1. Fork 第 05 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

```
$ ls -l
total 11568
drwxr-xr-x 1 胡爽 197121        0  3月 20 21:25 myproject/
drwxr-xr-x 1 胡爽 197121        0  3月 16 13:37 mywork/
drwxr-xr-x 1 胡爽 197121        0  3月 20 20:23 prj1/
drwxr-xr-x 1 胡爽 197121        0  3月 16 13:37 repo/
-rw-r--r-- 1 胡爽 197121      925  3月 14 11:21 script1.py
drwxr-xr-x 1 胡爽 197121        0  3月 14 16:43 week01/
drwxr-xr-x 1 胡爽 197121        0  3月 16 14:16 week02/
drwxr-xr-x 1 胡爽 197121        0  3月 21 10:09 week03/
drwxr-xr-x 1 胡爽 197121        0  3月 29 22:34 week04/
-rw-r--r-- 1 胡爽 197121        0  3月 19 16:03 weeko1
-rw-r--r-- 1 胡爽 197121 11824906  3月 21 10:20 第三周学习报告.pdf
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ pwd
/c/Users/胡爽/repo
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ git clone git@gitcode.com:HYY123abc/week05.git
Cloning into 'week05'...
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), 8.44 KiB | 2.81 MiB/s, done.
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ ls -l
total 11568
drwxr-xr-x 1 胡爽 197121        0  3月 20 21:25 myproject/
drwxr-xr-x 1 胡爽 197121        0  3月 16 13:37 mywork/
drwxr-xr-x 1 胡爽 197121        0  3月 20 20:23 prj1/
drwxr-xr-x 1 胡爽 197121        0  3月 16 13:37 repo/
-rw-r--r-- 1 胡爽 197121      925  3月 14 11:21 script1.py
drwxr-xr-x 1 胡爽 197121        0  3月 14 16:43 week01/
drwxr-xr-x 1 胡爽 197121        0  3月 16 14:16 week02/
drwxr-xr-x 1 胡爽 197121        0  3月 21 10:09 week03/
drwxr-xr-x 1 胡爽 197121        0  3月 29 22:34 week04/
drwxr-xr-x 1 胡爽 197121        0  4月  7 08:29 week05/
-rw-r--r-- 1 胡爽 197121        0  3月 19 16:03 weeko1
-rw-r--r-- 1 胡爽 197121 11824906  3月 21 10:20 第三周学习报告.pdf
(base)
```

