

Presentation Project: Chat System

-

GUI & File System

James Chen & Shanglin Yang



Instructors: Prof. Xianbin Gu & Dr. Wen Yin

Introduction



上海纽约大学
NYU SHANGHAI

Have You Ever Experience Situations Like This ...

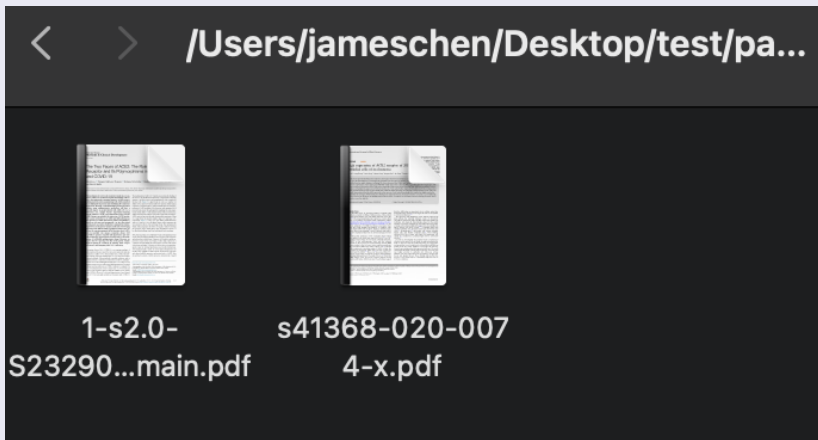
| 与我共享 | | | 📁 ⓘ |
|-----------------------|--------------|------------------------|-----|
| 名称 ↓ | 共享者 | 上次修改日期 | |
| 📁 Week 11 👤 | 🔴 Xianbin Gu | 2021年11月22日 Xianbin Gu | |
| 📁 Week 10 👤 | 🔴 Xianbin Gu | 2021年11月12日 Wayne Yin | |
| 📁 Week 9 👤 | 🔴 Xianbin Gu | 2021年11月2日 Xianbin Gu | |
| 📁 Week 8 👤 | 🔴 Xianbin Gu | 2021年10月28日 Wayne Yin | |
| 📁 Week 5 and Week 6 👤 | 🔴 Xianbin Gu | 2021年10月7日 Xianbin Gu | |
| 📁 Week 3 👤 | 🔴 Xianbin Gu | 2021年9月16日 Wayne Yin | |
| 📁 Week 2 👤 | 🔴 Xianbin Gu | 2021年9月10日 Wayne Yin | |
| 📁 Week 1 👤 | 🔴 Xianbin Gu | 2021年9月3日 Wayne Yin | |

| 本周 | |
|--|-----|
| 📁 JamesCHEN URC | 今天 |
| 📁 Final Project.zip 62.1 KB | |
| 📁 杨尚霖eternal | 昨天 |
| 📄 新建文本文档 (2).txt 1.6 KB | |
| 📁 杨尚霖eternal | 昨天 |
| 📄 GUI.py 8.5 KB | |
| 📁 杨尚霖eternal | 昨天 |
| 📄 GUI.py 8.5 KB | |
| 📁 杨尚霖eternal | 5天前 |
| 📄 Nine_Algorithms_That_Changed_the_Future_The_Ingeni.pdf 7.7 MB | |

Introduction



Have You Ever Experience Situations Like This ...



Introduction



上海 纽约 大学
NYU SHANGHAI

Our Modification to the Chat System

- Graphical User Interface
- FTP Server: File Upload & Download
- PDF Rename

Graphical User Interface



上海纽约大学
NYU SHANGHAI

Additional Buttons and Location Adjustment



Graphical User Interface



Time Button

Time: 27.11.21,22:24

```

1  import time
2
3  def layout(self,name):
4      self.time = Button(self.labelBottom,
5                          text = "Time",
6                          font = "Helvetica 6 bold",
7                          width = 20,
8                          bg = "#ABB2B9",
9                          command = lambda : self.showtime())
10
11 def showtime(self):
12     self.textCons.config(state = NORMAL),
13     self.textCons.insert(END,'Time: '+time.strftime('%d.%m.%y,%H
14     self.textCons.config(state = DISABLED)
15     self.textCons.see(END)
  
```

Graphical User Interface

上海纽约大学
NYU SHANGHAI

Connect Button

```
Who you what to connect with?  
Users: -----  
{'shanglin': 0, 'james': 0}  
Groups: -----  
{  
Enter the name and click the connect again!
```

