暨南大学本科实验报告专用纸

课程名称 __python 程序设计实验__ 成绩评定_____

实验项目名称 __环境与 IDE 搭建__ 指导教师 __林聪__

实验项目编号 __01__ 实验项目类型___ 实验地点

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学院 ___智能科学与工程___ 系_____专业 __人工智能___

实验时间 __2022__ 年 2 月 __23__ 日 _午～_ 3 月 __20__ 日 _午

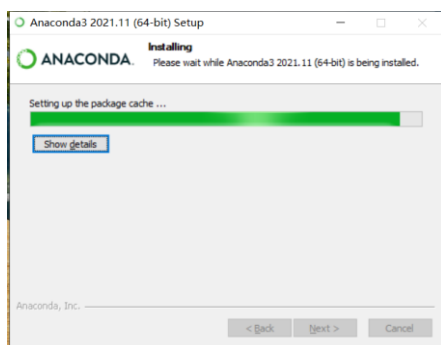## 一、 实验目的

建立与测试 Python 程序的完整开发环境
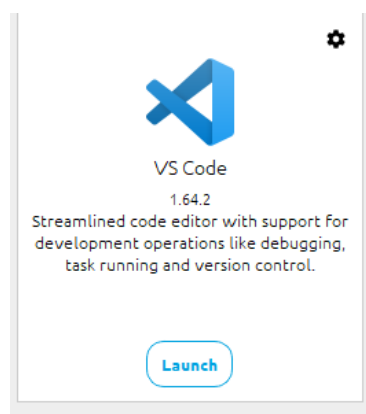
二、 实验原理

在 anaconda prompt 中可以实现对 anaconda 环境安装，删除，切换等操作。
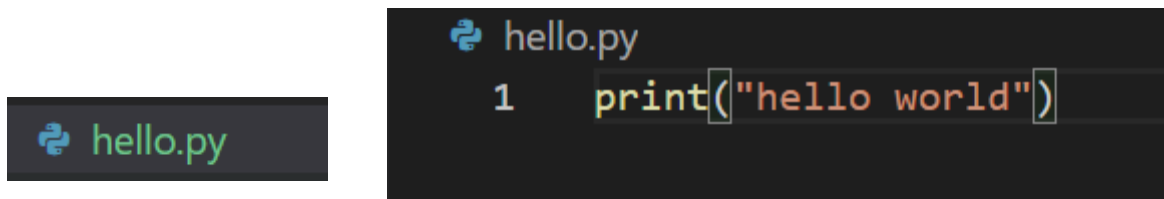
三、 实验过程

1. 安装 Anaconda 开发环境平台与 Python 解释器

（1）首先是安装 Anaconda 开发环境平台

（2）安装 vs code 开发环境

（3）测试简易程序，先创建一个文件，命名为 hello.py,然后输入代码运行

（4）1.在 Anaconda Prompt 种创建新的环境，输入 conda create –name wangzhitao python=3.9 安装，如何出现提醒（y/n），按 y 确定

出现这个便是安装成功

```
(base) C:\Users\86178>conda create --name wangzhitao python=3.9
WARNING: A directory already exists at the target location 'D:\Anaconda\envs\wangzhitao'
but it is not a conda environment.
Continue creating environment (y/[n])?
```

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

(base) C:\Users\86178>
```

2. 利用"conda env list"查看系统的全部环境

```
(base) C:\Users\86178>conda env list
# conda environments:
#
base                  *  D:\Anaconda
wangzhitao               D:\Anaconda\envs\wangzhitao

(base) C:\Users\86178>
```
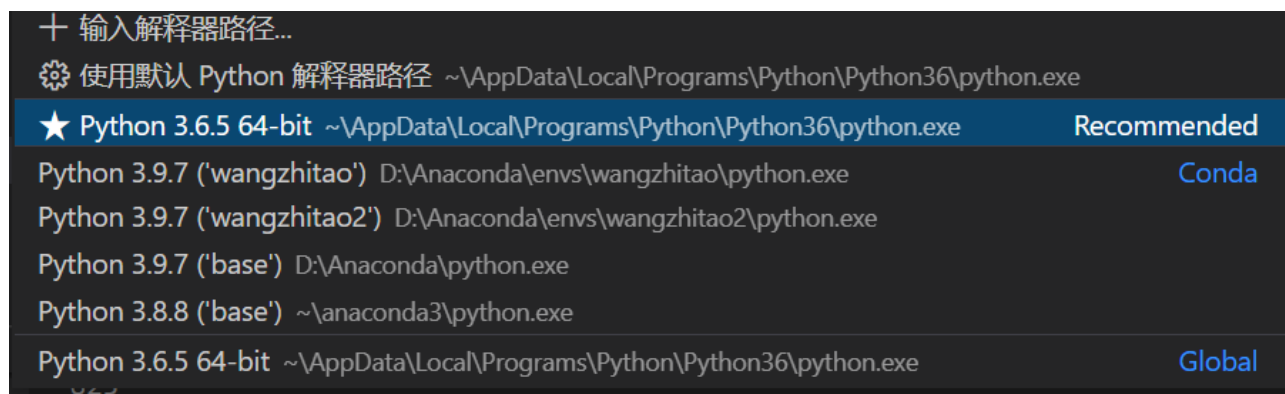
输入 conda activate wangzhitao 来切换激活新环境

