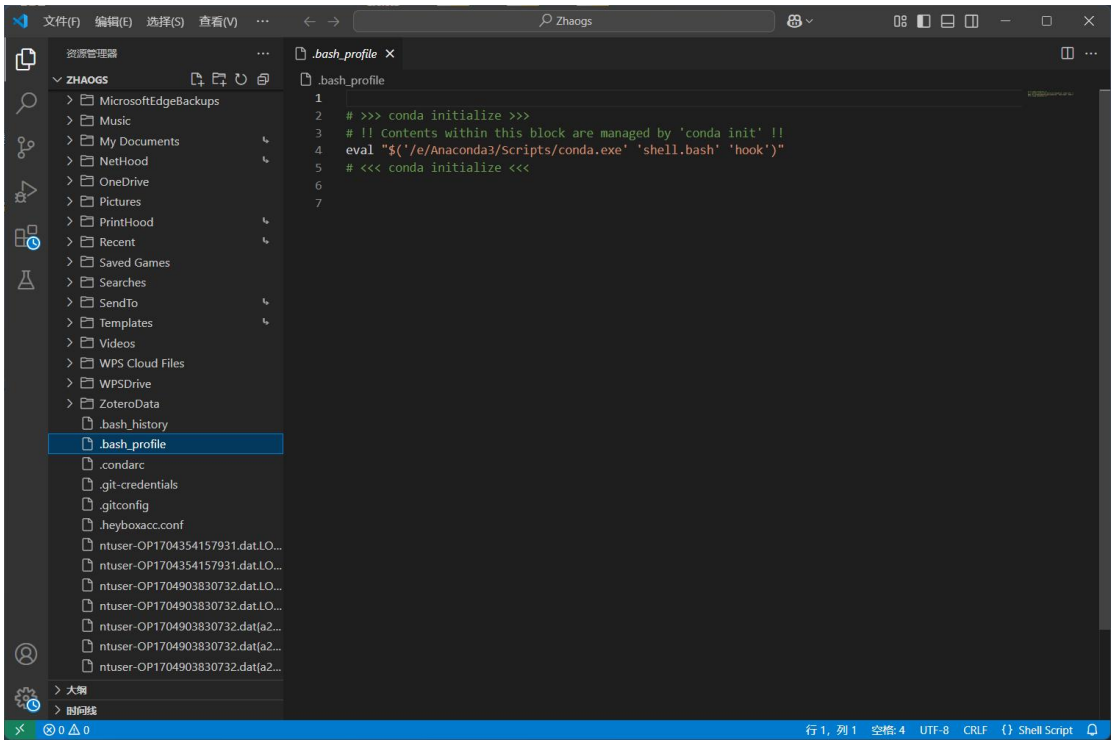
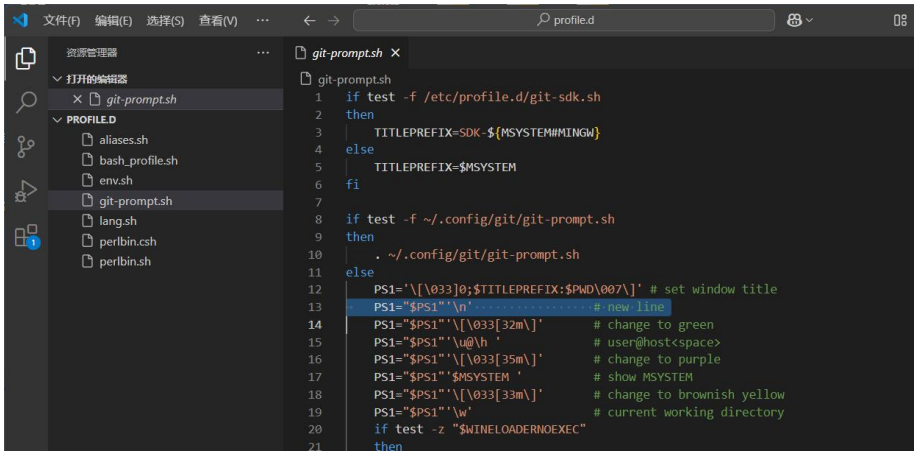
Week3 学习内容：

