

第四周作业笔记

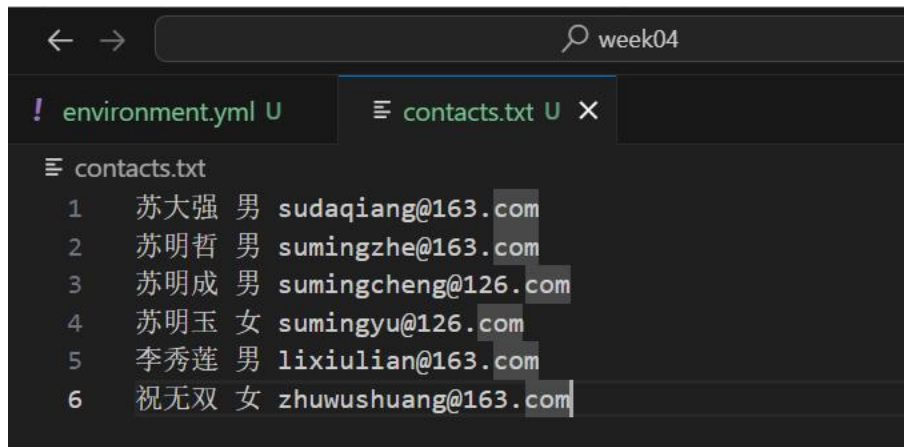
一、Fork 第 04 周打卡 仓库至你的名下，然后将你名下的这个仓库 Clone 到你的本地计算机

```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~  
$ cd repo  
  
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo  
$ ls -l  
total 17  
drwxr-xr-x 1 FAN0917 197121 0 3月 18 23:39 myproject/  
drwxr-xr-x 1 FAN0917 197121 0 3月 14 21:03 mywork/  
drwxr-xr-x 1 FAN0917 197121 0 3月 18 22:52 prj1/  
-rw-r--r-- 1 FAN0917 197121 374 3月 9 11:42 script1.py  
drwxr-xr-x 1 FAN0917 197121 0 3月 9 20:53 week01/  
drwxr-xr-x 1 FAN0917 197121 0 3月 14 21:27 week02/  
drwxr-xr-x 1 FAN0917 197121 0 3月 19 00:02 week03/  
  
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo  
$ git clone git@gitcode.com:jiemoduner/week04.git  
Cloning into 'week04'...  
remote: Enumerating objects: 5, done.  
remote: Counting objects: 100% (5/5), done.  
remote: Compressing objects: 100% (5/5), done.  
remote: Total 5 (delta 0), reused 5 (delta 0), pack-reused 0 (from 0)  
Receiving objects: 100% (5/5), 8.45 KiB | 2.82 MiB/s, done.
```

二、用 VS Code 打开项目目录,新建一个 environment.yml 文件,指定安装 Python 3.12, 然后运行 conda env create 命令 创建 Conda 环境

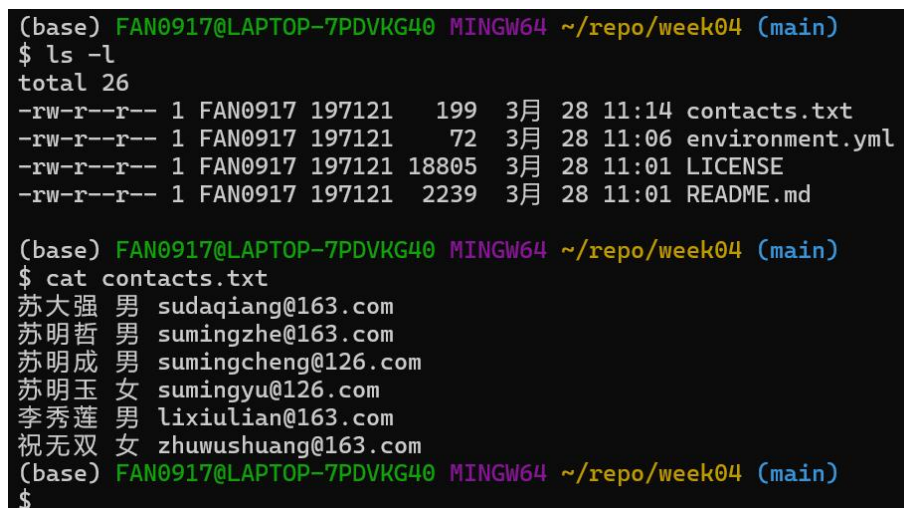
```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)  
$ cat ../myproject/environment.yml  
name: myproject  
channels:  
- conda-forge  
dependencies:  
- python=3.12  
- pandas  
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)  
$ cp ../myproject/environment.yml ./  
  
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)  
$ ls -l  
total 25  
-rw-r--r-- 1 FAN0917 197121 87 3月 28 11:05 environment.yml  
-rw-r--r-- 1 FAN0917 197121 18805 3月 28 11:01 LICENSE  
done  
#  
# To activate this environment, use  
#  
# $ conda activate week04  
#  
# To deactivate an active environment, use  
#  
# $ conda deactivate
```

