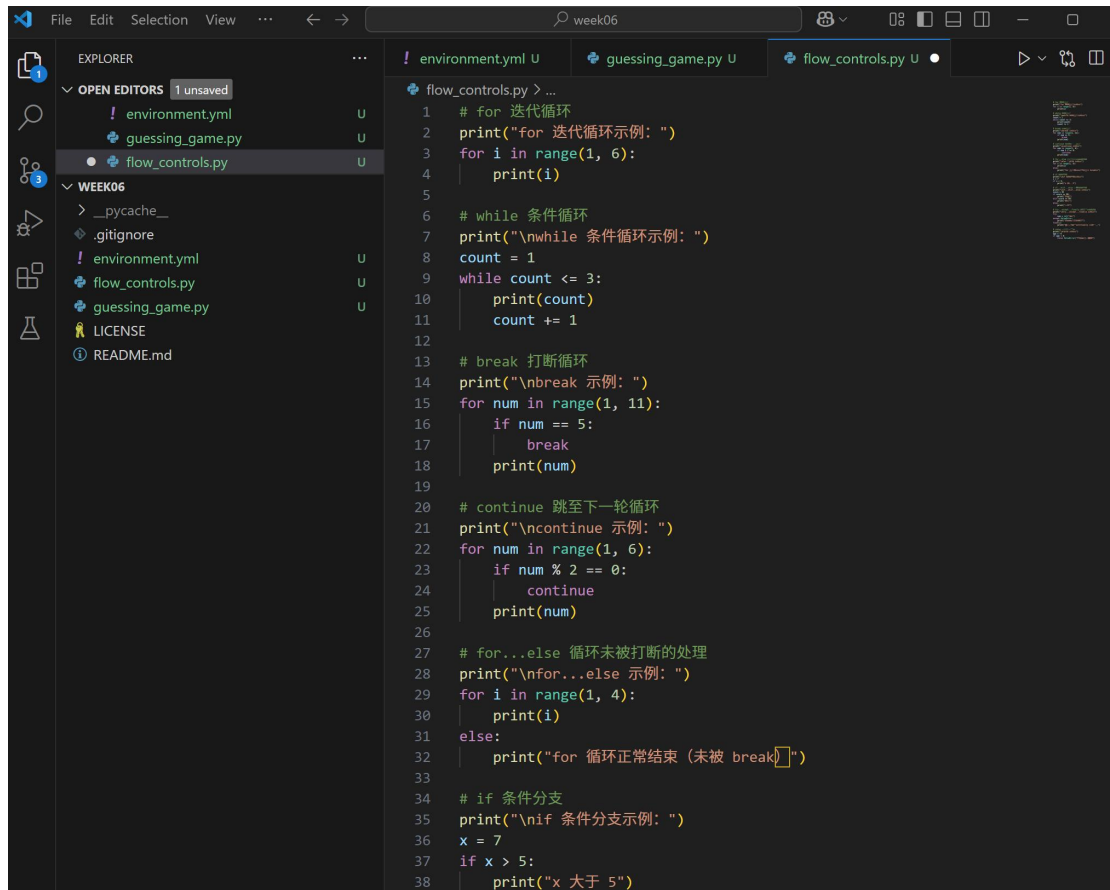


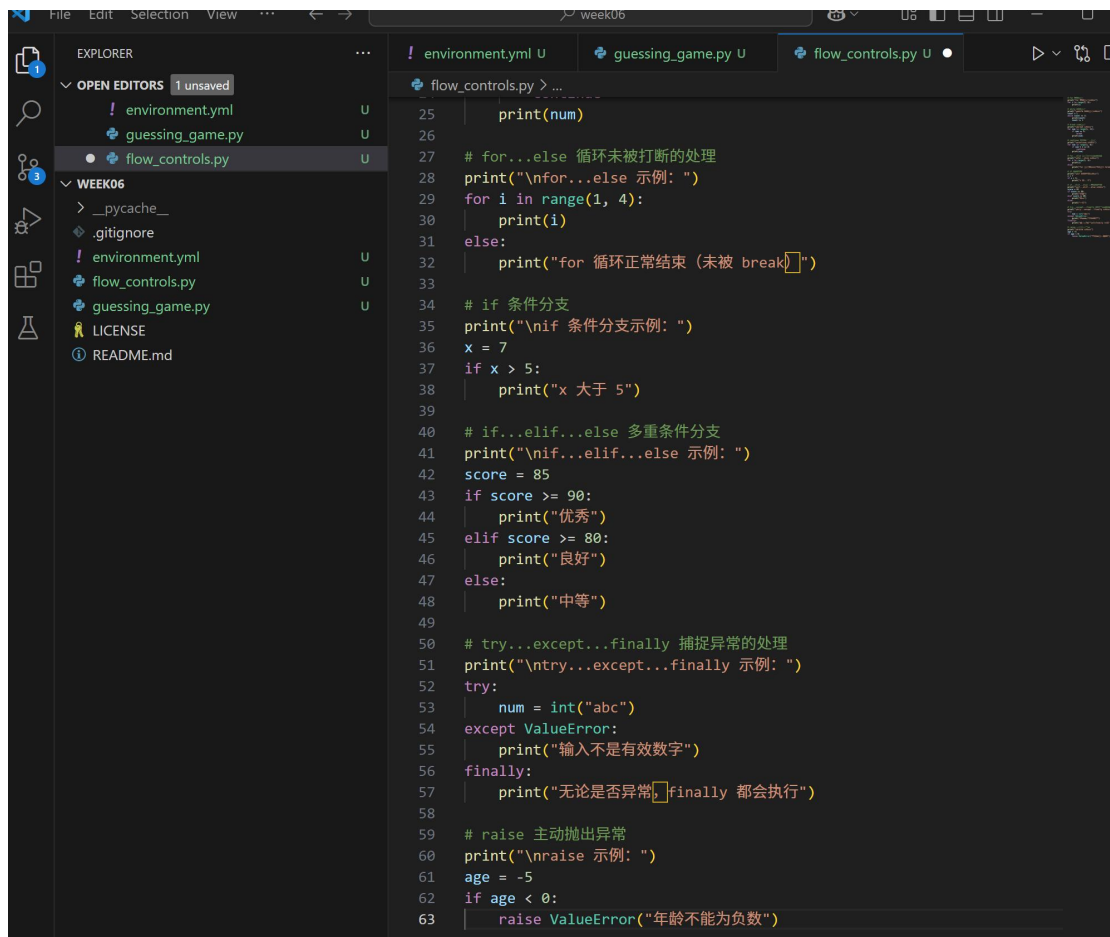
第六周学习笔记

```
MINGW64:/c/Users/wdhw1/he x + v
(base) wdhw1@wcx MINGW64 ~/hello
$
(base) wdhw1@wcx MINGW64 ~/hello
$ cd week06/
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ cp ../week05/environment.yml ./
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ ll
total 25
-rw-r--r-- 1 wdhw1 197609 91 5月 6 21:29 environment.yml
-rw-r--r-- 1 wdhw1 197609 18805 5月 6 21:28 LICENSE
-rw-r--r-- 1 wdhw1 197609 2239 5月 6 21:28 README.md
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ cat environment.yml
name: week06
channels:
  - conda-forge
dependencies:
  - python=3.12
  - wat-inspector(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ conda env create
Retrieving notices: done
Channels:
  - conda-forge
  - defaults
  - https://repo.anaconda.com/pkgs/main
  - https://repo.anaconda.com/pkgs/r
  - https://repo.anaconda.com/pkgs/msys2
Platform: win-64
Collecting package metadata (repodata.json): \

(Pdb) b 5
*** Blank or comment
(Pdb) c
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): 56
猜的数字太大了，再试试。
(第 2 次尝试) 请输入你猜的数字 (输入整数，或者输入 q 回车退出): 33
猜的数字太小了，再试试。
(第 3 次尝试) 请输入你猜的数字 (输入整数，或者输入 q 回车退出): 40
猜的数字太大了，再试试。
(第 4 次尝试) 请输入你猜的数字 (输入整数，或者输入 q 回车退出): 36
猜的数字太大了，再试试。