1.成功在 git bash 配置好 Conda Init，启动终端后，在提示符前能够看到 (base)

code . 在 vs code 中查看 .bash_profile 文件



根据操作，找到第 13 行，在前面加#键



成功使得（base）出现在前面且为一行

2.使用 conda info 命令查看本机 conda 的配置信息

```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda info

     active environment : base
    active env location : E:\Anaconda3
            shell level : 1
       user config file : C:\Users\Zhaogs\.condarc
 populated config files : C:\Users\Zhaogs\.condarc
          conda version : 4.10.3
    conda-build version : 3.21.6
         python version : 3.9.7.final.0
       virtual packages : __win=0=0
                          __archspec=1=x86_64
       base environment : E:\Anaconda3  (writable)
      conda av data dir : E:\Anaconda3\etc\conda
  conda av metadata url : None
           channel URLs : https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/mai
n/win-64
                          https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/mai
n/noarch
                          https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/r/w
in-64
                          https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/r/n
```

3.使用 conda env list 命令查看已有的 Conda 环境的名称和路径

```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda env list
# conda environments:
#
base                  *  E:\Anaconda3
```

理解 Conda 环境 的概念

4.创建两个 Conda 环境

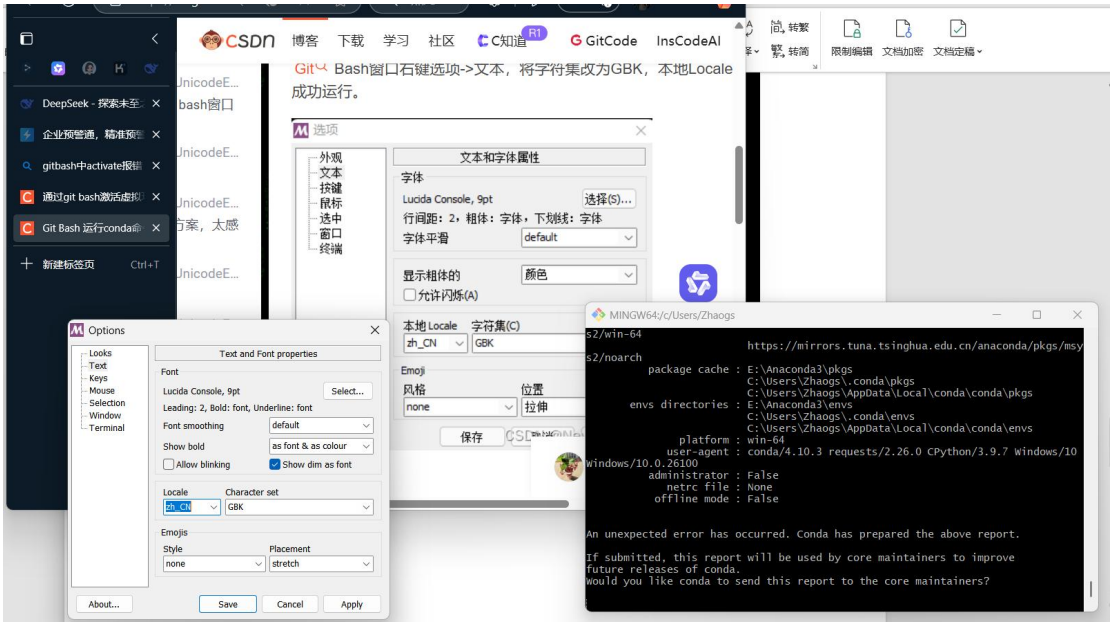
```
Downloading and Extracting Packages
ca-certificates-2025 | 130 KB     | ################################### | 100%
charset-normalizer-3 | 44 KB      | ################################### | 100%
brotli-python-1.0.9  | 347 KB     | ################################### | 100%
done
#
# To activate this environment, use
#
#     $ conda activate env1
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

```
Proceed ([y]/n)? y


Downloading and Extracting Packages
icc_rt-2022.1.0      | 6.5 MB     | ################################### | 100%
intel-openmp-2023.1. | 2.7 MB     | ################################### | 100%
statsmodels-0.14.4   | 10.4 MB    | ################################### | 100%
packaging-24.2       | 168 KB     | ################################### | 100%
numexpr-2.10.1       | 177 KB     | ################################### | 100%
done
#
# To activate this environment, use
#
#     $ conda activate env2
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

切换环境和验证版本，Conda activate env1 报错：

```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda env list
# conda environments:
#
base                  *  E:\Anaconda3
env1                     E:\Anaconda3\envs\env1
env2                     E:\Anaconda3\envs\env2

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda activate env1

# >>>>>>>>>>>>>>>>>>>>>> ERROR REPORT <<<<<<<<<<<<<<<<<<<<<<

    Traceback (most recent call last):
      File "E:\Anaconda3\lib\site-packages\conda\cli\main.py", line 140, in main
        return activator_main()
      File "E:\Anaconda3\lib\site-packages\conda\activate.py", line 1210, in main
        print(activator.execute(), end='')
    UnicodeEncodeError: 'gbk' codec can't encode character '\xd5' in position 1045: illegal multibyte sequence

`$ E:\Anaconda3\Scripts\conda-script.py shell.posix activate env1`

  environment variables:
            ACLOCAL_PATH=F:\github\Git\mingw64\share\aclocal;F:\github\Git\usr\share\aclocal
                CIO_TEST=<not set>
       CONDA_DEFAULT_ENV=base
                CONDA_EXE=E:/Anaconda3/Scripts/conda.exe
             CONDA_PREFIX=E:\Anaconda3
```