2. 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

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ cat week04/environment.yml
name: week04
channels:
  - conda-forge
dependencies:
  - python=3.12
    wat-inspector(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$
```
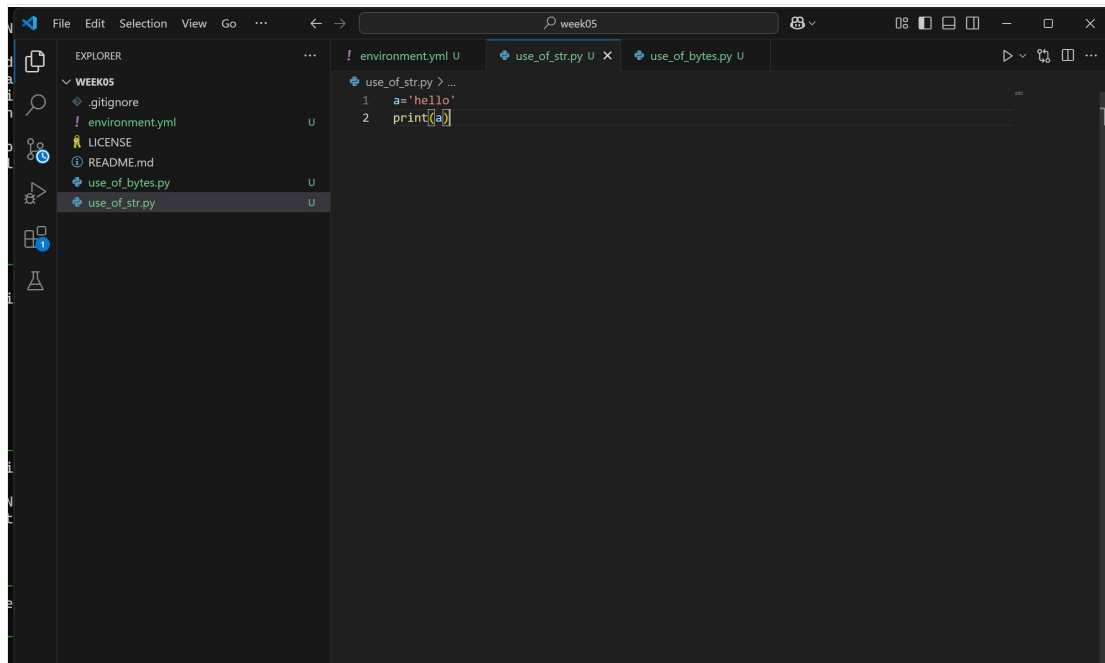
```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ cp week04/environment.yml week05/
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$ ls -l week05
total 25
-rw-r--r-- 1 胡爽 197121    89  4月   7 08:41 environment.yml
-rw-r--r-- 1 胡爽 197121 18805  4月   7 08:29 LICENSE
-rw-r--r-- 1 胡爽 197121  2239  4月   7 08:29 README.md
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo
$
```

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EXPLORER   ⋯   ! environment.yml U ✕

∨ WEEK05   ! environment.yml
  ◇ .gitignore   1   name: week05
  ! environment.yml   U   2   channels:
  ⚿ LICENSE   3   - conda-forge
  ⓘ README.md   4   dependencies:
                                        5   - python=3.12
                                        6   wat-inspector

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ conda env create
D:\Anaconda\Lib\argparse.py:2006: FutureWarning: `remote_definition` is deprecated and will be removed in 25.9. Use `conda env create --file=URL` in
stead.
  action(self, namespace, argument_values, option_string)
Retrieving notices: ...working... done

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

    Traceback (most recent call last):
      File "D:\Anaconda\Lib\site-packages\conda\exception_handler.py", line 18, in __call__
        return func(*args, **kwargs)
               ^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\cli\main.py", line 61, in main_subshell
        exit_code = do_call(args, parser)
                    ^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\cli\conda_argparse.py", line 205, in do_call
        result = getattr(module, func_name)(args, parser)
                 ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\notices\core.py", line 127, in wrapper
        return_value = func(*args, **kwargs)
                       ^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\cli\main_env_create.py", line 121, in execute
        spec = specs.detect(
               ^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\deprecations.py", line 174, in inner
        return func(*args, **kwargs)
               ^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\env\specs\__init__.py", line 64, in detect
        if spec.can_handle():
           ^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\env\specs\yaml_file.py", line 19, in can_handle
        self._environment = env.from_file(self.filename)
                            ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\env\env.py", line 173, in from_file
        return from_yaml(yamlstr, filename=filename)
               ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\env\env.py", line 139, in from_yaml
        data = yaml_safe_load(yamlstr)
               ^^^^^^^^^^^^^^^^^^^^^^^
      File "D:\Anaconda\Lib\site-packages\conda\common\serialize.py", line 46, in yaml_safe_load
```

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EXPLORER
∨ WEEK05
  ◇ .gitignore
  ! environment.yml   U
  👤 LICENSE
  ⓘ README.md
  🐍 use_of_bytes.py   U
  🐍 use_of_str.py   U

! environment.yml U   🐍 use_of_str.py U ✕   🐍 use_of_bytes.py U

🐍 use_of_str.py › ...
1   a='hello'
2   print(a)

```
(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ conda env list
# conda environments:
#
base                  *  D:\Anaconda
myproject                D:\Anaconda\envs\myproject
pri1                     D:\Anaconda\envs\pri1
prj2                     D:\Anaconda\envs\prj2
week04                   D:\Anaconda\envs\week04

(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ conda activate week05

EnvironmentNameNotFound: Could not find conda environment: week05
You can list all discoverable environments with `conda info --envs`.


(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
hello
(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

查看 id:

