

第六周 Python 代码组织

```
EXPLORER  ...  ! environment.yml U  guessing_game.py U X
WEEK06
  .gitignore
  environment.yml U
  guessing_game.py U
  LICENSE
  README.md

1  import random
2
3
4  def guessing_game():
5      # 生成 1 到 100 之间的随机整数
6      secret_number = random.randint(1, 100)
7      n = 0
8
9      print("欢迎来到猜数字游戏! 我已经想好了一个 1 到 100 之间的数字, 你可以开始猜啦。")
10
11     while True:
12         n += 1
13         # 获取玩家输入
14         guess = input(
15             f"(第 {n} 次尝试) 请输入你猜的数字 (输入整数, 或者输入 q 回车退出): "
16         )
17         guess = guess.strip() # 去除多余空白字符
18
19         if guess == "q":
20             break
21
22         try:
23             guess = int(guess)
24         except ValueError:
25             print("输入无效 🚫, 请输入一个整数。")
26             continue
27
28         if guess < 1 or guess > 100:
29             print("输入无效 🚫, 输入值应该在 1~100 之间。")
30             continue
```

```
27
28
29     if guess
30     print
31     conti
32         n = 0
33
34     if guess
35     print("欢迎来到猜数字游戏! 我已经想好了一个 1 到 100 之间的
36     数字, 你可以开始猜啦。")
37
38     while True:
39         (Pdb) n
40         > c:\users\mate\repo\week06\guessing_game.py(49)<module>()
41         -> if __name__ == "__main__":
42         (Pdb) n
43         > c:\users\mate\repo\week06\guessing_game.py(50)<module>()
44         -> guessing_game()
45         (Pdb) p __name__
46         '__main__'
47         (Pdb) █
48
49     raise Not
50
51     print("游戏结束, 再见 🍀。")
52
53
54     if __name__ == "__main__":
55         guessing_game()
```

```
secret_number = random.randint(1, 100) # 赋值语句
n = 0

print("欢迎来到

while True:
    n += 1
    # 获取玩家输入
    guess = input(
        f"(第
    )
    guess = guess.strip() # 去除多余空白字符

    if guess == "q":
        break

    try:
        guess = int(guess)
    except ValueError:
        print("输入无效 🚫, 请输入一个整数。")
        continue

    if guess < 1 or guess > 100:
        print("输入无效 🚫, 输入值应该在 1~100 之间。")
        continue
```

```
secret_number = random.randint(1, 100) #赋值语句
n = 0

print("欢迎来

while True:
    n += 1
    # 获取玩家
    guess = int(input(f"第{n}次尝试，请输入你猜的数字 (输入整数，或者输入 q 回车退出): "))
    if guess < 1 or guess > 100:
        print("请输入 1 到 100 之间的数字。")
        continue
    if guess == secret_number:
        print("恭喜你 🎉，猜对了！")
        break
    if guess < secret_number:
        print("猜的数字太小了，再试试。")
    else:
        print("猜的数字太大了，再试试。")
    try:
        guess = int(input(f"第{n}次尝试，请输入你猜的数字 (输入整数，或者输入 q 回车退出): "))
    except ValueError:
        print("请输入有效的整数。")
        continue
```

```
guessing_game():
    # 生成 1 到 100 之间的随机整数
    secret_number = random.randint(1, 100)
    n = 0

    print("欢迎来

while True:
    n += 1
    # 获取玩家
    guess = int(input(f"第{n}次尝试，请输入你猜的数字 (输入整数，或者输入 q 回车退出): "))
    if guess < 1 or guess > 100:
        print("请输入 1 到 100 之间的数字。")
        continue
    if guess == secret_number:
        print("恭喜你 🎉，猜对了！")
        break
    if guess < secret_number:
        print("猜的数字太小了，再试试。")
    else:
        print("猜的数字太大了，再试试。")
    try:
        guess = int(input(f"第{n}次尝试，请输入你猜的数字 (输入整数，或者输入 q 回车退出): "))
    except ValueError:
        print("请输入有效的整数。")
        continue

if guess == secret_number:
    print("恭喜你 🎉，猜对了！")
```

4. 创建一个 `flow_controls.py` 文件，让豆包 (或 DeepSeek 等任何大模型) 生成例子，尝试运行，体会理解以下 Python 流程控制语句：

