**MiniRSA**

**WHAT IS IT?**

This program is a mini chat application using RSA cryptosystem. It consists of 3 parts: RSA cryptosystem, terminal version of server and client, GUI version of chat program.

-RSA package contains a java class of tools for encrypting and decrypting with unit test for them. It also has three classes with main function to simulate encryption, decryption, and cracking the key.

-Terminal version asks user to input information and calculates both public and private key. It then sets up a connection between server and client and allows users chat with each other.

-GUI version generates user interface when program starts and allows visualized operations by user.

**Documentation**

detailing (at a minimum) your approach, structures, code, program usage

**Packages:**

**-gui**

This class

**-modular**

**-rsa**

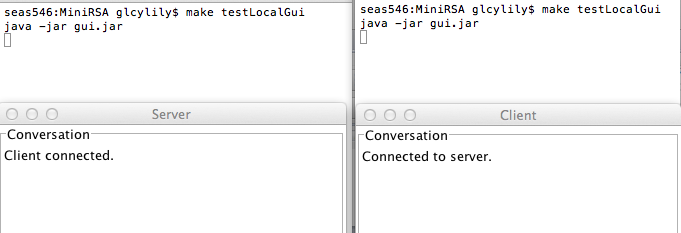
**Sample Run:**

1.  ***make build***  (prepares all the jar files needed)

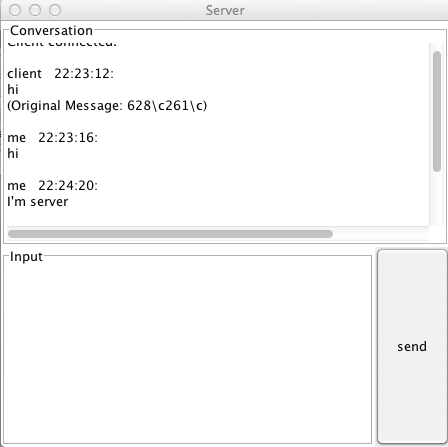


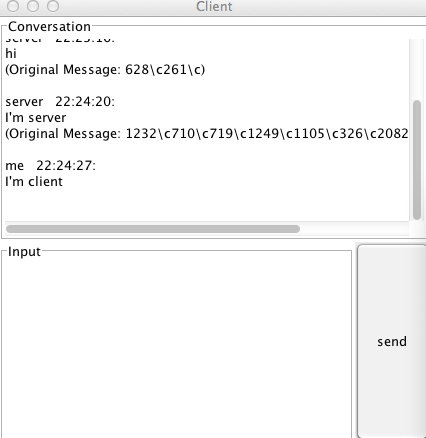
2. To test both end of GUI on local host:

In our GUI version, there is no difference between server and client. User can simply open two terminals and input command line twice: ***make testLocalGui.*** The one runs first would automatically be the server and latter one would be client.



GUI:



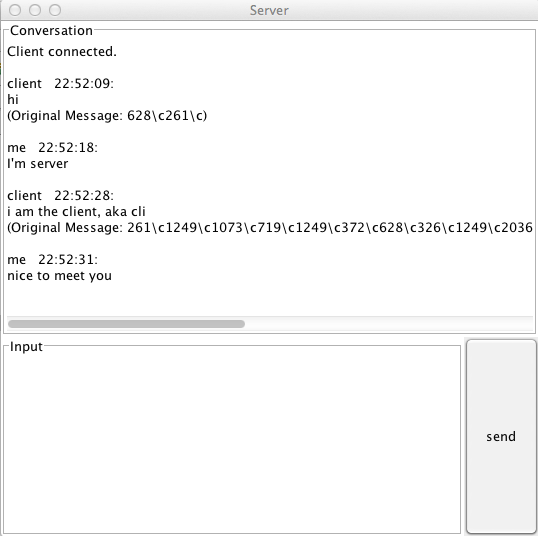


3. To test remote chatting:

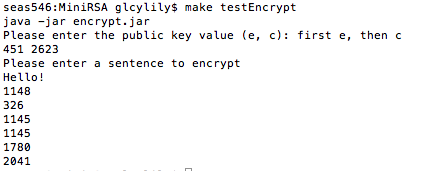
For one end, ***java –jar gui.jar <ipaddress> <port>***

For the other end, ***java –jar gui.jar <ipaddress> <port>***

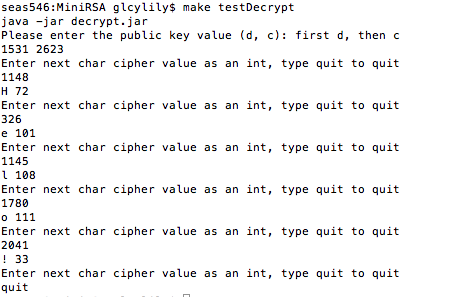
The port number should be the same



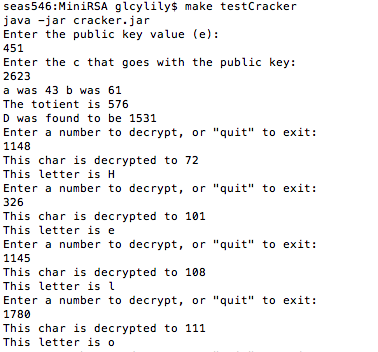
4. To test encrypt:



5. To test decrypt:



6. To test cracker



7. To test terminal version:

***make runTerminalServer***

***make runTerminalClient***