(第 5 次尝试) 请输入你猜的数字 (输入整数，或者输入 q 回车退出): 35
猜的数字太大了，再试试。
(第 6 次尝试) 请输入你猜的数字 (输入整数，或者输入 q 回车退出): 34
恭喜你 🎉，猜对了！
游戏结束，再见 🙋。
The program finished and will be restarted
> c:\users\wdhw1\hello\week06\guessing_game.py(1)<module>()
-> import random
(Pdb) l
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
```



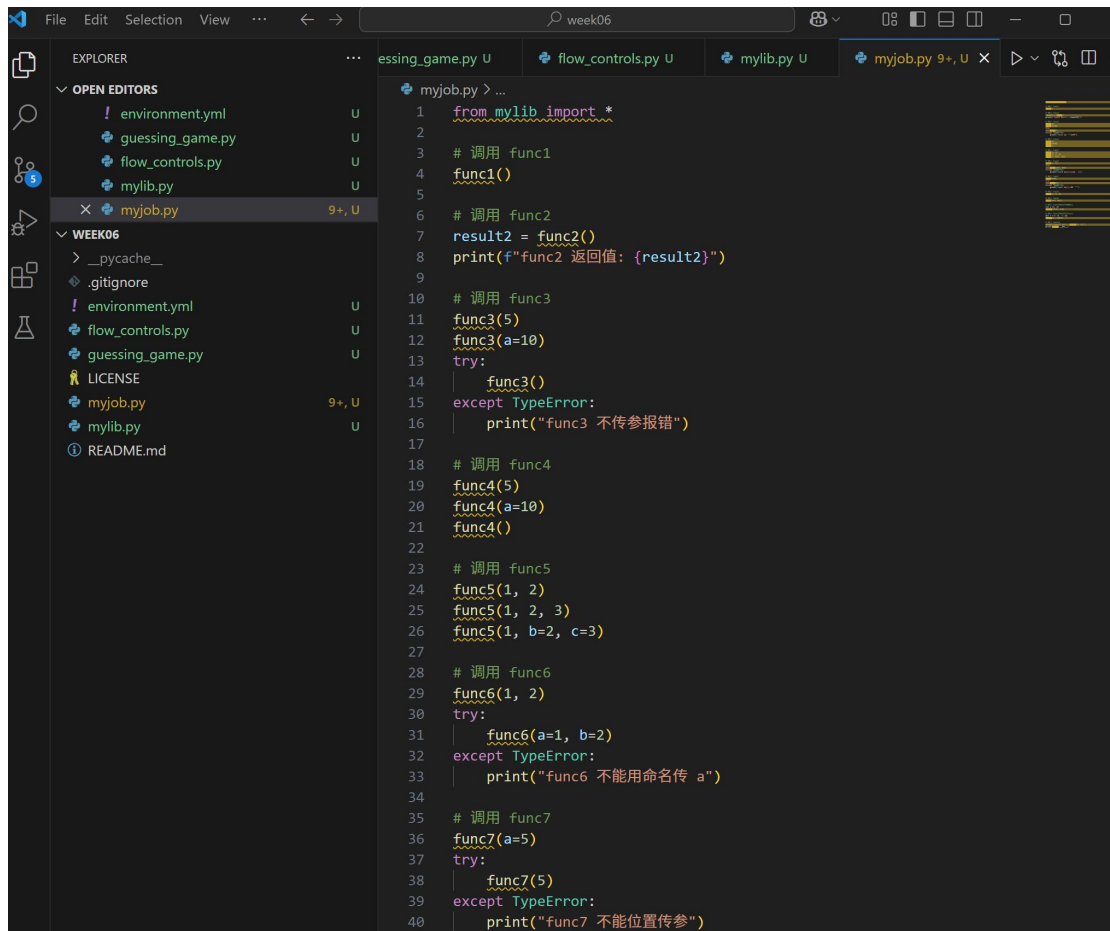
```
1 # for 迭代循环
2 print("for 迭代循环示例: ")
3 for i in range(1, 6):
4     print(i)
5
6 # while 条件循环
7 print("\nwhile 条件循环示例: ")
8 count = 1
9 while count <= 3:
10     print(count)
11     count += 1
12
13 # break 打断循环
14 print("\nbreak 示例: ")
15 for num in range(1, 11):
16     if num == 5:
17         break
18     print(num)
19
20 # continue 跳至下一轮循环
21 print("\ncontinue 示例: ")
22 for num in range(1, 6):
23     if num % 2 == 0:
24         continue
25     print(num)
26
27 # for...else 循环未被打断的处理
28 print("\nfor...else 示例: ")
29 for i in range(1, 4):
30     print(i)
31 else:
32     print("for 循环正常结束 (未被 break)")
33
34 # if 条件分支
35 print("\nif 条件分支示例: ")
36 x = 7
37 if x > 5:
38     print("x 大于 5")
```



```
25     print(num)
26
27 # for...else 循环未被打断的处理
28 print("\nfor...else 示例: ")
29 for i in range(1, 4):
30     print(i)
31 else:
32     print("for 循环正常结束 (未被 break)")
33
34 # if 条件分支
35 print("\nif 条件分支示例: ")
36 x = 7
37 if x > 5:
