

```
(base) 12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode
$ ll
total 8
drwxr-xr-x 1 12460 197609 0  3月 16 20:52 week02/
drwxr-xr-x 1 12460 197609 0  3月 22 20:30 week03/
drwxr-xr-x 1 12460 197609 0  3月 29 12:35 week04/
drwxr-xr-x 1 12460 197609 0  4月 12 10:49 week05/
```

1.

2. 运用 `conda create -n environment.yml python-3.12 --channel conda-forge` 创建环境

3.

```
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_stf.py
3025255177104
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_stf.py
hello
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |
```

```
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_stf.py
3025255177104
(week05.yml)
```

4.

```
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_stf.py
hello
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_stf.py
3025255177104
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_str.py
2338281429248
2338281427264
[9, 5]
[2, 5]
2338281429248
2338281427264
<class 'list'>
isinstance(a,str): False
isinstance(a,list): True
False
Traceback (most recent call last):
  File "D:\gitcode\week05\use_of_str.py", line 16, in <module>
    assert isinstance(a, str)
    ^^^^^^^^^^^^^^^^^^^^^^^
AssertionError
```

```
12 print(type(a))
13 print("instance(a,str):", instance(a, str))
14 print("instance(a,list):", instance(a, list))
15 print(instance(a, (str, float)))
16 assert instance(a, list)
17 print("goodbye")
18
```

```
assert instance(a, str)
^^^^^^^^^^^^^^^^^^^^
AssertionError
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (m
$ python use_of_str.py
2337344329984
2337344328000
[9, 5]
[2, 5]
2337344329984
2337344328000
<class 'list'>
instance(a,str): False
instance(a,list): True
False
goodbye
(week05.yml)
```

```
! week05.yml U  use_of_str.py X
use_of_str.py > ...
1 a[u] = 0
2 print(a)
3 print(b)
4 print(id(a))
5 print(id(b))
6 print(type(a))
7 print("instance(a,str):", isinstance(a, str))
8 print("instance(a,list):", isinstance(a, list))
9 print(isinstance(a, (str, float)))
10 try:
11     assert isinstance(a, str)
12 except AssertionError:
13     print("type error")
14 print("goodbye")
15
16
17
18
19
20
21
```

```

1 print("字面值")
2 s = "university"
3 print(s)
4 print(isinstance(s, str))
5 assert type(s) is str
6
7
8 print("f-string")
9 x = "tom"
10 s = f"name:{x}"
11 print(s)
12
13 s = "a\tb"
14 print("TAB", s)
15
16 s = "aaa\nbbb"
17 print("New Line", s)
18

```

```
$ python use_of_str2.py
字面值
university
True
f-string
name:tom
TAB a b
New Line aaa
bbb
=====
unsupported operand type(s) for /: 'str' and 'int'
True
True
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$
```

```

use_of_str2.py / ...
28     print(e)
29
30     assert s == "aaaa"
31
32     print("abc" > "ABC")
33     print("9" < ":")
34     print("book" < "{")
35
36     assert "book"
37     assert not ""
38
39     s = "book"
40     print(iter(s))
41
42     breakpoint()
43     for c in s:
44         print(c)
45
True
f-string
name:tom
TAB a  b
New Line aaa
bbb
=====
unsupported operand type(s) for /: 'str' and 'int'
True
True
True
<str_ascii_iterator object at 0x000001FCE027BEE0>
> d:\gitcode\week05\use_of_str2.py(43)<module>()
-> for c in s:
(Pdb) l
38
39     s = "book"
40     print(iter(s))
41
42     breakpoint()
43 -> for c in s:
44         print(c)
[EOF]
(Pdb) g = iter(s)
(Pdb) p g
<str_ascii_iterator object at 0x000001FCE02AC730>
(Pdb) p next(g)
'b'
(Pdb)
'o'
(Pdb)
'o'
(Pdb)
'k'
(Pdb)
*** StopIteration
(Pdb) |

