Assignment 1

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1.
The assumption that the delay from the server to the client is one half the RTT is not generally correct because:

a) Network traffic may be different in each direction for the packet causing the delay to be different in either direction.
b) RPC server or client may cause more or less overhead because of the addition of headers to the packet, meaning the network speed is less of a factor on the time differences.

2.
To make the files use command- make -f Makefile.add
To run server code- sudo ./add_server
To run client code- sudo ./add_client localhost

3.
Reasons for lack of server response:

a) The server could be down.
b) Network configuration could block the server response.

Solutions to the problem:

a) Have a maximum time to wait for the server response. If the client doesn't get any response in that time, it can either send a request again or display an error saying that the server is not responding.
b) Have a backup server in case the primary server is down. So, when the primary server is not responding then the client can automatically connect to the backup server.
c) Maintain a locally hosted cache (data replication) for when the server is unreachable. In this case, the user can be informed that the data is from the cache and may be stale.