38     print("x 大于 5")
39
40 # if...elif...else 多重条件分支
41 print("\nif...elif...else 示例: ")
42 score = 85
43 if score >= 90:
44     print("优秀")
45 elif score >= 80:
46     print("良好")
47 else:
48     print("中等")
49
50 # try...except...finally 捕捉异常的处理
51 print("\ntry...except...finally 示例: ")
52 try:
53     num = int("abc")
54 except ValueError:
55     print("输入不是有效数字")
56 finally:
57     print("无论是否异常 finally 都会执行")
58
59 # raise 主动抛出异常
60 print("\nraise 示例: ")
61 age = -5
62 if age < 0:
63     raise ValueError("年龄不能为负数")
```

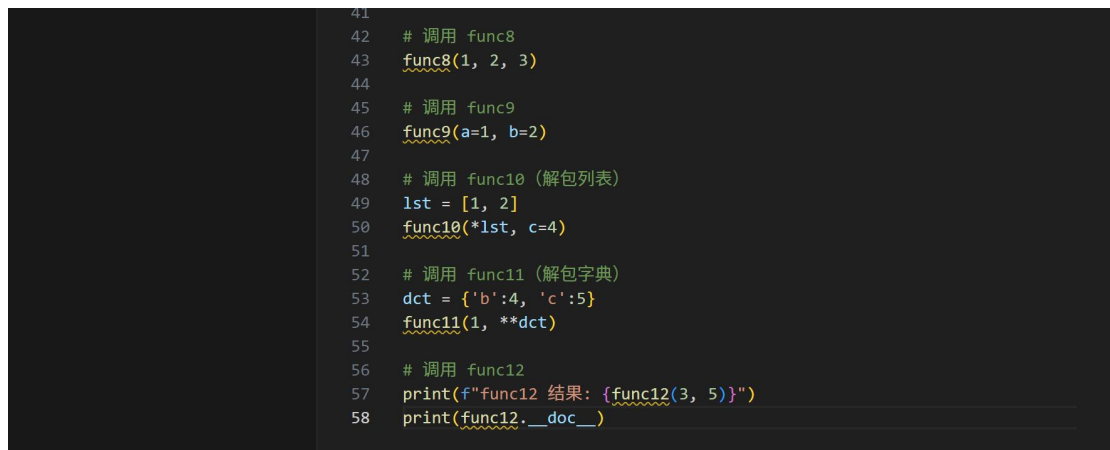
```
1 # func1: 无参无返回值
2 def func1():
3     print("func1 执行, 无参无返回值")
4
5 # func2: 无参有返回值
6 def func2():
7     return "这是 func2 的返回值"
8
9 # func3: 一个位置形参
10 def func3(a):
11     print(f"func3 接收位置参数 a: {a}")
12
13 # func4: 一个命名形参 (带默认值)
14 def func4(a=10):
15     print(f"func4 接收参数 a: {a}")
16
17 # func5: 多个位置形参和命名形参
18 def func5(a, b, c=3):
19     print(f"func5 位置参数 a: {a}, b: {b}, 命名参数 c: {c}")
20
21 # func6: 用 / 限定只接受位置实参的形参
22 def func6(a, /, b):
23     print(f"func6 位置参数 a: {a}, b: {b}")
24
25 # func7: 用 * 限定只接受命名实参的形参
26 def func7(*, a):
27     print(f"func7 命名参数 a: {a}")
28
29 # func8: 接受任意数量位置实参 (打包为元组)
30 def func8(*args):
31     print(f"func8 接收任意位置参数: {args}")
32
33 # func9: 接受任意数量命名实参 (打包为字典)