```

```

assert s == "aaaa"

print("abc" > "ABC")
print("9" < ":")
print("book" < "{")

assert "book"
assert not ""

s = "book"
print(iter(s))

# breakpoint()
for c in s:
    print(c)

print(len(s))

$ python use_of_str2.py
字面值
university
True
f-string
name:tom
TAB a  b
New Line aaa
bbb
=====
unsupported operand type(s) for /: 'str' and 'int'
True
True
True
<str_ascii_iterator object at 0x0000024C7912BF10>
b
o
o
k
4
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)

```

7.wat 没办法运行

```

print("9" < ":")
print("book" < "{")

assert "book"
assert not ""

s = "book"
print(iter(s))

# breakpoint()
for c in s:
    print(c)

print(len(s))

s = "book"
assert s[1:3] == "oo" # 1包含, 3不包含
breakpoint()

```

```

TAB a b
New Line aaa
bbb
=====
unsupported operand type(s) for /: 'str' and 'int'
True
True
True
<str_ascii_iterator object at 0x000001F497FBC0A0>
b
o
o
k
4
--Return--
> d:\gitcode\week05\use_of_str2.py(50)<module>()->None
-> breakpoint()
(Pdb) p s
'book'
(Pdb)
*** ModuleNotFoundError: No module named 'wat'
(Pdb)

```

8.

```

for c in s:
    print(c)

print(len(s))

s = "book"
assert s[1:3] == "oo" # 1包含, 3不包含
# breakpoint()

s = "the book of why took nooo"
print(s.capitalize())
print(s)
print(s.count("oo") == 3)
# breakpoint()

```

```

字面值
university
True
f-string
name:tom
TAB a b
New Line aaa
bbb
=====
unsupported operand type(s) for /: 'str' and 'int'
True
True
True
<str_ascii_iterator object at 0x000001725D01C1F0>
b
o
o
k
4
The book of why took nooo
the book of why took nooo
True

```

```

use_of_bytes.py > ...
1 from pathlib import Path
2
3 s = b"hello"
4 print(s)
5 print(s[0])
6
7 p = Path("/f/python/conda/envs/week05.yml/python")
8 breakpoint()
9

```

```

/f/python/conda/envs/week05.yml/python
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_bytes.py
b'hello'
104
--Return--
> d:\gitcode\week05\use_of_bytes.py(8)<module>()->None
-> breakpoint()
(Pdb) l
3 s = b"hello"
4 print(s)
5 print(s[0])
6
7 p = Path("/f/python/conda/envs/week05.yml/python")
8 -> breakpoint()
[EOF]
(Pdb) p p
WindowsPath('/f/python/conda/envs/week05.yml/python')

```

```

use_of_bytes.py > ...
1 from pathlib import Path
2
3 s = b"hello"
4 print(s)
5 print(s[0])
6
7 p = Path("F:\python\conda\envs\week05.yml\python.exe")
8 s = p.read_bytes()
9 print(len(s))
10

```

```

File "F:\python\conda\envs\week05.yml\Lib\pathlib.py", line 104, in
    return io.open(self, mode, buffering, encoding, errors
FileNotFoundError: [Errno 2] No such file or directory: 'F
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_bytes.py
b'hello'
104
93184
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$

```



```

print(len(s))

p = Path("week05.yml")
b = p.read_bytes()
print(b[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)

```

```

$ python use_of_bytes.py
b'hello'
104
93184
110
b'\xe4\xbd\xa0\xe5\xa5\xbd'
b'\xc4\xe3\xba\xc3'
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

```

use_of_int.py > ...
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
10

```

```

$ python use_of_bytes.py
b'hello'
104
93184
110
b'\xe4\xbd\xa0\xe5\xa5\xbd'
b'\xc4\xe3\xba\xc3'
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /
$ python use_of_int.py
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /
$

```

9.