三、新建一个 `contacts.txt` 文件，每行写一个联系人，每个联系人都包含姓名、性别、邮箱三个字段，用空格分隔



A screenshot of a code editor window titled "week04". It shows two tabs: "environment.yml" and "contacts.txt". The "contacts.txt" tab is active, displaying a list of six contacts, each on a new line, separated by spaces. The contacts are: 1. 苏大强 男 sudaqiang@163.com, 2. 苏明哲 男 sumingzhe@163.com, 3. 苏明成 男 sumingcheng@126.com, 4. 苏明玉 女 sumingyu@126.com, 5. 李秀莲 男 lixiulian@163.com, and 6. 祝无双 女 zhuwushuang@163.com.

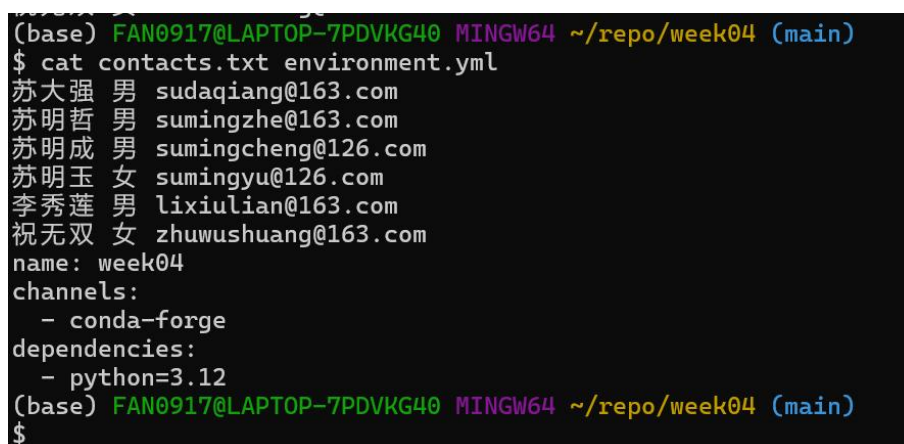
```
environment.yml U contacts.txt U X
contacts.txt
1 苏大强 男 sudaqiang@163.com
2 苏明哲 男 sumingzhe@163.com
3 苏明成 男 sumingcheng@126.com
4 苏明玉 女 sumingyu@126.com
5 李秀莲 男 lixiulian@163.com
6 祝无双 女 zhuwushuang@163.com
```



A terminal window screenshot showing the execution of two commands. The first command is `ls -l`, which lists the files in the current directory: `contacts.txt`, `environment.yml`, `LICENSE`, and `README.md`. The second command is `cat contacts.txt`, which displays the contents of the `contacts.txt` file, showing the same six contacts as in the code editor.

```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ ls -l
total 26
-rw-r--r-- 1 FAN0917 197121 199 3月 28 11:14 contacts.txt
-rw-r--r-- 1 FAN0917 197121 72 3月 28 11:06 environment.yml
-rw-r--r-- 1 FAN0917 197121 18805 3月 28 11:01 LICENSE
-rw-r--r-- 1 FAN0917 197121 2239 3月 28 11:01 README.md

(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ cat contacts.txt
苏大强 男 sudaqiang@163.com
苏明哲 男 sumingzhe@163.com
苏明成 男 sumingcheng@126.com
苏明玉 女 sumingyu@126.com
李秀莲 男 lixiulian@163.com
祝无双 女 zhuwushuang@163.com
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$
```