34 def func9(**kwargs):
35     print(f"func9 接收任意命名参数: {kwargs}")
36
37 # func10: 接受两个位置形参, 一个命名形参, 测试解包
38 def func10(a, b, c=3):
39     print(f"func10 位置参数 a: {a}, b: {b}, 命名参数 c: {c}")
```

```
40
41 # func11: 接受一个位置形参, 两个命名形参, 测试解包
42 def func11(a, b=2, c=3):
43     print(f"func11 位置参数 a: {a}, 命名参数 b: {b}, c: {c}")
44
45 # func12: 带 docstring 和类型注解
46 def func12(a: int, b: int) -> int:
47     """
48     计算两个整数的和。
49
50     :param a: 第一个整数
51     :param b: 第二个整数
52     :return: 两个整数的和
53     """
54     return a + b
```



The screenshot shows the VS Code interface with the Explorer sidebar on the left. The Explorer sidebar shows a project structure with a folder named 'WEEK06' containing several files: `environment.yml`, `guessing_game.py`, `flow_controls.py`, `mylib.py`, `myjob.py` (highlighted), and `README.md`. The main editor window displays the content of `myjob.py`. The code includes imports, function calls, and error handling using `try` and `except` blocks.

```
1  from mylib import *
2
3  # 调用 func1
4  func1()
5
6  # 调用 func2
7  result2 = func2()
8  print(f"func2 返回值: {result2}")
9
10 # 调用 func3
11 func3(5)
12 func3(a=10)
13 try:
14     func3()
15 except TypeError:
16     print("func3 不传参报错")
17
18 # 调用 func4
19 func4(5)
20 func4(a=10)
21 func4()
22