查询 CSDN 找到解决方法：




```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda activate env1
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

查询 python 版本：

```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda activate env1
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ which python
/e/Anaconda3/envs/env1/python
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ python --version
Python 3.12.9
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ python
Python 3.12.9 | packaged by Anaconda, Inc. | (main, Feb  6 2025, 18:49:16) [MSC v.19
29 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import requests
>>> requests
<module 'requests' from 'E:\\Anaconda3\\envs\\env1\\Lib\\site-packages\\requests\\__
init__.py'>
>>> requests.__file__
'E:\\Anaconda3\\envs\\env1\\Lib\\site-packages\\requests\\__init__.py'
>>>
```

```
'E:\\Anaconda3\\envs\\env1\\Lib\\site-packages\\requests\\__init__.py'
>>> quit()
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda activate env2
(env2)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ which python
/e/Anaconda3/envs/env2/python
(env2)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ python --version
Python 3.9.21
(env2)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ python
Python 3.9.21 (main, Dec 11 2024, 16:35:24) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import requests
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
ModuleNotFoundError: No module named 'requests'
>>> import pandas
>>> pandas .__version__
'2.2.3'
>>> import statsmodels
```

5.使用 conda list 命令显示环境里的软件包列表及其版本信息

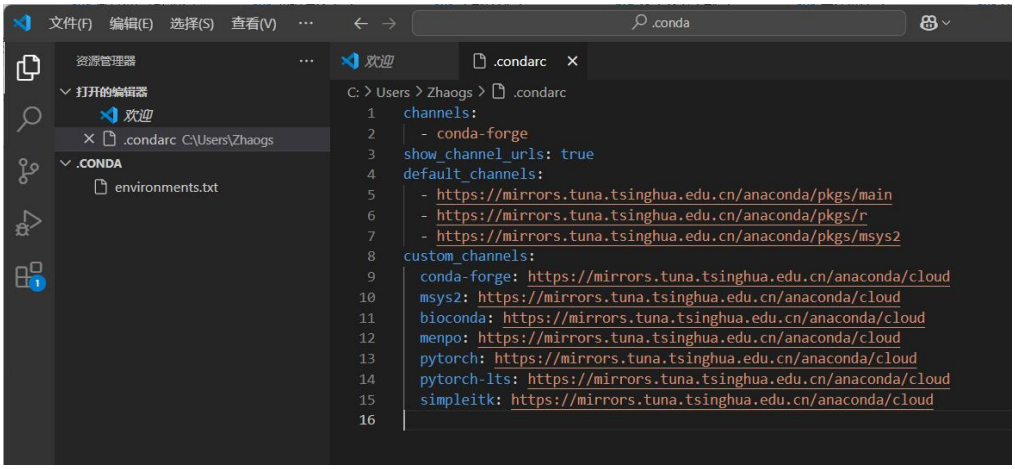
```
>>> quit()
(env2)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda list
# packages in environment at E:\Anaconda3\envs\env2:
#
# Name                    Version                   Build  Channel
blas                      1.0                         mkl    defaults
bottleneck                1.4.2           py39hc99e966_0    defaults
ca-certificates           2025.2.25            haa95532_0    defaults
icc_rt                    2022.1.0             h6049295_2    defaults
intel-openmp              2023.1.0        h59b6b97_46320    defaults
mkl                       2023.1.0        h6b88ed4_46358    defaults
mkl-service               2.4.0           py39h827c3e9_2    defaults
mkl_fft                   1.3.11          py39h827c3e9_0    defaults
mkl_random                1.2.8           py39hc64d2fc_0    defaults
numexpr                   2.10.1          py39h4cd664f_0    defaults
numpy                     1.26.4          py39h055cbcc_0    defaults
numpy-base                1.26.4          py39h65a83cf_0    defaults
openssl                   3.0.16               h3f729d1_0    defaults
packaging                 24.2            py39haa95532_0    defaults
pandas                    2.2.3           py39h5da7b33_0    defaults
patsy                     1.0.1           py39haa95532_0    defaults
pip                       25.0            py39haa95532_0    defaults
pybind11-abi              5                    hd3eb1b0_0    defaults
python                    3.9.21               h8205438_1    defaults
python-dateutil           2.9.0post0      py39haa95532_2    defaults
python-tzdata             2023.3             pyhd3eb1b0_0    defaults
pytz                      2024.1          py39haa95532_0    defaults
scipy                     1.13.1          py39h8640f81_1    defaults
setuptools                75.8.0          py39haa95532_0    defaults
six                       1.16.0             pyhd3eb1b0_1    defaults
sqlite                    3.45.3               h2bbff1b_0    defaults
statsmodels               0.14.4          py39h827c3e9_0    defaults
tbb                       2021.8.0             h59b6b97_0    defaults
tzdata                    2025a                h04d1e81_0    defaults
vc                        14.42                haa95532_4    defaults
vs2015_runtime            14.42.34433          he0abc0d_4    defaults
wheel                     0.45.1          py39haa95532_0    defaults
(env2)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