```
(base) C:\Users\86178>conda activate wangzhitao

(wangzhitao) C:\Users\86178>
```

3. 利用"conda info"显示该新环境下的 Python 版本和路径.

```
(base) C:\Users\86178>conda info

     active environment : base
    active env location : D:\Anaconda
            shell level : 1
       user config file : C:\Users\86178\.condarc
 populated config files : C:\Users\86178\.condarc
          conda version : 4.10.3
    conda-build version : 3.21.6
         python version : 3.9.7.final.0
       virtual packages : __cuda=11.4=0
                          __win=0=0
                          __archspec=1=x86_64
       base environment : D:\Anaconda  (writable)
      conda av data dir : D:\Anaconda\etc\conda
  conda av metadata url : None
           channel URLs : https://repo.anaconda.com/pkgs/main/win-64
                          https://repo.anaconda.com/pkgs/main/noarch
                          https://repo.anaconda.com/pkgs/r/win-64
                          https://repo.anaconda.com/pkgs/r/noarch
                          https://repo.anaconda.com/pkgs/msys2/win-64
                          https://repo.anaconda.com/pkgs/msys2/noarch
          package cache : D:\Anaconda\pkgs
                          C:\Users\86178\.conda\pkgs
                          C:\Users\86178\AppData\Local\conda\conda\pkgs
       envs directories : D:\Anaconda\envs
                          C:\Users\86178\.conda\envs
                          C:\Users\86178\AppData\Local\conda\conda\envs
               platform : win-64
             user-agent : conda/4.10.3 requests/2.26.0 CPython/3.9.7 Windows/10 Windows/10.0.19042
          administrator : False
             netrc file : None
           offline mode : False
```

然后进入 vs code 中按 CTRL+SHIFT+P，在其中的 Python: Select Interpreter
中选择，这么一看，我有两个 base，python 版本有点多。

＋ 输入解释器路径...		
⚙ 使用默认 Python 解释器路径 ~\AppData\Local\Programs\Python\Python36\python.exe		
★ Python 3.6.5 64-bit ~\AppData\Local\Programs\Python\Python36\python.exe		Recommended
Python 3.9.7 ('wangzhitao') D:\Anaconda\envs\wangzhitao\python.exe		Conda
Python 3.9.7 ('wangzhitao2') D:\Anaconda\envs\wangzhitao2\python.exe		
Python 3.9.7 ('base') D:\Anaconda\python.exe		
Python 3.8.8 ('base') ~\anaconda3\python.exe		
Python 3.6.5 64-bit ~\AppData\Local\Programs\Python\Python36\python.exe		Global

4. 在 Anaconda prompt 中输入 conda install keras 来安装第三方包 keras，
并通过输入 conda list keras 来查看版本

```
(wangzhitao) C:\Users\86178>conda install keras
Collecting package metadata (current_repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
  current version: 4.11.0
  latest version: 4.12.0

Please update conda by running

    $ conda update -n base -c defaults conda



## Package Plan ##

  environment location: D:\Anaconda\envs\wangzhitao

  added / updated specs:
    - keras


The following NEW packages will be INSTALLED:

  keras              pkgs/main/noarch::keras-2.6.0-pyhd3eb1b0_0


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

```
(wangzhitao) C:\Users\86178>conda list keras
# packages in environment at D:\Anaconda\envs\wangzhitao:
#
# Name                    Version                   Build  Channel
keras                     2.6.0                 pyhd3eb1b0_0

(wangzhitao) C:\Users\86178>
```

在 Anaconda prompt 中输入 pip install 来安装第三方包 zfpy,并通过输入

conda list zfpy 来查看版本

```
(wangzhitao) C:\Users\86178>pip install zfpy
Collecting zfpy
  Using cached zfpy-0.5.5-cp39-cp39-win_amd64.whl (125 kB)
Installing collected packages: zfpy
Successfully installed zfpy-0.5.5
```

```
(wangzhitao) C:\Users\86178>conda list zfpy
# packages in environment at D:\Anaconda\envs\wangzhitao:
#
# Name                    Version                   Build  Channel
zfpy                      0.5.5                    pypi_0    pypi
```

