

## 第五周学习报告

### ● 复制到 week05

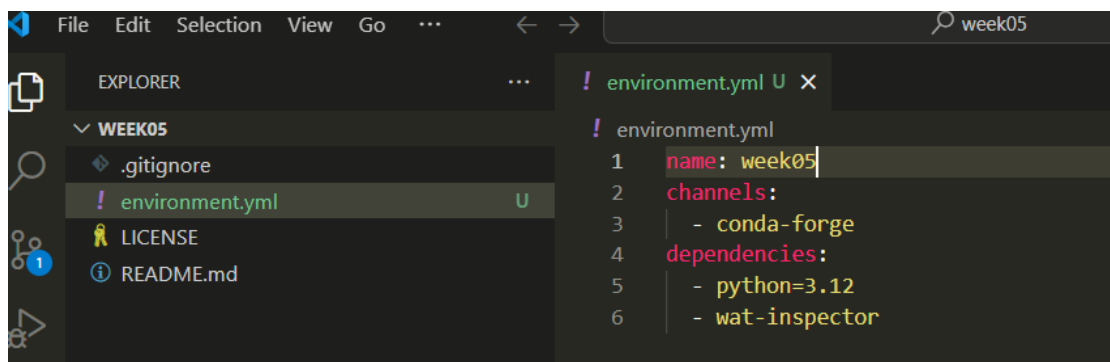
```
name: week04
channels:
  - conda-forge
dependencies:
  - python=3.12
  - wat-inspector
(base) tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo
$ cp week04/environment.yml week05/

(base) tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo
$ ls -l
total 20
drwxr-xr-x 1 tmk 197121 0 3月 20 23:37 myproject/
drwxr-xr-x 1 tmk 197121 0 3月 17 23:03 repo/
-rw-r--r-- 1 tmk 197121 0 3月 7 21:05 script1.py
drwxr-xr-x 1 tmk 197121 0 3月 7 22:40 week01/
drwxr-xr-x 1 tmk 197121 0 3月 17 23:44 week02/
drwxr-xr-x 1 tmk 197121 0 3月 20 23:59 week03/
drwxr-xr-x 1 tmk 197121 0 3月 30 22:53 week04/
drwxr-xr-x 1 tmk 197121 0 4月 13 10:00 week05/

(base) tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo
$ ls -l week05
total 25
-rw-r--r-- 1 tmk 197121 91 4月 13 10:00 environment.yml
-rw-r--r-- 1 tmk 197121 18805 4月 13 09:58 LICENSE
-rw-r--r-- 1 tmk 197121 2239 4月 13 09:58 README.md

(base) tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo
$
```

### ● 打开 week05 并改名



```
(base) tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ conda activate week05
(base)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
(base)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
hello
(base)
```

- 运行，字符串有缓存，id 一样

```
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
100462836864
(week05)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2625959582848
(week05)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
```

```
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
2625959582848
(week05)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
1379467025536
1379467025536
(week05)
```

- 类型 type, isinstance, dir 等

```
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$ python use_of_str.py
1987999832320
1987999830336
[9, 5]
[2, 5]
1987999832320
1987999830336
<class 'list'>
(week05)
tmk@LAPTOP-GTIMJUPO MINGW64 ~/repo/week05 (main)
$
```

```
$ python use_of_str.py
2762696628480
2762696626496
[9, 5]
[2, 5]
2762696628480
2762696626496
<class 'list'>
False
(week05)
```

```

$ python use_of_str.py
1664131995904
1664131993920
[9, 5]
[2, 5]
1664131995904
1664131993920
<class 'list'>
isinstance(a, str): False
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__', '__s
tr__', '__subclasshook__', 'append', 'clear', 'copy', 'count', 'extend', 'index', 'insert', 'pop', 'remove', 'reverse',
'sort']
(week05)
tmk@LAPTOP-GTINJUP0 MINGW64 ~/repo/week05 (main)
$

```

```

$ python use_of_str.py
2496739875072
2496739873088
[9, 5]
[2, 5]
2496739875072
2496739873088
<class 'list'>
isinstance(a, str): False
isinstance(a, list): True

```

```

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):', isinstance(a, str))
14 print('isinstance(a, list):', isinstance(a, list))
15 print(isinstance(a, (str, float)))
16 try:
17     assert isinstance(a, str)
18 except AssertionError:
19     breakpoint()
20     print('type error')
21 print('goodbye')

```

- 字面、推导、初始化、运算、索引、返回

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)
14
15 s = 'aaa\nbbb'
16 print('New Line', s)
17
18
19
20 s = """xyz
21 | abc
22 |   eee
23 |   aaa
24 |   """
25 print(s)
26
27 print('初始化')
28 s = str()
29 print(s)
30 s = str([5, 8, 2])
31 print(s)
32
33 assert str([5, 8, 2]) == '[5, 8, 2]'
34 assert str(1.1 + 2.2) == '3.3'
35
36 assert str() == ''
```

