

结果:



1. 创建 socket 和邮件服务器建立 TCP 连接

```
# Create socket called clientSocket and establish a TCP connection with mailserver
clientSocket = socket(AF_INET, SOCK_STREAM) # Assign IP address and port number
clientSocket.connect(connectaddress) # Connect to Local SMTP
recv = clientSocket.recv(1024)
print(recv)
if recv[:3].decode() != '220': # Print Error Clause
    print("220 reply not received from server")
```

2. 发送 HELO 命令

```
# Send HELO command and print server response.
helloCommand = "HELO Alice\r\n"
clientSocket.send(bytes(helloCommand.encode()))
recv1 = clientSocket.recv(1024)
print(recv1.decode())
if recv1.decode()[:3] != "250":
    print("250 reply not received from server.")
```

3. 发送"AUTH LOGIN"命令, 验证身份

```
loginini = b'AUTH LOGIN\r\n'
userCommand = (base64.b64encode(b'13846009898@163.com').decode() + '\r\n').encode()
passwordCommand = (base64.b64encode(b'XSQDJQG6WKXNKKDD').decode() + '\r\n').encode()
clientSocket.send(loginini)
recv2 = clientSocket.recv(1024).decode('utf-8')
print('222+ ', recv2)
```

4. 发送 username

```
clientSocket.send(userCommand)
recv3 = clientSocket.recv(1024).decode('utf-8')
print('333+ ', recv3)
```

5. 发送 password, 如果验证成功, 服务器将返回状态码 235

```

clientSocket.send(passwordCommand)
recv4 = clientSocket.recv(1024).decode('utf-8')
print('444+ ', recv4)

```

6. 发送 MAIL FROM 命令

```

# Send MAIL FROM command and print server response.
clientSocket.send((mailfrom.encode())) # send mail, had to convert to bytes
check = clientSocket.recv(1024)
print(check) # print confirmation of working messages

```

7. 发送 RCPT TO 命令

```

# Send RCPT TO command and print server response.
clientSocket.send((rcptto.encode())) # recieve, had to convert to bytes
check1 = clientSocket.recv(1024)
print(check1) # print confirmation of working messages

```

8. 发送 DATA 命令以及邮件内容

```

# Send DATA command and print server response.
clientSocket.send((data.encode())) # DATA, had to convert to bytes
check2 = clientSocket.recv(1024)
print(check2) # print confirmation of working messages

```

```

# Message ends with a single period.
send = 'from: ' + "13846009898@163.com" + '\r\n'
send += 'To: ' + "1371894384@qq.com" + '\r\n'
send += 'Subject: ' + "我是主题" + '\r\n'
#send += 'Content-Type: ' + 'abc' + '\t\n\r\n'
send += msg
clientSocket.sendall(((send + endmsg).encode())) # Concatinate bits for message
check3 = clientSocket.recv(1024)
print(check3) # print confirmation of working messages

```

9. 发送结束消息，以单个"."结束

```

msg = "\r\n 我是内容" # Declarations
endmsg = "\r\n.\r\n"

clientSocket.sendall(((send + endmsg).encode())) # Concatinate bits for message

```

10. 发送 QUIT 命令

```

# Send QUIT command and get server response.
clientSocket.send(bytes(quitmsg.encode())) # Quit the session
check4 = clientSocket.recv(1024)
print(check4)

```

在本次实验中，我遇到了一些问题，其中最主要的问题是在原本的代码中，网易会把我的消息当做垃圾信息从而使我的邮件发送失败，使得我只能给自己发送消息。经过我在网上的查阅学习，我修改发送内容，是内容更加规范，不会被识别成垃圾信息。

命令行：

```
C:\Users\Toooooo\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/Toooooo/PycharmProjects/pythonProject/main.py
b'220 163.com Anti-spam GT for Coremail System (163com[20141201])\r\n'
250 OK

-----
222+ 334 dXNlcm5hbWU6

333+ 334 UGFzc3dvcmQ6

444+ 235 Authentication successful

-----
b'250 Mail OK\r\n'
b'250 Mail OK\r\n'
b'354 End data with <CR><LF>.<CR><LF>\r\n'
b'250 Mail OK queued as smtp14,EsCowADHQdDftG9h6Q0pGw--.23429S2 1634710751\r\n'
b'221 Bye\r\n'

Process finished with exit code 0
|
```

对实验结果的分析：

我发送的指令都收到了正确的状态码答复，从而可以正确的实现发送邮件，所发送的邮件的发件人，收件人，和主题，内容与预期全部一致，即本次实验成功完成。

其中

```
250 OK

-----
222+ 334 dXNlcm5hbWU6

333+ 334 UGFzc3dvcmQ6

444+ 235 Authentication successful

-----
b'250 Mail OK\r\n'
b'250 Mail OK\r\n'
b'354 End data with <CR><LF>.<CR><LF>\r\n'
b'250 Mail OK queued as smtp14,EsCowADHQdDftG9h6Q0pGw--.23429S2 1634710751\r\n'
b'221 Bye\r\n'
```

这些状态码对应之前我们发过的各个指令。

改进措施：

可以直接引用 stmp 包，可以更快更好的实现 stmp 协议而不是用 socket 手写 stmp 服务器。

发送的信息要有一点逻辑，不然会被识别为垃圾邮件。

可以加入 gui 图形界面，使得操作更直观方便。

写信

收信

通讯录

收件箱(729)

星标邮件 ★

群邮件

草稿箱(2)

已发送

已删除

垃圾箱

[清空]

« 返回

回复

回复全部

转发

删除

彻底删除

举报

拒收

标记为... ▼

移动到... ▼

我是主题 ☆

发件人: 13846009898 <13846009898@163.com> 图

时 间: 2021年10月19日 (星期二) 下午7 : 41

收件人: 士 <1371894384@qq.com>

我是内容