5. 在 anaconda prompt 中输入 conda list 来列出环境中已经安装的包，其

中刚安装的包在里面。

```
(wangzhitao) C:\Users\86178>conda list keras
# packages in environment at D:\Anaconda\envs\wangzhitao:
#
# Name                    Version                   Build  Channel
keras                     2.6.0                 pyhd3eb1b0_0

(wangzhitao) C:\Users\86178>conda list
# packages in environment at D:\Anaconda\envs\wangzhitao:
#
# Name                    Version                   Build  Channel
ca-certificates           2022.2.1              haa95532_0
certifi                   2021.10.8         py39haa95532_2
keras                     2.6.0                 pyhd3eb1b0_0
openssl                   1.1.1m                h2bbff1b_0
pip                       21.2.4            py39haa95532_0
python                    3.9.7                 h6244533_1
setuptools                58.0.4            py39haa95532_0
sqlite                    3.38.0                h2bbff1b_0
tzdata                    2021e                 hda174b7_0
vc                        14.2                  h21ff451_1
vs2015_runtime            14.27.29016           h5e58377_2
wheel                     0.37.1                pyhd3eb1b0_0
wincertstore              0.2               py39haa95532_2
zfpy                      0.5.5                     pypi_0    pypi
```

7. 在 anaconda prompt 中输入 conda create -n wangzhitao2—clone wangzhitao 来克隆环境

```
(base) C:\Users\86178>conda create -n wangzhitao2 --clone wangzhitaoa
```

8. 利用"conda list --explicit > env.txt"保存当前环境,并用 conda env list 来查看环境

```
(wangzhitao) C:\Users\86178>conda list --explicit>env.txt

(wangzhitao) C:\Users\86178>conda env list
# conda environments:
#
base                      D:\Anaconda
wangzhitao             *  D:\Anaconda\envs\wangzhitao
wangzhitao2               D:\Anaconda\envs\wangzhitao2
```

9. 输入 conda deavtivate 退出该环境

```
(wangzhitao2) C:\Users\86178>conda deactivate

(wangzhitao) C:\Users\86178>
```

10. 输入 conda remove -n wangzhitao2 --all 来删除环境

```
(wangzhitao) C:\Users\86178>conda remove -n wangzhitao2 --all

Remove all packages in environment D:\Anaconda\envs\wangzhitao2:

## Package Plan ##

  environment location: D:\Anaconda\envs\wangzhitao2


The following packages will be REMOVED:

  bzip2-1.0.8-he774522_0
  ca-certificates-2022.2.1-haa95532_0
  certifi-2020.6.20-pyhd3eb1b0_3
  libffi-3.4.2-h604cdb4_1
  openssl-1.1.1m-h2bbff1b_0
  pip-21.2.4-py310haa95532_0
  python-3.10.0-h96c0403_3
  setuptools-58.0.4-py310haa95532_0
  sqlite-3.37.2-h2bbff1b_0
  tk-8.6.11-h2bbff1b_0
  tzdata-2021e-hda174b7_0
  vc-14.2-h21ff451_1
  vs2015_runtime-14.27.29016-h5e58377_2
  wheel-0.37.1-pyhd3eb1b0_0
  wincertstore-0.2-py310haa95532_2
  xz-5.2.5-h62dcd97_0
  zlib-1.2.11-h8cc25b3_4


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

11. 利用"conda env create --file bio-env.txt"恢复该环境.输入发现错误

```
(base) C:\Users\86178>conda env create --file bio-env.txt

EnvironmentFileNotFound: 'C:\Users\86178\bio-env.txt' file not found
```

输入 conda create –name wangzhitao2 –file env.txt 后恢复环境

```
(base) C:\Users\86178>conda create --name wangzhitao2 --file env.txt
WARNING: A directory already exists at the target location 'D:\Anaconda\envs\wangzhitao2'
but it is not a conda environment.
Continue creating environment (y/[n])?
```

输入 conda env list 发现该环境正常恢复

```
(base) C:\Users\86178>conda env list
# conda environments:
#
base                  *  D:\Anaconda
wangzhitao                D:\Anaconda\envs\wangzhitao
wangzhitao2               D:\Anaconda\envs\wangzhitao2
```

四、 实验结果

五、 在老师的指导和自己的琢磨下，实验得以顺利成功完成

六、 实验总结

初步熟悉了在 **anaconda prompt** 中进行一些环境上的操作，对 **python** 的了解更进一步。