

1. 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

```
MINGW64:/c/Users/lenovo/w  X + v
done
#
# To activate this environment, use
#
#     $ conda activate week05
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$
```

- 2、`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)

```
#     $ conda deactivate

(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
2513114128880
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
2695616020864
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$
```

- 3、`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

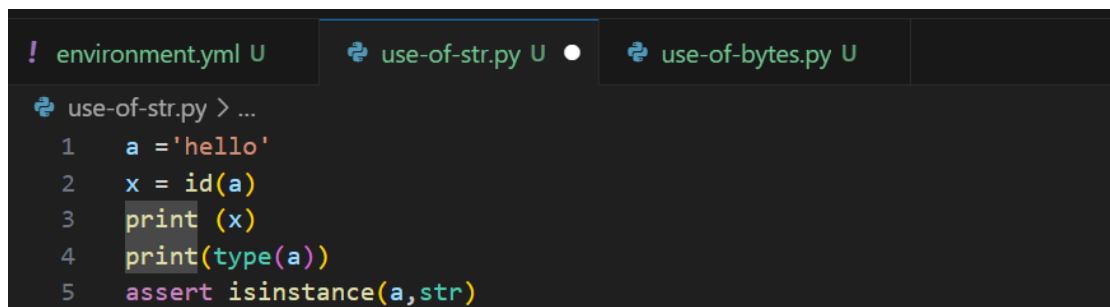
4、可以利用 `assert` 语句查验某个表达式 (`expression`) 为真，否则报错

(`AssertionError`) 退出

5、可以利用 `try` 语句拦截报错，避免退出，将流程 (`flow`) 转

入 `except` 语句

6、可以调用 `breakpoint()` 函数暂停程序运行，进入 `pdb` 调试 (`debug`) 模式



```
! environment.yml U  use-of-str.py U  use-of-bytes.py U
use-of-str.py > ...
1  a = 'hello'
2  x = id(a)
3  print(x)
4  print(type(a))
5  assert isinstance(a, str)
```

7、对于 每一个 上述要求掌握的对象类型 (将来遇到新的对象类型也应该如此)，我们首先应该熟悉如何通过 表达式 (`expression`) 得到他们的 实例 (`instance`)，一般包括以下途径:

- 字面值 (`literal`) (包括 `f-string` 语法)
- 推导式 (`comprehension`) (仅限 `list`、`dict`、`set`)
- 初始化 (`init`)
- 运算值 (`operator`)
- 索引值 (`subscription`)
- 返回值 (`return value of function/method call`)

```
! environment.yml U  use-of-str.py U X  use-of-bytes.py U  >
use-of-str.py > ...
1
2     print("字面值")
3     s='university'
4     print(isinstance(s,str))
5     assert type(s) is str

MINGW64:/c/Users/lenovo/w  X  +  v
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~
$ cd week05
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
字面值
True
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$
```

```
! environment.yml U  use-of-str.py
use-of-str.py > ...
1
2     print("字面值")
3     s='university'
4     print(s)
5     print(isinstance(s,str))
6     assert type(s) is str
7
8     print("初始化")
9     s = str()
10    print(s)
11
12    s = "棒"
13    s = s*10
14    print(s)

True
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
字面值
university
True
初始化
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
File "C:\Users\lenovo\week05\use-of-str.py", line 11
    assert str(3.3+4.4) |="7.7"
                      ^^
SyntaxError: invalid syntax
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
File "C:\Users\lenovo\week05\use-of-str.py", line 14
    print (s)
          ^
SyntaxError: invalid character ' (' (U+FF08)
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$ python use-of-str.py
字面值
university
True
初始化
棒棒棒棒棒棒棒棒
(base) lenovo@DESKTOP-PFIKGT MINGW64 ~/week05 (main)
$
```