```

Help  <  >  MINGW64:/d/gitcode/week05  x  +  v
! week05.yml U  use_of_str.
+ use_of_float.py > ...
1 x = 3.14
2 print(type(x))
3

```

```

12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode
$ cd week05
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_float.py
<class 'float'>
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

```

! week05.yml U  use_of_str.
+ use_of_float.py > ...
1 import random
2
3 x = 3.14
4 print(type(x))
5
6 y = float("3.14")
7 print(type(y))
8
9 assert x == y
10
11 x = 5 / 3
12 print(x, type(x))
13
14 x = random.random()
15 print(x)
16

```

```

$ cd week05
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_float.py
<class 'float'>
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_float.py
<class 'float'>
<class 'float'>
1.6666666666666667 <class 'float'>
0.05474914612623483
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

```

print(x)
assert not 0.0

nan = float("nan")
print(nan + 3)
print(nan > 3)
print(nan < 3)
print(nan == 3)

pinf = float("inf")
print(3.14e-2)
print(pinf > 1e2000)
print(pinf < pinf)
print(pinf == pinf)

ninf = float("-inf")
print(ninf)

```

```

<class 'float'>
<class 'float'>
1.6666666666666667 <class 'float'>
0.15028689847079557
nan
False
False
False
0.0314
False
False
True
-inf
(True)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (m
$

```

10.

```

week05.yml U  use_of_str.py U
use_of_bool.py > ...
1  t = True
2  f = False
3  print(t, f)
4
5  print(type(t))
6  print(isinstance(t, int))
7

```

```

-inf
(True)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_bool.py
True False
<class 'bool'>
True
(True)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$

```

11

```

_of_str.py U  use_of_str2.py U
use_of_list.py > [0]
1  l = [1, 5, "abc"]
2  print(l)
3
4  print(l[0])
5  print(l[1])
6  print(l[2])
7
8  try:
9      print(l[3])
10 except IndexError as e:
11     print(e)
12
13 print(l[-1])
14 print(l[-1][1])
15

```

```

True
(True)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_bool.py
True False
<class 'bool'>
True
(True)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$

```

12

```

a = [2, 5]
b = [5]
try:
    print(a - b)
except TypeError as e:
    print(e)

a = [2, 5]
print(a * 3)

a = [2, 5]
b = a * 3
a[0] = 9
print(a)
print(b)

```

```

[1, 5, 'abc']
1
5
abc
list index out of range
abc
b
[2, 5, 'a', 'c']
['a', 'c', 2, 5]
False
unsupported operand type(s) for -: 'list' and 'list'
[2, 5, 2, 5, 2, 5]
[9, 5]
[2, 5, 2, 5, 2, 5]
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)

```

13

```

use_of_dict.py > ...
d = {"a": 1, "bb": 5, "cat": 3}
print(d)
print(type(d))

```

```

(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_dict.py
{'a': 1, 'bb': 5, 'cat': 3}
<class 'dict'>
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

```

use_of_dict.py > ...
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.values()]
15 print(l)
16

```

```

{'a': 1, 'bb': 5, 'cat': 3}
<class 'dict'>
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_dict.py
{'a': 1, 'bb': 5, 'cat': 3}
<class 'dict'>
a
bb
cat
1
5
3
1
5
3
[1, 5, 3]
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

14.

```

print(t[0])
print(t[1])
print(t[2])

try:
    t[0] = 9
except TypeError as e:
    print(e)

d = {}
d["abc"] = 5
d[7] = 100
print(d)

```

```

(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_tuple.py
(1, 'a', 3.14)
<class 'tuple'>
1
a
3.14
'tuple' object does not support item assignment
{'abc': 5, 7: 100}
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

```

except TypeError as e:
    print(e)

d = {}
d["abc"] = 5
d[7] = 100
q = [3, 1]

try:
    d[q] = 21
except TypeError as e:
    print(e)

t = (3, 1)
d[t] = 21
print(d)
print(d[3, 1])