Time

Connect

Leave

Send

Upload

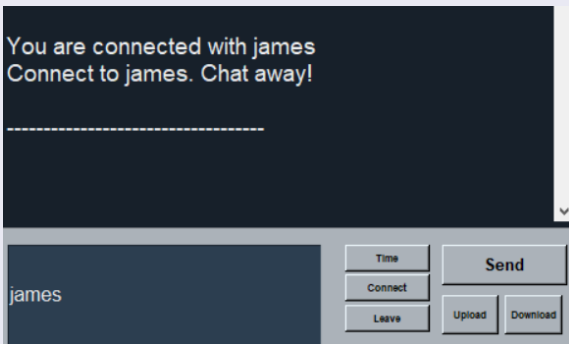
Download

Graphical User Interface



上海纽约大学
NYU SHANGHAI

Connect Button



Graphical User Interface



Connect Button

```
1 def layout(self,name):
2     self.connect = Button(self.labelBottom,
3                             text = "Connect",
4                             font = "Helvetica 6 bold",
5                             width = 20,
6                             bg = "#ABB2B9",
7                             command = lambda : self.showconnect())
8 def showconnect(self):
9     if self.entryMsg.get()=='':
10         self.my_msg= 'who'
11     else:
12         target=self.entryMsg.get()
13         self.my_msg= 'c '+target
14     self.entryMsg.delete(0, END)
```

Graphical User Interface



上海师范大学
SHNU

Leave Button

```
You are disconnected from james

++++ Choose one of the following commands
      ? _term_: to search your chat logs where _term_
appears
      q : to to quit the system
      p _#_: to get number <#> sonnet
```

| | | | |
|--|---------|--------|----------|
| | Time | Send | |
| | Connect | | |
| | Leave | Upload | Download |

```
[shanglin]bye
```

Graphical User Interface

上海 纽约 大学
NYU SHANGHAI

Leave Button

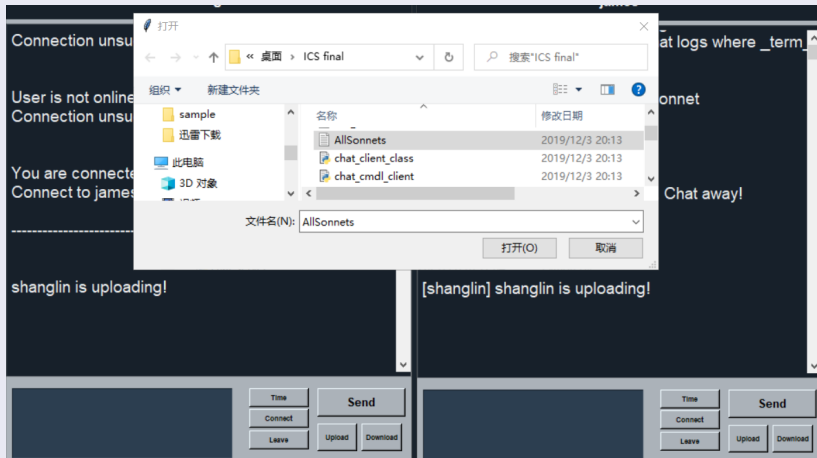
```
1 def layout(self,name):
2     self.leave = Button(self.labelBottom,
3                          text = "Leave",
4                          font = "Helvetica 6 bold",
5                          width = 20,
6                          bg = "#ABB2B9",
7                          command = lambda : self.sendButton('bye')
```

Graphical User Interface



上海 纽约 大学
SJTU SHANGHAI

Upload Button



Graphical User Interface



上海纽约大学
NYU SHANGHAI

Upload Button

```
1  import os
2  import tkinter as tk
3  from tkinter import filedialog
4
5
6  def file_opener():
7      root = tk.Tk()
8      root.withdraw()
9      file_path = filedialog.askopenfilename()
10     return file_path
```

FTP Server: File Upload & Download



上海 纽约 大学
NYU SHANGHAI

Demo

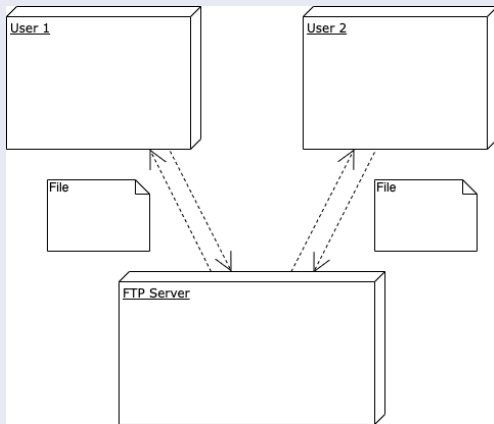
See Video

FTP Server: File Upload & Download



上海纽约大学
NYU SHANGHAI

Structure



FTP Server: File Upload & Download



FTP Server

```
1  from pathlib import Path
2  from pyftplib.authorizers import DummyAuthorizer
3  from pyftplib.handlers import FTPHandler
4  from pyftplib.servers import FTPServer
5  def main():
6      authorizer = DummyAuthorizer()
7      # Now stored in local file folder
8      # "/Users/jameschen/Desktop/" "D:\upload"
9      home_path = Path(__file__).parent / 'files'
10     home_path.mkdir(parents=True, exist_ok=True) # make new fold
11     authorizer.add_user("Admin", "Admin", str(home_path), perm='')
12     handler = FTPHandler
13     handler.authorizer = authorizer
14     server = FTPServer(('0.0.0.0', 8888), handler)
15     server.serve_forever()
```