6.使用 conda install 命令往 Conda 环境里安装更多的软件包，并验证版本。

```
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda install ipython
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: E:\Anaconda3\envs\env1

  added / updated specs:
    - ipython


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    asttokens-2.0.5            |     pyhd3eb1b0_0          20 KB  defaults
    colorama-0.4.6             |  py312haa95532_0          53 KB  defaults
    decorator-5.1.1            |     pyhd3eb1b0_0          12 KB  defaults
    executing-0.8.3            |     pyhd3eb1b0_0          18 KB  defaults
    ipython-8.30.0             |  py312haa95532_0         1.5 MB  defaults
    jedi-0.19.2                |  py312haa95532_0         1.2 MB  defaults
    matplotlib-inline-0.1.6    |  py312haa95532_0          19 KB  defaults
    parso-0.8.4                |  py312haa95532_0         239 KB  defaults
```

```
charset-normalizer      3.3.2          pyhd3eb1b0_0    defaults
colorama                0.4.6        py312haa95532_0    defaults
decorator               5.1.1          pyhd3eb1b0_0    defaults
executing               0.8.3          pyhd3eb1b0_0    defaults
expat                   2.6.4            h8ddb27b_0    defaults
idna                    3.7          py312haa95532_0    defaults
ipython                 8.30.0       py312haa95532_0    defaults
jedi                    0.19.2       py312haa95532_0    defaults
libffi                  3.4.4            hd77b12b_1    defaults
matplotlib-inline       0.1.6        py312haa95532_0    defaults
openssl                 3.0.16           h3f729d1_0    defaults
parso                   0.8.4        py312haa95532_0    defaults
pip                     25.0         py312haa95532_0    defaults
prompt-toolkit          3.0.43       py312haa95532_0    defaults
prompt_toolkit          3.0.43           hd3eb1b0_0    defaults
pure_eval               0.2.2          pyhd3eb1b0_0    defaults
pygments                2.15.1       py312haa95532_1    defaults
pysocks                 1.7.1        py312haa95532_0    defaults
python                  3.12.9           h14ffc60_0    defaults
requests                2.32.3       py312haa95532_1    defaults
setuptools              75.8.0       py312haa95532_0    defaults
six                     1.16.0         pyhd3eb1b0_1    defaults
sqlite                  3.45.3           h2bbff1b_0    defaults
stack_data              0.2.0          pyhd3eb1b0_0    defaults
tk                      8.6.14           h0416ee5_0    defaults
traitlets               5.14.3       py312haa95532_0    defaults
```

7.配置 Anaconda 清华镜像，加快 conda install 安装软件包的速度，将 conda-forge 设置为默认 Channel，让 conda install 能够安装更多的软件包。




```
liblzma                 5.6.4            h2466b09_0    conda-forge
libsqlite               3.49.1           h67fdade_2    conda-forge
libzlib                 1.3.1            h2466b09_2    conda-forge
matplotlib-inline       0.1.6        py312haa95532_0    defaults
mkl                     2020.4         hb70f87d_311    conda-forge
numpy                   2.2.4        py312h3150e54_0    conda-forge
openssl                 3.4.1            ha4e3fda_0    conda-forge
packaging               24.2           pyhd8ed1ab_2    conda-forge
parso                   0.8.4        py312haa95532_0    defaults
pip                     25.0         py312haa95532_0    defaults
polars                  1.24.0                pypi_0    pypi
prompt-toolkit          3.0.43       py312haa95532_0    defaults
prompt_toolkit          3.0.43           hd3eb1b0_0    defaults
pure_eval               0.2.2          pyhd3eb1b0_0    defaults
pygments                2.15.1       py312haa95532_1    defaults
pysocks                 1.7.1        py312haa95532_0    defaults
python                  3.12.9       h3f84c4b_1_cpython    conda-forge
python_abi              3.12                5_cp312    conda-forge
requests                2.32.3       py312haa95532_1    defaults
setuptools              75.8.0       py312haa95532_0    defaults
six                     1.16.0         pyhd3eb1b0_1    defaults
sqlite                  3.45.3           h2bbff1b_0    defaults
stack_data              0.2.0          pyhd3eb1b0_0    defaults
tk                      8.6.13           h5226925_1    conda-forge
traitlets               5.14.3       py312haa95532_0    defaults
tzdata                  2025a            h04d1e81_0    defaults
```

8. 使用 pip install 命令往 Conda 环境里安装 Python 软件包，并验证版本。

```
pygments                  2.15.1          py312haa95532_1    defaults
pysocks                   1.7.1           py312haa95532_0    defaults
python                    3.12.9          h3f84c4b_1_cpython    conda-forge
python-dateutil           2.9.0.post0             pypi_0    pypi
python_abi                3.12                  5_cp312    conda-forge
pytz                      2025.1                  pypi_0    pypi
requests                  2.32.3          py312haa95532_1    defaults
setuptools                75.8.0          py312haa95532_0    defaults
simplejson                3.20.1                  pypi_0    pypi
six                       1.16.0             pyhd3eb1b0_1    defaults
soupsieve                 2.6                     pypi_0    pypi
sqlite                    3.45.3             h2bbff1b_0    defaults
stack_data                0.2.0              pyhd3eb1b0_0    defaults
tk                        8.6.13             h5226925_1    conda-forge
tqdm                      4.67.1                  pypi_0    pypi
traitlets                 5.14.3          py312haa95532_0    defaults
tushare                   1.4.19                  pypi_0    pypi
typing-extensions         4.12.2                  pypi_0    pypi
tzdata                    2025.1                  pypi_0    pypi
ucrt                      10.0.22621.0       h57928b3_1    conda-forge
urllib3                   2.3.0           py312haa95532_0    defaults
vc                        14.42              haa95532_4    defaults
vc14_runtime              14.42.34438       hfd919c2_24    conda-forge
vs2015_runtime            14.42.34438       h7142326_24    conda-forge
wcwidth                   0.2.5              pyhd3eb1b0_0    defaults
websocket-client          1.8.0                   pypi_0    pypi
```

9. 配置 PyPI 清华镜像，加快 pip install 安装软件包的速度。

```
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ python -m pip install --upgrade pip
Looking in indexes: https://pypi.tuna.tsinghua.edu.cn/simple
Requirement already satisfied: pip in e:\anaconda3\envs\env1\lib\site-packages (25.0
)
Collecting pip
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/c9/bc/b7db44f5f39f9d0494071
bddae6880eb645970366d0a200022a1a93d57f5/pip-25.0.1-py3-none-any.whl (1.8 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
━ 1.8/1.8 MB 4.8 MB/s eta 0:00:00
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 25.0
    Uninstalling pip-25.0:
      Successfully uninstalled pip-25.0
Successfully installed pip-25.0.1
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ pip config set global.index-url https://mirrors.tuna.tsinghua.edu.cn/pypi/web/simp
le
Writing to C:\Users\Zhaogs\AppData\Roaming\pip\pip.ini
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

10.导出 environment.yml Conda 环境配置文件

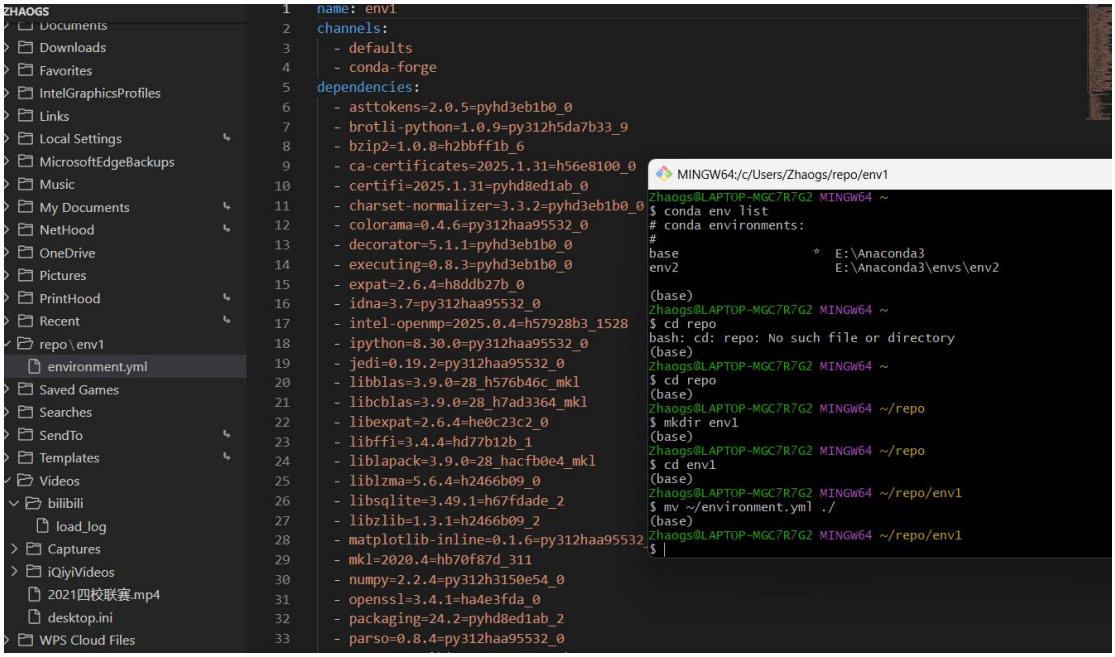
```
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda env export -f environment.yml
(env1)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$
```

删除 Conda 环境

