Name:

Assignment 3 Demo Rubric

- GIPC Functionalities (__ / 6 total)
  - Use breakpoint to show that the the inputting client makes a remote method call in server (1)
  - Use breakpoint to show that the inputting client's call returns before the call in the server returns (1)
  - Use breakpoint to show the server's call being executed (1)
  - Use breakpoint to show the server making remote method call in a non-inputting client (1)
  - Use breakpoint to show the server's call returns before the call in the non-inputting client returns (1)
  - Use breakpoint to show the non-inputting client executing the method (1)
- Create inconsistency with atomic broadcast without consensus (__ / 3 total)
  - Set breakpoint in server right before it broadcasts the change in broadcast mode to all clients, using one clients, have it send a request to change the broadcast mode (atomic → non-aomic), show the server stops before it makes the callback to change the mode (1)
  - While the server is stopped, input a command from a client, then resume the server and show and explain the inconsistency (2)
- Broadcast consensus with multiple clients (__ / 5 total)
  - Repeat step one in the last section, but show the server stop as well as logs on the client side indicating they are in a waiting state. (2)
  - When both clients are waiting for consensus, show that inputs by users during this state are ignored (1)
  - Resume the breakpoi
  - nt and show logs indicating both clients have changed modes (1)
  - Input commands into both clients and show them being executed in the correct mode (1)
- Launch a server with non-synchronized command-broadcast and two clients using different IPC mechanisms (NIO and GIPC, determined by an interactive parameter). Use breakpoints to show an inconsistency created by inputting two non-commuting commands and explain why this happens. (__ / 3)Repeat the process except with synchronized command-broadcast in server and show the inconsistency resolved. Explain what is different in this case vs the last. (__ / 3)
- Performance Experiments (__ / 9 total)
  - Using VNC for the clients, for each IPC mechanism, time the execution of 500 input commands under local execution, basic distributed 3-user and atomic distributed 3-user, record the result of each (there should be 9 in total) (2 pt)
  - Repeat the experiment above, except execute server and client on different computers, record the results (2 pt)
  - Repeat the experiment a third time, except run the clients directly using ssh (2 pt)
  - Provide a theoretical ranking of speed (with explanation) between the different (IPC, broadcast-mode) pairs, and explain why the experiments results agree/disagree with the ranking. (3)

Total: _____ / 29 Points

Notes and Other Comments: