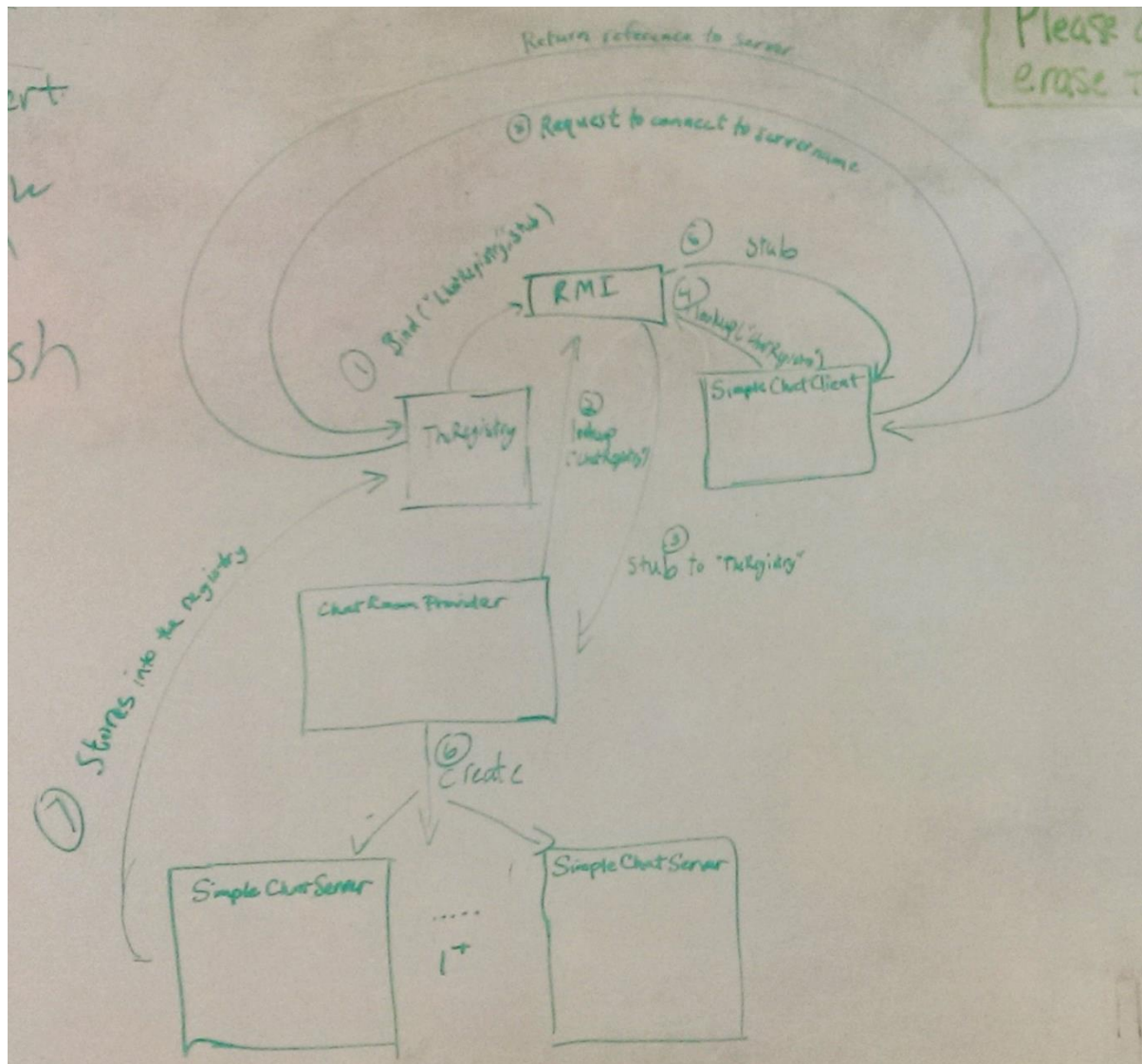


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Mini Project 3 Design Document

STRUCTURE

Picture of the structure of our design:



In the diagram above, rmiregistry is the first thing to be initiated.

TheRegistry will bind itself to the RMI registry by passing to the RMI registry: a name ("ChatRegistry") and a stub of itself [Step 1]. This allows any client (either a SimpleChatClient or a ChatRoomProvider) to simply request for a "ChatRegistry" and that client will receive stub or reference to TheRegistry so it can call TheRegistry's methods. If a SimpleChatClient connects, he or she will be registered into TheRegistry [Steps 2-5]. A ChatRoomProvider can then create SimpleChatServer objects and register them to TheRegistry via remote method call along with a Server name where they will be stored [Steps 6-7]. A client can then look up a server name through a remote method call to TheRegistry. If it exists in TheRegistry, it will return a reference stub to the SimpleChatClient so he or she can call the SimpleChatServer's methods.

Explanation of each class:

The Registry

- The Registry keeps track of servers that any client could connect to. It provides methods that will retrieve information from servers and return it to requesting clients. We use 4 ArrayList:

- 1) stub of the server
- 2) name of the server
- 3) stub for client
- 4) name for client

The indices of the corresponding server ArrayLists match. The indices of the corresponding client ArrayLists match as well. We use these ArrayLists to keep track of which clients and servers have been registered to the registry.

Chat Room Provider

- A Chat Room Provider creates a ChatRoomServer object every time an admin requests to create a chat room. It can also delete a server on the condition that there are no clients that are connected to the server.

Chat Room Server

- A Chat Room Server is a dedicated chat room that is created by the chat room provider. It will allow clients to:

- 1) join the chat room
- 2) leave the chat room
- 3) chat in the chat room once the client is connected

Chat Client

- A Chat Client has the ability to:

- 1) search available chat rooms
- 2) join an available chat room
- 3) leave a chat room that the client is already in
- 4) send and receive messages from currently joined chat rooms