```
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda env remove -n env1

Remove all packages in environment E:\Anaconda3\envs\env1:

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
```

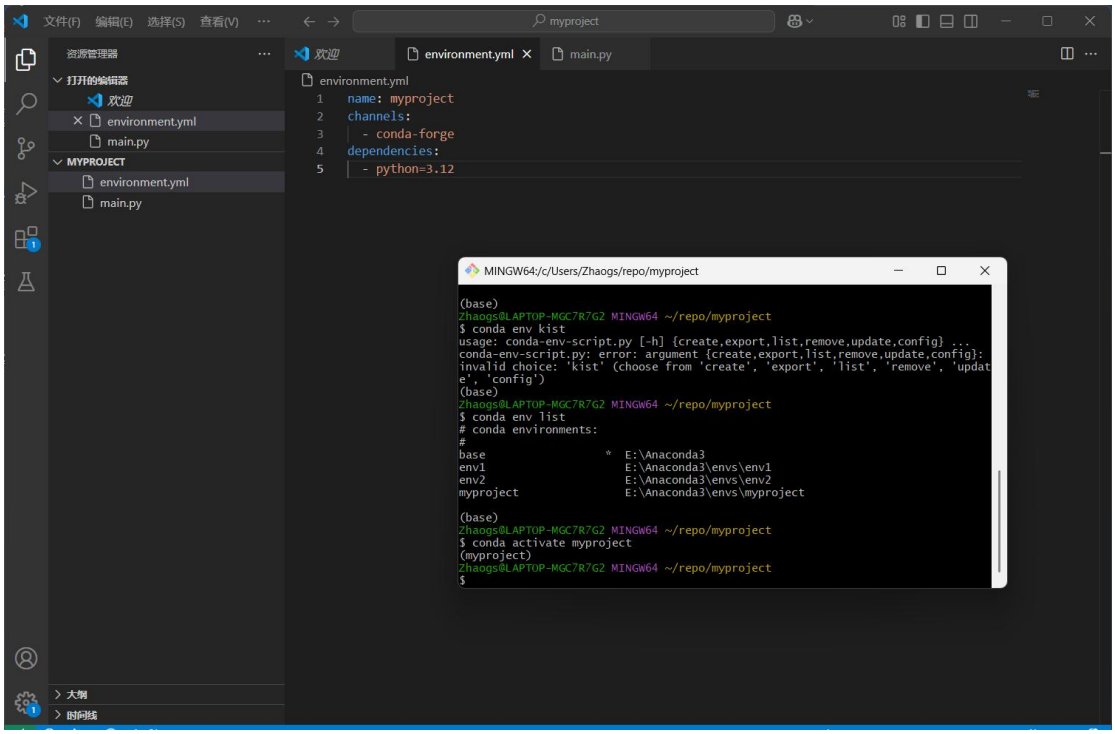
```
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
$ conda env list
# conda environments:
#
base                  *  E:\Anaconda3
env2                     E:\Anaconda3\envs\env2