```
environment.yml U          use_of_str.py U X          use_of_bytes.py U
use_of_str.py > ...
  1    a='hello'
  2    x=id(a)
  3    print(x)
```

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2229756977600
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

o 对于任何对象，都可以传给以下内置函数（built-in function）用于检视

（inspect):id()-- 返回对象在虚拟内存中的地址（正整数），如果 id(a) ==

id(b)，那么 a is b （is 是个运算符)

type() -- 返回对象的类型

isinstance() -- 判断对象是否属于某个（或某些）类型

dir() -- 返回对象所支持的属性（attributes）的名称列表
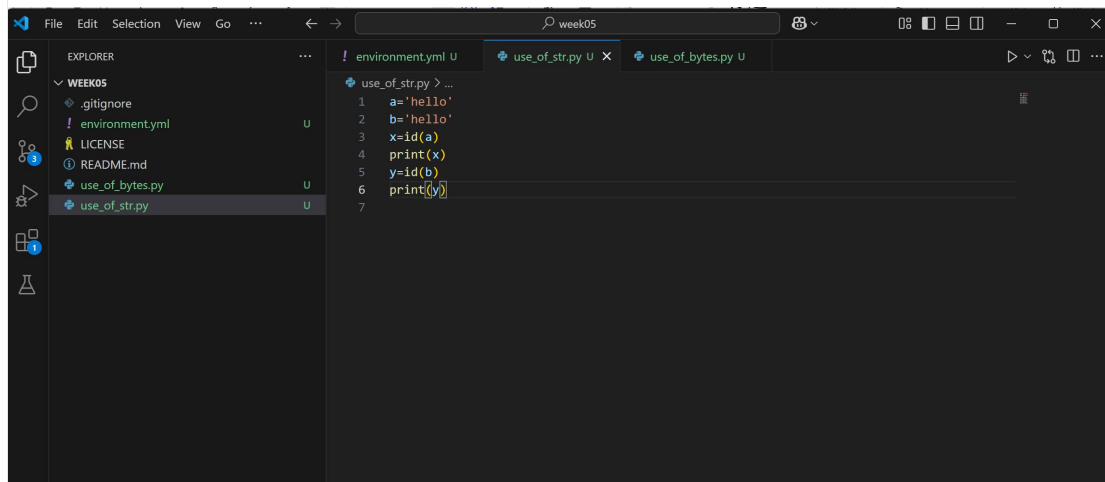
str() -- 返回对象 print 时要显示在终端的字符串

每次运行结果都不一样：

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2229756977600
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
1603518554560
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
652823488
e)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

Id 一样：


```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
1675843035584
1675843035584
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
```

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2260445501696
2260445499712
[9, 5]
[2, 5]
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
```

```
   1   a=[2,5]
   2   b=[2,5]
   3   x=id(a)
   4   print(x)
   5   y=id(b)
   6   print(y)
   7   a[0]=9
   8   print(a)
   9   print(b)
  10   print(id(a))#is it same as x?
  11   print(id(b))#is it same as y?
```

胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2210604325120
2210604323136
[9, 5]
[2, 5]
2210604325120
2210604323136
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$

```
<class 'list'>
(base)
```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
3012205943040
3012205941056
[9, 5]

3012205943040
3012205941056
<class 'list'>
False
(base)

胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ print(1,2, 6, 10)
bash: syntax error near unexpected token `1,2, 6, 10) '
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ print(1,2, 6, 10)
bash: syntax error near unexpected token `1,2, 6, 10) '
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ print(1,2,6,10)
bash: syntax error near unexpected token `1,2,6,10'
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python
Python 3.12.7 | packaged by Anaconda, Inc. | (main, Oct 4 2024, 13:17:27) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> print(1,2,6,10)
1 2 6 10
>>>

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python
Python 3.12.7 | packaged by Anaconda, Inc. | (main, Oct  4 2024, 13:17:27) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> print(32)
32
>>> print(str(32))
32
>>>
```



```python
1   a=[2,5]
2   b=[2,5]
3   x=id(a)
4   print(x)
5   y=id(b)
6   print(y)
7   a[0]=9
8   print(a)
9   print(b)
10  print(id(a))#is it same as x?
11  print(id(b))#is it same as y?
12  print(type(a))
13  print (isinstance(a,str))
14  print ('isinstance(a,str):',isinstance(a,str))
15  print('isinstance(a,list):',isinstance(a,list))
16  print('dir(a):',dir(a))
```