23 # 调用 func5
24 func5(1, 2)
25 func5(1, 2, 3)
26 func5(1, b=2, c=3)
27
28 # 调用 func6
29 func6(1, 2)
30 try:
31     func6(a=1, b=2)
32 except TypeError:
33     print("func6 不能用命名传参")
34
35 # 调用 func7
36 func7(a=5)
37 try:
38     func7(5)
39 except TypeError:
40     print("func7 不能位置传参")
```



This block continues the Python code from the previous block, showing function calls and docstring printing.

```
41
42 # 调用 func8
43 func8(1, 2, 3)
44
45 # 调用 func9
46 func9(a=1, b=2)
47
48 # 调用 func10 (解包列表)
49 lst = [1, 2]
50 func10(*lst, c=4)
51
52 # 调用 func11 (解包字典)
53 dct = {'b':4, 'c':5}
54 func11(1, **dct)
55
56 # 调用 func12
57 print(f"func12 结果: {func12(3, 5)}")
58 print(func12.__doc__)
```

```
MINGW64/c/Users/wdhw/he x + v
GNU nano 8.3 pyproject.toml Modified
[build-system]
requires = ["setuptools", "wheel"]
build-backend = "setuptools.build_meta"

[project]
name = "mypkg"
version = "0.1.0"
authors = [
    {name = "Your Name", email = "your_email@example.com"}
]
description = "A sample package for demonstrating package creation"
requires-python = ">=3.12"

Save modified buffer?
Y Yes
N No ^C Cancel
```

```
MINGW64/c/Users/wdhw/he x + v
GNU nano 8.3 environment.yml Modified
name: guessing_game_env
dependencies:
- python=3.12
- pip:
  - -e.

Save modified buffer?