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~
```

用 environment.yml 配置文件重建 Conda 环境



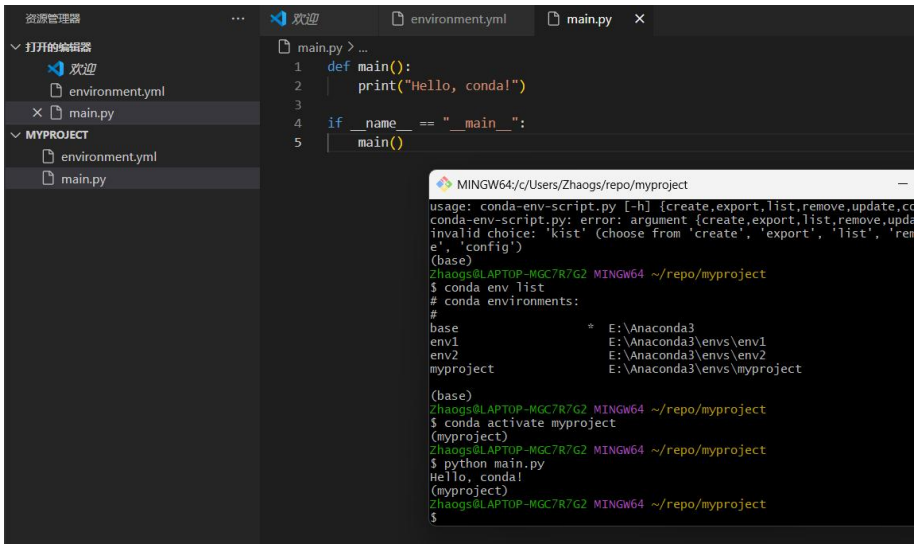

```
5.0.1 polars-1.24.0 python-dateutil-2.9.0.post0 pytz-2025.1 simplejson-3.20.1 soupsi
eve-2.6 tqdm-4.67.1 tushare-1.4.19 typing-extensions-4.12.2 tzdata-2025.1 websocket-
client-1.8.0

done
#
# To activate this environment, use
#
#     $ conda activate env1
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/env1
$ conda env list
# conda environments:
#
base                  *  E:\Anaconda3
env1                     E:\Anaconda3\envs\env1
env2                     E:\Anaconda3\envs\env2