```
>>> quit()
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2039289747712
2039289745728
[9, 5]
[2, 5]
2039289747712
2039289745728
<class 'list'>
False
isinstance(a,str): False
isinstance(a,list): True
dir(a): ['__add__', '__class__', '__class_getitem__', '__contains__', '__delattr__', '__delitem__', '__dir__', '__doc__', '__eq__', '__format__', '__ge__', '__getattribute__', '__getitem__', '__getstate__', '__gt__', '__hash__', '__iadd__', '__imul__', '__init__', '__init_subclass__', '__iter__', '__le__', '__len__', '__lt__', '__mul__', '__ne__', '__new__', '__reduce__', '__reduce_ex__', '__repr__', '__reversed__', '__rmul__', '__setattr__', '__setitem__', '__sizeof__', '__str__', '__subclasshook__', 'append', 'clear', 'copy', 'count', 'extend', 'index', 'insert', 'pop', 'remove', 'reverse', 'sort']
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

```
NameError: name 'instance' is not defined. Did you mean: 'isinstance'?
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
  File "C:\Users\胡爽\repo\week05\use_of_str.py", line 18
    print (goodbye)
          ^
SyntaxError: invalid character '（' (U+FF08)
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python
Python 3.12.7 | packaged by Anaconda, Inc. | (main, Oct  4 2024, 13:17:27) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> AssertionError
<class 'AssertionError'>
>>>
```

```
use_of_str.py > ...
1   print('字面值')
2   s='university'
3   print(isinstance(s,str))
4   assert type((s)) is str
5
```

```
use_of_str.py > ...
1   print('字面值')
2   s='university'
3   print(s)
4   print(isinstance(s,str))
5   assert type((s)) is str
6
7   print('f-string')
8   x='Tom'
9   s=f'name:{x}'
10  print(s)
11
12  s='a\tb '
13  print ('TAB',s)
```

$ python use_of_str.py
字面值
university
True
f-string
name:Tom
TAB a   b
(base)
$

environment.yml U   use_of_str.py U X   use_

use_of_str.py > ...

```python
print('字面值')
s='university'
print(s)
print(isinstance(s,str))
assert type((s)) is str

print('f-string')
x='Tom'
s=f'name:{x}'
print(s)

s='a\tb '
print ('TAB',s)

S='aaaaa\nbbbbbb'
print('New Line',s)

#raw-string,translate,multi-line

s="""xyz
abc
    eee
aaa
"""
print(s)
```

```
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$  python use_of_str.py
字面值
university
True
f-string
name:Tom
TAB a    b
New Line a        b
"xyz
abc
    eee
aaa

(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

```
24
25    print(s)
26    print('初始化')
27    s=str()
28    print(s)
```

```
(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
字面值
university
True
f-string
name:Tom
TAB a    b
New Line a        b
"xyz
abc
    eee
aaa

初始化

(base)
胡爽@LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$
```

```
29
30    assert str([5,8,2])=='[5,8,2]'
31    assert str (1.1+2.2)=='3.3'
```

```
AssertionError
(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python -m pdb use_of_str.py
> c:\users\胡爽 \repo\week05\use_of_str.py(1)<module>()
-> print('字面值')
(Pdb) c
字面值
university
True
f-string
name:Tom
TAB a   b
New Line a        b
"xyz
abc
   eee
aaa

初始化

Traceback (most recent call last):
  File "D:\Anaconda\Lib\pdb.py", line 1960, in main
    pdb._run(target)
  File "D:\Anaconda\Lib\pdb.py", line 1754, in _run
    self.run(target.code)
  File "D:\Anaconda\Lib\bdb.py", line 606, in run
    exec(cmd, globals, locals)
  File "<string>", line 1, in <module>
  File "C:\Users\胡爽 \repo\week05\use_of_str.py", line 30, in <module>
    assert str([5,8,2])=='[5,8,2]'
           ^^^^^^^^^^^^^^^^^^^^^^^^
AssertionError
Uncaught exception. Entering post mortem debugging
Running 'cont' or 'step' will restart the program
> c:\users\胡爽 \repo\week05\use_of_str.py(30)<module>()
-> assert str([5,8,2])=='[5,8,2]'
(Pdb) p str(1.1+2.2)
'3.3000000000000003'
(Pdb)
```

```
30        assert str([5,8,2])=='[5,8,2]'
31        assert str (1.1+2.2)1=='3.3'
```

```
AssertionError
Uncaught exception. Entering post mortem debugging
Running 'cont' or 'step' will restart the program
> c:\users\胡爽 \repo\week05\use_of_str.py(30)<module>()
-> assert str([5,8,2])=='[5,8,2]'
(Pdb) p str(1.1+2.2)
'3.3000000000000003'
(Pdb) q
Post mortem debugger finished. The C:\Users\胡爽 \repo\week05\use_of_str.py will be restarted
> c:\users\胡爽 \repo\week05\use_of_str.py(1)<module>()
-> print('字面值')
(Pdb) q
(base)
胡爽 @LAPTOP-SKS7HB85 MINGW64 ~/repo/week05 (main)
$ python -m pdb use_of_str.py
> c:\users\胡爽 \repo\week05\use_of_str.py(1)<module>()
-> print('字面值')
(Pdb)
```