Y Yes
N No ^C Cancel
```

```
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ mkdir -p scripts
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ mv mylib.py src/mypkg/
mv: cannot move 'mylib.py' to 'src/mypkg/': No such file or directory
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ mv myjob.py scripts/
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ mkdir -p src/mypkg
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ mv mylib.py src/mypkg/
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ touch src/mypkg/__init__.py
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ nano pyproject.toml
(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ conda activate guessing_game_env

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

(base) wdhw1@wcx MINGW64 ~/hello/week06 (main)
$ pip install -e.
Looking in indexes: https://mirrors.tuna.tsinghua.edu.cn/pypi/web/simple
Obtaining file:///C:/Users/wdhw1/hello/week06
Installing build dependencies ... done
Checking if build backend supports build_editable ... done
```

```

MINGW64~/c/Users/wdhw/he  x  +  v  -  □  x
(base) wdhwlcwx MINGW64 ~/hello/week06 (main)
$ pip install -e.
Looking in indexes: https://mirrors.tuna.tsinghua.edu.cn/pypi/web/simple
Obtaining file:///C:/Users/wdhw/he/hello/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
Building wheels for collected packages: mypkg
Building editable for mypkg (pyproject.toml) ... done
Created wheel for mypkg: filename=mypkg-0.1.0-0.editable-py3-none-any.whl size=7427 sha256=2e5c7a7c16e18b9c47c3a2533cdad7ceddb7d85856ac29626234ff13c428c466
Stored in directory: C:\Users\wdhw\AppData\Local\Temp\pip-ephem-wheel-cache-j_g7hu4k\wheels\77\3d\8a\c3cc8f869c7f4775b141917fefc4402e9ba0ad23c48cd7c7d2
Ran pip subprocess with arguments:
['C:\\Users\\wdhw\\anaconda3\\envs\\guessing_game_env\\python.exe', '-m', 'pip', 'install', '-U', '-r', 'C:\\Users\\wd\\
Pip subprocess output:
Looking in indexes: https://mirrors.tuna.tsinghua.edu.cn/pypi/web/simple
Obtaining file:///C:/Users/wdhw/he/hello/week06 (from -r C:\Users\wdhw\hello\week06\condaenv.0bcmrswl.requirements.txt ())
Installing build dependencies: started
Installing build dependencies: finished with status 'done'
Checking if build backend supports build_editable: started
Checking if build backend supports build_editable: finished with status 'done'
Getting requirements to build editable: started
Getting requirements to build editable: finished with status 'done'
Preparing editable metadata (pyproject.toml): started
Preparing editable metadata (pyproject.toml): finished with status 'done'
Building wheels for collected packages: mypkg
Building editable for mypkg (pyproject.toml): started
Building editable for mypkg (pyproject.toml): finished with status 'done'

```

```

MINGW64~/c/Users/wdhw/he  x  +  v  -  □  x
Obtaining file:///C:/Users/wdhw/he/hello/week06 (from -r C:\Users\wdhw\hello\week06\condaenv.0bcmrswl.requirements.txt ())
Installing build dependencies: started
Installing build dependencies: finished with status 'done'
Checking if build backend supports build_editable: started
Checking if build backend supports build_editable: finished with status 'done'
Getting requirements to build editable: started
Getting requirements to build editable: finished with status 'done'
Preparing editable metadata (pyproject.toml): started
Preparing editable metadata (pyproject.toml): finished with status 'done'
Building wheels for collected packages: mypkg
Building editable for mypkg (pyproject.toml): started
Building editable for mypkg (pyproject.toml): finished with status 'done'
Created wheel for mypkg: filename=mypkg-0.1.0-0.editable-py3-none-any.whl size=7427 sha256=afd8ffbd38f3ae2254c5ea2ae3e
Stored in directory: C:\Users\wdhw\AppData\Local\Temp\pip-ephem-wheel-cache-rx3kzx80\wheels\77\3d\8a\c3cc8f869c7f4772
Successfully built mypkg
Installing collected packages: mypkg
Successfully installed mypkg-0.1.0

done
#
# To activate this environment, use
#
#     $ conda activate guessing_game_env
#
# To deactivate an active environment, use
#
#     $ conda deactivate
#
(base) wdhwlcwx MINGW64 ~/hello/week06 (main)
$

```