- `for` 迭代循环 (iteration loop)
- `while` 条件循环 (conditional loop)
- `break` 打断跳出循环
- `continue` 跳至下一轮循环
- `for...else` 循环未被打断的处理
- `if` 条件分支
- `if...elif[...elif]` 多重条件分支
- `if...else` 未满足条件的处理
- `try...except[...except...else...finally]` 捕捉异常的处理
- `raise` 主动抛出异常

```
MINGW64/c/Users/mate/repr x + v
48     count += 3 # 29 32 35 38 41 44 47
49
50     numbers = [1, 2, 3, 4, 5]
51     breakpoint()
52     -> while numbers:
53         print(numbers.pop())
[EOF]
(Pdb) p numbers
[1, 2, 3, 4]
(Pdb) n
> c:\users\mate\repo\week06\flow_controls.py(53)<module>()
-> print(numbers.pop())
(Pdb) n
4
> c:\users\mate\repo\week06\flow_controls.py(52)<module>()
-> while numbers:
(Pdb) p numbers
[1, 2, 3]
(Pdb) █
```

```

: "meet", "vegetable": "cherry", "city": "harbin"}
l.keys():
ey}: {value}") # foo

: "meet", "vegetable":
l.keys():

: "meet", "vegetable":
irl.values():
e)
语句
50:
t)
# 29 32 35 38 41 44 4
2, 3, 4, 5]

MINGW64/c/Users/mate/repr x + v
> c:\users\mate\repo\week06\flow_controls.py(52)<module>()
-> while numbers:
(Pdb) n
> c:\users\mate\repo\week06\flow_controls.py(53)<module>()
-> print(numbers.pop())
(Pdb) n
1
> c:\users\mate\repo\week06\flow_controls.py(52)<module>()
-> while numbers:
(Pdb) p numbers
[]
(Pdb) p bool(numbers)
False
(Pdb) █
```

```
myjob.py
1  import mylib # noqa: F401
2
3  breakpoint()
4

MINGW64/c/Users/mate/repr x + v
[EOF]
(Pdb) p mylib
<module 'mylib' from 'C:\\Users\\mate\\repo\\week06\\mylib.py'>
(Pdb) import wat
(Pdb) wat / mylib

value: <module 'mylib' from 'C:\\Users\\mate\\repo\\week06\\mylib.py'>
type: module

Public attributes:
  def func()

(Pdb) █
```

```
... week06
mylib.py U myjob.py X
myjob.py > ...
1 import mylib # noqa: F401
2
3 y = mylib.func1() # 106856.0
4 print(y) # 返回值是 None什么也没有
5
6 try:
7     y = mylib.func1(0)
8 except TypeError as e:
9     print(e)
10
```

```
MINGW64/c/Users/mate/repr X + v
(week06)
mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$ python myjob.py
106856.0
None
106856.0
(week06)
mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$ python myjob.py
106856.0
None
func1() takes 0 positional arguments but 1 was given
(week06)
mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$
```

```
File Edit Selection View Go ... week06
EXPLORER
WEEK06
  __pycache__
  guessing_game.cpython-...
  mylib.cpython-312.pyc
  src\mypkg
    __init__.py U
    guessing_game.py U
    mylib.py U
    .gitignore
    environment.yml U
    flow_controls.py U
    LICENSE
    myjob.py U
    pyproject.toml U
    README.md
pyproject.toml U
pyproject.toml
1 [project]
2 name = "mypackage"
3 version = "2025.4.14"
4 dependencies = [
5     "openpyxl",
6 ]
7 authors = [
8     {name = "READ lijie", email = "2661805899@qq.com"},
9 ]
10 description = "test"
11
12 [project.optional-dependencies]
13 dev = [
14     "pytest",
15 ]
```

```
game.cpython-...
thon-312.pyc
ent.yml U
ols.py U
toml U
nd
2 name = "mypackage"
3 version = "2025.4.14"
4 dependencies = [
5     "openpyxl"
6 ]
7 authors = [
8     {name = "
9 }
10 description
11
12 [project.op
13 dev = [
14     "pytest"
15 ]
16
```

```
MINGW64/c/Users/mate/repr X + v
-rw-r--r-- 1 mate 197121 18805 4月 13 11:32 LICENSE
-rw-r--r-- 1 mate 197121 1483 4月 13 16:27 myjob.py
-rw-r--r-- 1 mate 197121 381 4月 14 14:10 pyproject.toml
-rw-r--r-- 1 mate 197121 2239 4月 13 11:32 README.md
drwxr-xr-x 1 mate 197121 0 4月 14 13:48 src/
(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$ pip install -e .
Obtaining file:///C:/Users/mate/repo/week06
Installing build dependencies ... done
Checking if build backend supports build_editable ... done
Getting requirements to build editable ... done
Preparing editable metadata (pyproject.toml) ... done
Requirement already satisfied: openpyxl in d:\ananconda\lib\site-packages (from mypackage==2025.4.14) (3.1.5)
Requirement already satisfied: et-xmlfile in d:\ananconda\lib\site-packages (from openpyxl->mypackage==2025.4.14) (1.1.0)
Building wheels for collected packages: mypackage
Building editable for mypackage (pyproject.toml) ... done
Created wheel for mypackage: filename=mypackage-2025.4.14-0.editable-py3-none-any.whl size=7540 sha256=d5d5758794fcc3e512b5f0cdf0e11d373e69ed3dd513828e0e2deffe3678896
Stored in directory: C:\Users\mate\AppData\Local\Temp\pip-ephem-wheel-cache-1pvxhiv3\wheels\92\ce\6c\e5593960261f463dcf58f14fb88f70cd5229e62d7322593c9b
Successfully built mypackage
Installing collected packages: mypackage
Successfully installed mypackage-2025.4.14
(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
```

```
File "<stdin>", line 1, in <module>
ModuleNotFoundError: No module named 'mypackage'
>>> import mypkg
>>> mypkg.__file__
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'mypkg' is not defined. Did you mean: 'mypkg'?
>>> mypkg.__file__
'C:\\Users\\mate\\repo\\week06\\src\\mypkg\\__init__.py'
>>> import mypkg.mylib
>>> mypkg.mylib.func1()
106856.0
>>> mypkg.guessing_game
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
AttributeError: module 'mypkg' has no attribute 'guessing_game'
>>> import mypkg.guessing_game
>>> mypkg.guessing_game.
File "<stdin>", line 1
mypkg.guessing_game.
^
SyntaxError: invalid syntax
>>> mypkg.guessing_game.guessing_game
<function guessing_game at 0x000001851AE66200>
>>> mypkg.guessing_game.guessing_game
<function guessing_game at 0x000001851AE66200>
>>>
>>> mypkg.guessing_game.guessing_game()
欢迎来到猜数字游戏! 我已经想好了一个 1 到 100 之间的数字, 你可以开始猜啦。
(第 1 次尝试) 请输入你猜的数字 (输入整数, 或者输入 q 回车退出):
```

```
1 from mypkg import mylib # noqa: F401
2
-56.72708045777622
-78.61916848035314
15
15
15
-3
func6() got some positional-only arguments passed as keyword arguments: 'a'
5
func7() takes 2 positional arguments but 3 were given
21
0
name:alice
age:77
city:harbin
位置实参 arg1:101
位置实参 arg2:222
位置实参 named_arg:default
位置实参 arg1:30
位置实参 arg2:445
位置实参 named_arg:default
位置实参 arg1:30
位置实参 arg2:445
位置实参 named_arg:new york
a = 1, b = 2, c = 3
位置实参 arg1:7
位置实参 arg2:88
位置实参 named_arg:22
(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$
```

```
src > mypkg > mylib.py > func1
1 def func1(): # 没有形参, 没有返回值
2     x = 20
位置实参 arg2:445
位置实参 named_arg:new york
a = 1, b = 2, c = 3
位置实参 arg1:7
位置实参 arg2:88
位置实参 named_arg:22
(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (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.
>>> import mypkg
>>> quit()
... quit()
File "<stdin>", line 2
quit()
^
SyntaxError: invalid character ' ' (U+FF09)
>>> quit()
(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (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.
>>> from mypkg import mylib
>>> mylib.func1()
44756.0
>>>
```

```

(base) mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$ python
Python 3.12.7 | packaged by Anaconda, Inc. | (main, Oct 4 2024, 13:17:27) [MSC v.1929 64 bit
4)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> from mypkg import mylib
>>> mylib.func1()
44756.0
>>> import openpyxl
>>> openpyxl.__file__
'D:\\ananconda\\Lib\\site-packages\\openpyxl\\__init__.py'
>>> mylib.__file__
'C:\\Users\\mate\\repo\\week06\\src\\mypkg\\mylib.py'
>>>

