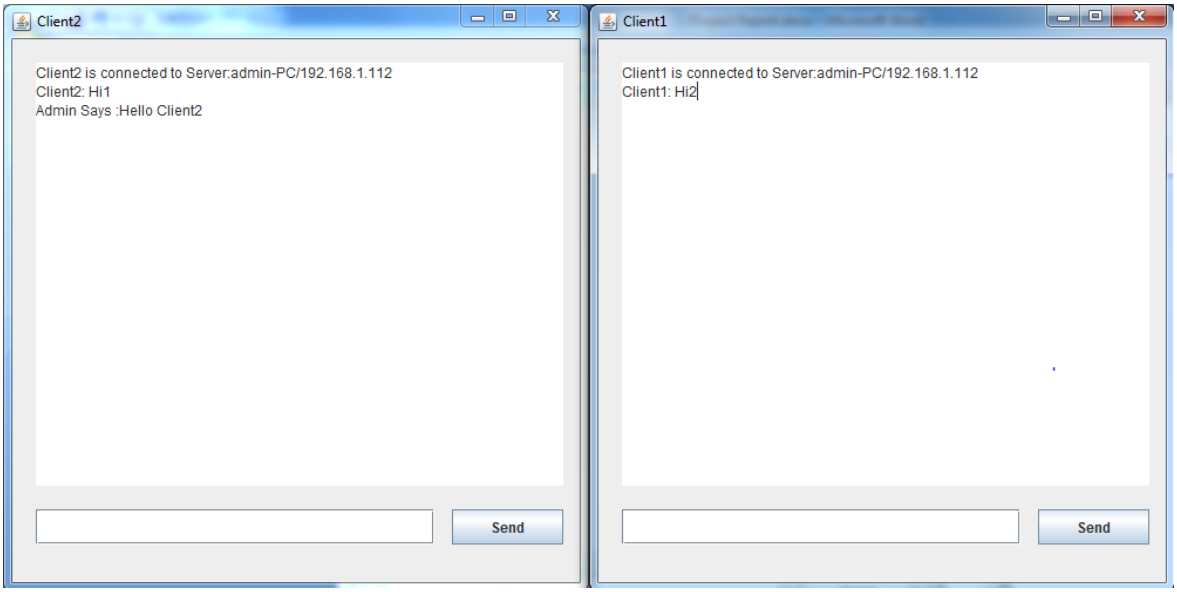
Step 4: Look for the server status for the sorted clients as per their priority.

```
Client Name==Client2 and its Priority==10
Client Name==Client1 and its Priority==2
Multivalue Map Size--2
Average time for enqueue operation in nanoseconds---1386674 for 2 users
Array after Sorted--Client1 2 Thread[Thread-1,5,main] Socket[addr=/192.168.1.112,port=49196,localport=9000]
Array after Sorted--Client2 10 Thread[Thread-0,5,main] Socket[addr=/192.168.1.112,port=49195,localport=9000]
Before Responding to Higher Priority Client
Average time for Dequeue operation in nanoseconds---71929556 for 2 users
```

Step 5: Send the response to higher priority Client from the Server.



Step 6: Check if the higher priority Clients gets the response from the Server.



Step 7: Repeat above scenario from the step one for the given set of number of concurrent clients.