```

```

$ python use_of_tuple.py
(1, 'a', 3.14)
<class 'tuple'>
1
a
3.14
'tuple' object does not support item assignment
unhashable type: 'list'
{'abc': 5, 7: 100, (3, 1): 21}
21
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$

```

15

```

use_of_set.py > ...
1 s = {1, 4, 7}
2 print(s)
3 print(type(s))
4
5 q = {1, 2, 1, 2, 5, 1}
6 print(q)
7 s = set(q)
8 print(s)
9
10 s = {5, 2, 1, 3, 4, 1}
11 print(s)
12 print(2 in s)
13 print(3 in s)
14
15 s2 = {3, 2, 3}
16 print(s | s2)
17 print(s & s2)
18 print(s ^ s2)
19

```

```

print(2 in 5)
^^^^^^
TypeError: argument of type 'int' is not iterable
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_set.py
{1, 4, 7}
<class 'set'>
{1, 2, 5}
{1, 2, 5}
{1, 2, 3, 4, 5}
True
True
{1, 2, 3, 4, 5}
{2, 3}
{1, 4, 5}
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ |

```

16

```

use_of_path.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

```

```

AttributeError: WindowsPath object has no attribute 'iterdir'
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)
$ python use_of_path.py
.
True
D:\gitcode\week05
[WindowsPath('.git'),
 WindowsPath('.gitignore'),
 WindowsPath('LICENSE'),
 WindowsPath('README.md'),
 WindowsPath('use_of_bool.py'),
 WindowsPath('use_of_bytes.py'),
 WindowsPath('use_of_dict.py'),
 WindowsPath('use_of_float.py'),
 WindowsPath('use_of_int.py'),
 WindowsPath('use_of_list.py'),
 WindowsPath('use_of_path.py'),
 WindowsPath('use_of_set.py'),
 WindowsPath('use_of_str.py'),
 WindowsPath('use_of_str2.py'),
 WindowsPath('use_of_tuple.py'),
 WindowsPath('week05.yml')]
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (main)

```


17.

```

use_of_path.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
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (m
$ python use_of_path.py
.
True
D:\gitcode\week05
[WindowsPath('.git'),
 WindowsPath('.gitignore'),
 WindowsPath('data1'),
 WindowsPath('LICENSE'),
 WindowsPath('README.md'),
 WindowsPath('use_of_bool.py'),
 WindowsPath('use_of_bytes.py'),
 WindowsPath('use_of_dict.py'),
 WindowsPath('use_of_float.py'),
 WindowsPath('use_of_int.py'),
 WindowsPath('use_of_list.py'),
 WindowsPath('use_of_path.py'),
 WindowsPath('use_of_set.py'),
 WindowsPath('use_of_str.py'),
 WindowsPath('use_of_str2.py'),
 WindowsPath('use_of_tuple.py'),
 WindowsPath('week05.yml')]
True
True
True
README.md
(week05.yml)

```

18.

```

se_of_datetime.py > ...
from datetime import date, datetime, timedelta # noqa: F401

t1 = date.today()
t2 = date(2025, 11, 11)
td = t2 - t1
print(td)
print(type(td))
print(td.days)

s1 = "2024-05-23"
s2 = "2024-12-21"
d1 = datetime.strptime(s1, "%Y-%m-%d")
d2 = datetime.strptime(s2, "%Y-%m-%d")
print(d1)
print(d2)

d1 = datetime.strptime(s1, "%Y-%m-%d")
^^^^^^^^
NameError: name 'datetime' is not defined. Did you
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (
$ python use_of_datetime.py
213 days, 0:00:00
<class 'datetime.timedelta'>
213
2024-05-23 00:00:00
2024-12-21 00:00:00
(week05.yml)
12460@LAPTOP-T1VTLFCA MINGW64 /d/gitcode/week05 (
$

```