A terminal window screenshot showing the execution of the `cat` command with two file names: `contacts.txt` and `environment.yml`. The output shows the contents of `contacts.txt` followed by the contents of `environment.yml`, which includes the channel `conda-forge` and the dependency `python=3.12`.

```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ cat contacts.txt environment.yml
苏大强 男 sudaqiang@163.com
苏明哲 男 sumingzhe@163.com
苏明成 男 sumingcheng@126.com
苏明玉 女 sumingyu@126.com
李秀莲 男 lixiulian@163.com
祝无双 女 zhuwushuang@163.com
name: week04
channels:
- conda-forge
dependencies:
- python=3.12
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$
```

四、新建一个 main.py 文件，里面写 Python 代码，要求读取 contacts.txt 文件的内容，进行数据处理后，输出一个 emails.txt 文件

```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ python main.py
邮件已成功写入 emails.txt。

(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ ls -l
total 31
-rw-r--r-- 1 FAN0917 197121 201 3月 28 11:16 contacts.txt
-rw-r--r-- 1 FAN0917 197121 658 3月 28 12:16 emails.txt
-rw-r--r-- 1 FAN0917 197121 72 3月 28 11:06 environment.yml
-rw-r--r-- 1 FAN0917 197121 18805 3月 28 11:01 LICENSE
-rw-r--r-- 1 FAN0917 197121 1382 3月 28 11:25 main.py
-rw-r--r-- 1 FAN0917 197121 2239 3月 28 11:01 README.md

(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$
```

```
! environment.yml U  contacts.txt U  main.py U  emails.txt U X
emails.txt
1  to: <sumingcheng@126.com>
2  尊敬的苏明成先生，您的会员资格即将到期，请及时续费。
3  ---
4  to: <sumingyu@126.com>
5  尊敬的苏明玉女士，您的会员资格即将到期，请及时续费。
6  ---
7  to: <lixiumlian@163.com>
8  尊敬的李秀莲先生，您的会员资格即将到期，请及时续费。
9  ---
10 to: <sudaqiang@163.com>
11 尊敬的苏大强先生，您的会员资格即将到期，请及时续费。
12 ---
13 to: <sumingzhe@163.com>
14 尊敬的苏明哲先生，您的会员资格即将到期，请及时续费。
15 ---
16 to: <zhuwushuang@163.com>
17 尊敬的祝无双女士，您的会员资格即将到期，请及时续费。
18
```

五、在 (pdb) 提示符下练习使用一些命令

- 1: 查看代码跑到什么地方

```
(base) FAN0917@LAPTOP-7PDVKG40 MINGW64 ~/repo/week04 (main)
$ python -m pdb main.py
> c:\users\fan0917\repo\week04\main.py(1)<module>()
-> def read_contacts(file_path):
(Pdb) l
1  -> def read_contacts(file_path):
2      try:
3          with open(file_path, 'r', encoding='utf-8') as file:
4              contacts = []
5              for line in file:
6                  name, gender, email = line.strip().split()
7                  contacts.append((name, gender, email))
8          return contacts
9      except FileNotFoundError:
10         print(f"错误: 未找到文件 {file_path}。")
11         return []
(Pdb)
```

n: 执行当前行

```
(Pdb) n
> c:\users\fan0917\repo\week04\main.py(14)<module>()
-> def generate_emails(contacts):
(Pdb) l
9      except FileNotFoundError:
10         print(f"错误: 未找到文件 {file_path}。")
11         return []
12
13
14  -> def generate_emails(contacts):
15      sorted_contacts = sorted(contacts, key=lambda x: (x[2].split(
16  '@')[1], x[2].split('@')[0]))
17      email_content = []
18      for name, gender, email in sorted_contacts:
19         title = "先生" if gender == "男" else "女士"
20         email_text = f"to: <{email}>\n尊敬的{name}{title}, 您的会
21 员资格即将到期, 请及时续费。 \n---"
(Pdb)
```

p: 打印表达式

```
(Pdb) p read_contacts
<function read_contacts at 0x000001C268D536A0>
(Pdb)
```

p: 美观打印

```
(Pdb) pp contacts
[('苏大强', '男', 'sudaqiang@163.com'),
 ('苏明哲', '男', 'sumingzhe@163.com'),
 ('苏明成', '男', 'sumingcheng@126.com'),
 ('苏明玉', '女', 'sumingyu@126.com'),
 ('李秀莲', '男', 'lixliulian@163.com'),
 ('祝无双', '女', 'zhuwushuang@163.com')]
(Pdb)
```