(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/env1
$
```

11.创建项目目录，在 VS Code 文本编辑器里安装一些支持 Python 开发的常用扩展，编写 main.py 脚本，创建该项目专用的 Conda 环境，在终端里激活该环境并成功运行该脚本。

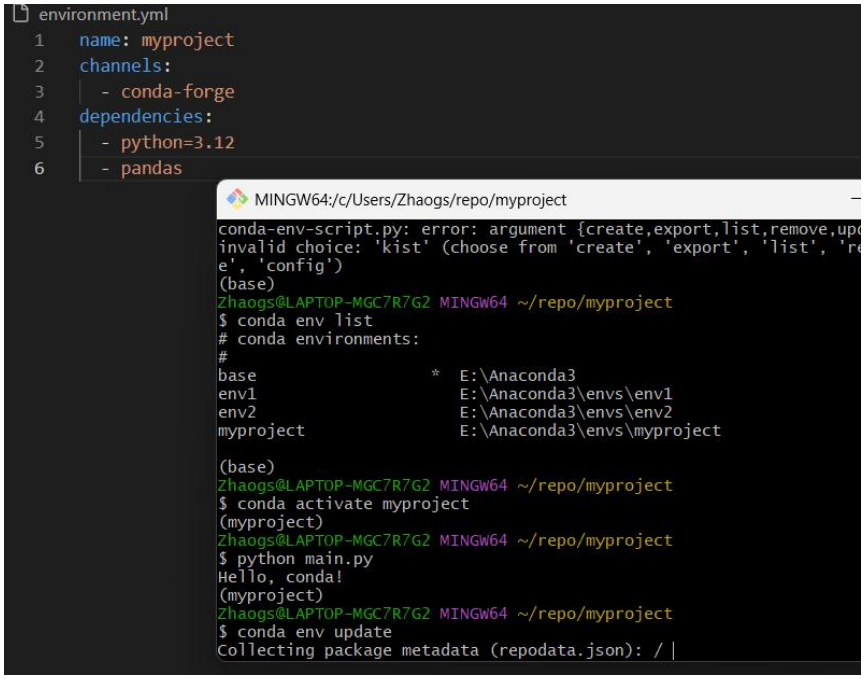

文件(F) 编辑(E) 选择(S) 查看(V)
myproject
资源管理器
打开的编辑器
欢迎
environment.yml
main.py
MYPROJECT
environment.yml
main.py
大纲
时间线
environment.yml
name: myproject
channels:
- conda-forge
dependencies:
- python=3.12
MINGW64:/c/Users/Zhaogs/repo/myproject
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ conda env kist
usage: conda-env-script.py [-h] {create,export,list,remove,update,config} ...
conda-env-script.py: error: argument {create,export,list,remove,update,config}: invalid choice: 'kist' (choose from 'create', 'export', 'list', 'remove', 'update', 'config')
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ conda env list
# conda environments:
#
base * E:\Anaconda3
env1 E:\Anaconda3\envs\env1
env2 E:\Anaconda3\envs\env2
myproject E:\Anaconda3\envs\myproject
(base)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ conda activate myproject
(myproject)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$

安装过一些拓展

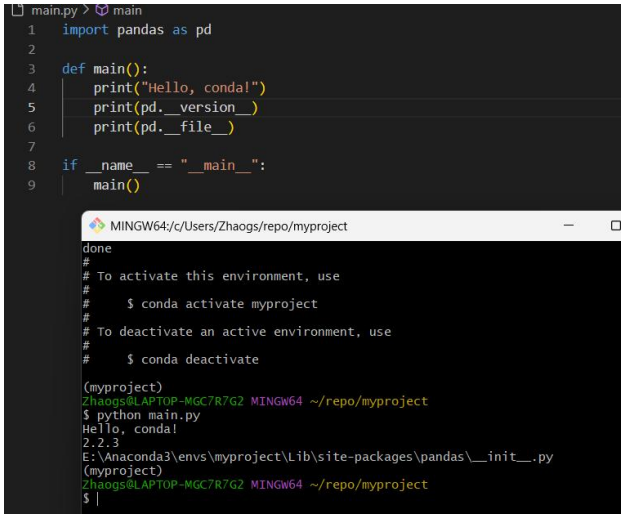
扩展
在应用商店中搜索扩展
已安装 9
Jupyter 7268ms
Jupyter notebook support, i...
Microsoft 重启以更新
Chinese (Simplified) (简体...
中文(简体)
Microsoft
Jupyter Cell Tags
Jupyter Cell Tags support for...
Microsoft
Jupyter Keymap
Jupyter keymaps for notebo...
Microsoft
Jupyter Notebook ... 43ms
Renderers for Jupyter Noteb...
Microsoft
Jupyter Slide Show
Jupyter Slide Show support ...
Microsoft
Pylance 2518ms
推荐 2



用 conda env update 更新环境配置



增加 pandas 后：



破网也太慢了……不想下了这个校园网　30 分钟下不下来！

```
py", line 620, in _read
    parser = TextFileReader(filepath_or_buffer, **kwds)
             ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
  File "E:\Anaconda3\envs\myproject\Lib\site-packages\pandas\io\parsers\readers.
py", line 1620, in __init__
    self._engine = self._make_engine(f, self.engine)
                   ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
  File "E:\Anaconda3\envs\myproject\Lib\site-packages\pandas\io\parsers\readers.
py", line 1880, in _make_engine
    self.handles = get_handle(
                   ^^^^^^^^^^^
  File "E:\Anaconda3\envs\myproject\Lib\site-packages\pandas\io\common.py", line
 873, in get_handle
    handle = open(
             ^^^^^
FileNotFoundError: [Errno 2] No such file or directory: './EPA_SmartLocationData
base_V3_Jan_2021_Final.csv'
(myproject)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ curl -O https://edg.epa.gov/EPADataCommons/public/OA/EPA_SmartLocationDatabase
_V3_Jan_2021_Final.csv
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  0  192M    0 1552k    0     0   4424      0 12:39:22  0:05:59 12:33:23  3491
```

下了一晚上！

```
py", line 1620, in __init__
    self._engine = self._make_engine(f, self.engine)
                   ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
  File "E:\Anaconda3\envs\myproject\Lib\site-packages\pandas\io\parsers\readers.
py", line 1880, in _make_engine
    self.handles = get_handle(
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FileNotFoundError: [Errno 2] No such file or directory: './EPA_SmartLocationData
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Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ curl -O https://edg.epa.gov/EPADataCommons/public/OA/EPA_SmartLocationDatabase
_V3_Jan_2021_Final.csv
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  3  192M    3 7728k    0     0    339      0   6d 21h  6:28:13   6d 14h     0
curl: (56) Recv failure: Connection was reset
(myproject)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$
```

运行 python main.py

```
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$ python main.py
7.01% of U.S. residents live in highlywalkable neighborhoods.
(myproject)
Zhaogs@LAPTOP-MGC7R7G2 MINGW64 ~/repo/myproject
$
```