```

```

ng_game.cpython-312.pyc 2 name = "mypackage"
python-312.pyc MINGW64/c/Users/mate/repo x + v
Preparing editable metadata (pyproject.toml): started
Preparing editable metadata (pyproject.toml): finished with status 'done'
Collecting openpyxl (from mypackage==2025.4.14->r C:\Users\mate\repo\week06\condaenv.4mo54tyx.req)
Downloading openpyxl-3.1.5-py2.py3-none-any.whl.metadata (2.5 kB)
Collecting et-xmlfile (from openpyxl->mypackage==2025.4.14->r C:\Users\mate\repo\week06\condaenv.)
Downloading et_xmlfile-2.0.0-py3-none-any.whl.metadata (2.7 kB)
Downloading openpyxl-3.1.5-py2.py3-none-any.whl (250 kB)
Downloading et_xmlfile-2.0.0-py3-none-any.whl (18 kB)
Building wheels for collected packages: mypackage
Building editable for mypackage (pyproject.toml): started
Building editable for mypackage (pyproject.toml): finished with status 'done'
Created wheel for mypackage: filename=mypackage-2025.4.14-py2.py3-none-any.whl size=7245 sha256=0
Stored in directory: C:\Users\mate\AppData\Local\Temp\pip-ephem-wheel-cache-pe4e6eyw\wheels\92\cb
Successfully built mypackage
Installing collected packages: et-xmlfile, openpyxl, mypackage
Successfully installed et-xmlfile-2.0.0 mypackage-2025.4.14 openpyxl-3.1.5

done
#
# To activate this environment, use
#
#     $ conda activate week06
#
# To deactivate an active environment, use
#
#     $ conda deactivate

mate@LAPTOP-JHSPH2KU MINGW64 ~/repo/week06 (main)
$

```