```

38     s = '='
39     x = id(s)
40     s = s * 20
41     y = id(s)
42     print (s)
43     assert x != y
44
45     s = 'hello'
46     assert s[3] == 'l'
47     assert s[-1] == 'o'
48     assert s[:3] == 'hel'
49     assert s[4] == s[-1]
50     try:
51         s[5]
52     except IndexError as e:
53         print(e)
54
55     s = 'hello'
56     u = s.upper()
57     print(u)
58     print(s)
59
60     t = 'name: {}, age {}'
61     print(t)
62     t1 = t.format('Jack', 21)
63     print(t1)

```

- 验证属性，字节等

```
95     assert 'book'
96     assert not ''
97
98     s = 'book'
99     print(iter(s))
100
101     for c in s:
102         print(c)
103
104     print(len(s))
105
106     s = 'book'
107     assert s[1:3] == "oo"
108
109     s = 'the book of why took nooo'
110     print(s.capitalize())
111     print(s)
112     print(s.count('oo') == 3)
113
114     print('abc123'.isalnum())
115     print('abc123 '.isalnum())
116     print('abc123'.isidentifier())
117     print('123abc'.isidentifier())
118     print('abc_123'.isidentifier())
119     print('abc-123'.isidentifier())
120
121     q = ['rose', 'jack', 'bob']
122     print('.'.join(q))
123     s = 'rose:jack:bob'
124     print(s.split(":"))
125     assert s.partition(':') == ("rose ", ":", "jack:bob")
126
```

```

s = b'hello'
print(s)
print(s[0])

p = Path("/d/ana2/envs/week05/python")
s = p.read_bytes()
print(len(s))

p = Path("enviroment.yml")
s = p.read_bytes()
print(s[0])

s = b.decode()
assert isinstance(s, str)
b2 = s.encode()
assert isinstance(b2, bytes)
assert b2 == b

s = "你好"
b1 = s.encode("utf-8")
print(b1)
b2 = s.encode("gbk")
print(b2)

s = "abc你好😁"
print(s)
b = s.encode()
breakpoint()

```

- 加减乘除

```

1  i = 42
2  x = 5
3  y = 7
4  z = x + y
5
6  x = 5
7  y = 17
8  assert y // x == 3
9  assert y % x == 2

```

- 列表

```

33  b = a * 3
34  print(f"{b=}")
35  a[0] = 9
36  print(a)
37  print(b)
38
39  a = [2, 5]
40  b = [a] * 3
41  print(f"{b=}")
42  a[0] = 9
43  print(a)
44  print(b)
45
46  a = [2, 5, 3]
47  b = [i**2 for i in a]
48  print(b)
49  b = [i**2 for i in a if i < 4]
50  print(b)
51
52  a = [2, 5]
53  b = [a] * 3
54  print(f"{b=}")
55  x= a.append(4)
56  print(x)
57  print(a)

```

- 字典等



• use\_of\_deepy

```
1 d = {"a": 1, "bb": 5, "cat": 3}
2 print(d)
3 print(type(d))
4
5 for a in d:
6     print(a)
7
8 for a in d:
9     print(d[a])
10
11 for a in d.values():
12     print(a)
13
14 l = [a for a in d.items()]
15 print(l)
16
17 for k, v in d.items():
18     print(k, v)
19
20 breakpoint()
```

```

use_of_pass.py
1  from pathlib import Path
2  from pprint import pprint
3
4  p = Path(".")
5  print(p)
6  print(p.exists())
7  print(p.absolute())
8  pprint(list(p.iterdir()))
9
10 p = Path('./data1')
11 print(p.exists())
12 p.mkdir(exist_ok=True)
13 print(p.exists())
14 print(p.is_dir())
15
16 p = Path(".")
17 p2 = p / "README.md"
18 print(p2)
19 p3 = p2.absolute()
20 print(p3)
21

```

WEEK05

- .gitignore
- ! environment.yml U
- 👤 LICENSE
- 📖 README.md
- 🔗 use\_of\_bool.py U
- 🔗 use\_of\_bytes.py U
- 🔗 use\_of\_datetime.py U
- 🔗 use\_of\_dict.py U
- 🔗 use\_of\_float.py U
- 🔗 use\_of\_int.py U
- 🔗 use\_of\_list.py U
- 🔗 use\_of\_pass.py U
- 🔗 use\_of\_set.py U
- 🔗 use\_of\_str.py U
- 🔗 use\_of\_tuple.py U

use\_of\_datetime.py

```

1  from datetime import datetime, date, timedelta
2
3  t1 = date.today()
4  t2 = date(2025, 11, 11)
5  td = t2 - t1
6  print(td)
7  print(type(td))
8  print(td.days)
9
10 t1 = "2024-05-23"
11 t2 = "2024-12-04"
12 d1 = datetime.strptime(s1, "%Y-%m-%d")
13 d2 = datetime.strptime(s2, "%Y-%m-%d")
14 print(d1)
15 print(d2)
16

```