FTP Server: File Upload & Download



上海纽约大学
NYU SHANGHAI

Threading (in chat_server)

```
1 from threading import Thread
2 import file_server
3
4 def main():
5     Thread(target=file_server.main).start()
6     server = Server()
7     server.run()
```

FTP Server: File Upload & Download



上海纽约大学
NYU SHANGHAI

Upload (in GUI)

```
1  import os
2  import tkinter as tk
3  from tkinter import filedialog
4
5
6  def file_opener():
7      root = tk.Tk()
8      root.withdraw()
9      file_path = filedialog.askopenfilename()
10     return file_path
```

FTP Server: File Upload & Download



上海纽约大学
NYU SHANGHAI

Download (in GUI)

```

1  def download(path=str(Path(__file__).parent / 'user_files' / 'us
2      """all files on server are stored in path folder"""
3      path = Path(path)
4      path.mkdir(parents=True, exist_ok=True)
5      ftp = ftpconnect()
6      for filename in ftp.nlst():
7          with open(path / filename, "wb") as f:
8              ftp.retrbinary('RETR %s' % filename, f.write)
9      ftp.quit()
10
11 class GUI:
12     def download_for_current_user():
13         download(str(Path(__file__).parent / 'user_files' /

```

PDF Rename

上海纽约大学
NYU SHANGHAI

PDF Rename: Library

```
1 import os
2 from PyPDF2 import PdfFileReader
3 from shutil import copy2
4 from pathlib import Path
5
6 src_dir = Path(__file__).parent/"papers_oldDir"
7 des_dir = Path(__file__).parent/'papers_newDir'
```

#L

PDF Rename

上海纽约大学
NYU SHANGHAI

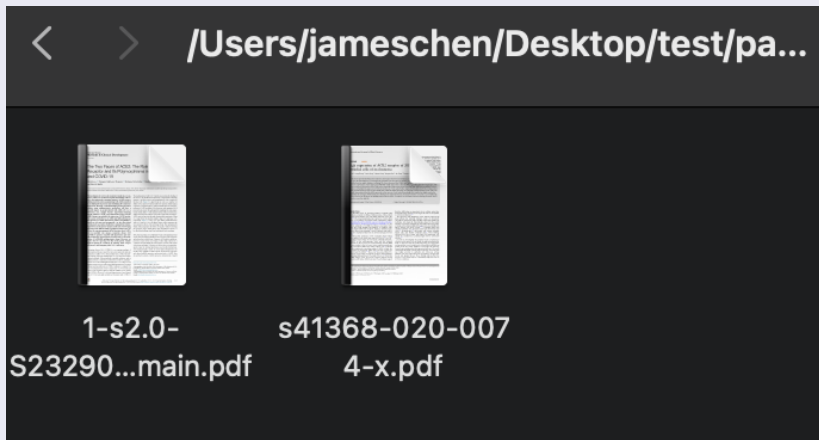
PDF Rename: File Process

```
1  if not os.path.exists(des_dir):#if no, creat one
2      os.makedirs(des_dir)
3
4  if os.path.exists(src_dir):
5      dirs = os.listdir(src_dir)
6      for dirc in dirs:
7          pdf_reader = PdfFileReader(open(os.path.join(src_dir, dirc), 'r'))
8          paper_title = pdf_reader.getDocumentInfo().title
9          print("num : %s" % num , paper_title)
10         num += 1
11         paper_title = str(paper_title)
```

PDF Rename



PDF Rename: Demo – Before



PDF Rename



PDF Rename: Demo – After

< > /Users/jameschen/Desktop/test/pa...



High expression of ACE2 receptor of 2019-nCoV pneumonia
of ACE2...cosa.pdf

The Two Faces of ACE2: Potential Receptor and Therapeutic Target
ACE2/ T...D-19.pdf

Acknowledgments



上海纽约大学
NYU SHANGHAI

Acknowledgments

We would like to express our sincere gratitude to our main instructor Prof. Xianbin Gu, teaching assistant Dr. Wen Yin. Without their instruction, this project would not have been accomplished. Special thanks to GitHub user @wolfpan for insightful suggestions for debugging. Thanks Prof. Lihua Xu for providing this very handy \LaTeX template.

References



Bibliography

- ① 61MKSI, "Python builds an ftp server in one second to help you share files on the LAN" *Zhihu*. [Online]. Available: <https://zhuanlan.zhihu.com/p/84228436>.
- ② ChangTingWai, "Python- upload a single file to FTP" *Zhihu*. [Online]. Available: <https://zhuanlan.zhihu.com/p/415360923>.
- ③ royal, "Use python to read pdf titles and categorize them" *CSDN*. [Online]. Available: https://blog.csdn.net/weixin_41090039/article/details/82421312.
- ④ Shawpan, "Python one sentence using the file dialog to get the file path" *CSDN*. [Online]. Available: <https://blog.csdn.net/shawpan/article/details/78759199>.
- ⑤ T. Gaddis, *Starting out with python*. Harlow, United Kingdom: Pearson, 2022.