

Engineering Take-home coding test

We are hiring engineers who are really good at writing software -- you. Hopefully you also have experience writing servers, because those are important at our company. That's why we only employ great engineers.

You have one week to complete this assignment... and (slight) kudos if you do it faster.

Please write a chat server.

Below is a quick example of protocol; <= denotes the server sending data and => denotes the client sending data. The protocol is newline based.

To show that you're particularly awesome, consider features such as private messages, creating a mobile or web client, high scalability, proven security, special emoticons, etc. Feel free to add features, but make sure everything works as outlined below.

NOTE: The basic server should be pretty straightforward, but you can really shine by picking a couple of additional features and running with them.

Use any language you like, but you should give crystal clear instructions on how to get this running on the latest OS X. We must be able to connect via a program such as Telnet, etc. A web interface can be additional, but the main method of connecting needs to be Telnet or equivalent for the review.

Please deploy your software to a server and give us the IP address. Ideally you can keep that server up for a couple of weeks, but we'll try to be a lot faster than that. If you are worried about paying for servers, go check out Amazon's cool offer of a free micro instance for anyone.

Code: Please also provide us a link to the source code, whether it be on Github, Bitbucket, etc.

```
gc$ telnet x.x.x.x 9399 Trying x.x.x.x...
Connected to x.x.x.x. Escape Character is '^'
<= Welcome to the GungHo test chat server
<= Login Name?
=> gh
<= Sorry, name taken.
```

<= Login Name?
=> gh_reviewer
<= Welcome gh_reviewer!
=> /rooms
<= Active rooms are:
<= * chat (5)
<= * hottub (2)
<= end of list.
=> /join chat
<= entering room: chat
<= * gh
<= * gh_reviewer (** this is you)
<= * foo
<= * user1
<= * user2
<= * mario
<= end of list.
<= foo: welcome gh_reviewer!
=> hi there!
<= gh_reviewer: hi there!
<= * new user joined chat: user7
=> gotta go!
=> /leave
<= gh_reviewer: gotta go!
<= * user has left chat: gh_reviewer (** this is you)
=> /quit
<= BYE

Connection closed by foreign host.