

简要说明文档

程序运行

服务器端和客户端均通过命令行运行。

服务器端: `python server.py`

客户端: `python client.py ip_addr port`

在本地测试 ip 地址为 localhost, 默认端口为 6666

```
$ python server.py
Game server starts!
```

```
$ python client.py localhost 6666
```

注册与登录

```
$ python client.py localhost 6666
Welcome to the 21 points game world!!
Please choose 1 if you already have an
account, otherwise choose 2
1. login
2. create an account
Your choice:_
```

- 注册

```
Your choice:2
Create new account...
User Name:fanxiaochen
Password:fxc
Confirm Password:fxc
New account created. Now login again.
```

- 登录

```
Please login first...
User Name:fanxiaochen
Password:fxc_
```

游戏大厅

```
Successful login. Now you've in the 21 points game lobby.
In the game lobby, you can create rooms to
play games or chat with other players.
Some commands to know:
1. 'cr roomname' -- create new room
2. 'find all' -- find all rooms
3. 'er roomname' -- enter existing room
4. 'qt roomname' -- quit from room
5. 'logout' -- logout the lobby
6. 'start' -- be ready for the game
7. '21game answer' -- send your answer
8. chatting mode
  1> 'chatAll msg' -- broadcast to all players
  2> 'chatRoom msg' -- broadcast to players in the room
  3> 'chat username msg' -- chat with somebody
  4> 'msg' -- receive messages
cmd: _
```

进入游戏大厅之后，会提示整个所需要的各种命令格式，主要包括房间相关，游戏相关以及聊天相关的命令。

创建房间

```
cmd:cr fan
Successful creating room! Now you can play game in the room.
You can chat with others or input "start" to wait for the game, it'll start half
-hourly...
```

发现房间

```
cmd:find all
Current Rooms:
room name: fan
room owner: fanxiaochen
player number: 1
```

进入房间

```
cmd:er fan
Successful entering room! Now you can play game in the room.
You can chat with others or input "start" to wait for the game, it'll start half
-hourly...
```

退出房间

```
cmd:qt  
Successful quitting room!
```

开始游戏

进入房间之后，需要房间内的所有玩家输入‘start’来确认开始游戏，然后服务器根据整半点发布 21 点游戏给房间里面的每一个玩家。题目要求是每逢半点才发布具体内容，所以不要过早确认开始游戏，因为一旦确认，就默认进入等待过程，无法再做其他的事情。

```
cmd:start  
Ready for game. Waiting for others...
```

到时间点之后，游戏发布给房间内所有玩家。

```
Game starts! There are four numbers below,  
by using "+ - * / < >" to get the result be close to 21.  
please write the answer like "21game ANSWER" in 15s.  
0 5 8 3
```

按要求输入答案之后，需要等待其他所有玩家都作答完毕。当所有玩家完成答案之后，会反馈游戏结果。（题目要求是在 15s 之内完成作答，但实际上发现由于需要手动输入表达式这样的命令，所以往往都会超时，导致没有人获胜，将作答时间增加一些更合理）

胜利者：

```
ans:21game 5+8+3+0  
Congratulations! You are the winner!  
Continue or not?  
1. continue  
2. quit room
```

失败者：

```
ans:21game 8-3+5+0  
Sorry! You lose the game.  
Continue or not?  
1. continue  
2. quit room
```

一轮游戏结束之后可以选择继续还是退出房间。

聊天模式

一共有四个相关命令。'chatAll'用来向大厅内所有人广播，'chatRoom'用来向房间内所有人广播，'chat'用来向某个特定的人发送消息，而'msg'用来查看已接收到的消息。（由于没有做控制台的非阻塞式操作，所以他人发送过来的消息不能及时在控制台中出现，需要手动查看已接收到的消息）

```
8. chatting mode
1> 'chatAll msg' -- broadcast to all players
2> 'chatRoom msg' -- broadcast to players in the room
3> 'chat username msg' -- chat with somebody
4> 'msg' -- receive messages
```

向大厅所有人发送消息

```
cmd:chatAll hello!~
Chatting...<lobby msg>netease1:hello!~
```

向房间所有人发送消息

```
cmd:chatRoom let's play~
Chatting...<room msg>netease1:let's play~
```

向特定玩家发送消息

```
cmd:chat fanxiaochen who are you?
Chatting...<private msg>netease1:who are you?
```

接收消息

```
cmd:msg
<lobby msg>netease1:hello!~
<room msg>netease1:let's play~
<private msg>netease1:who are you?
```

注销并存盘

输入'logout'即可注销，并且在线时长被存入数据库。

```
cmd:logout
Successful logout.
Welcome to the 21 points game world!!
Please choose 1 if you already have an
account, otherwise choose 2
1. login
2. create an account
Your choice:
```