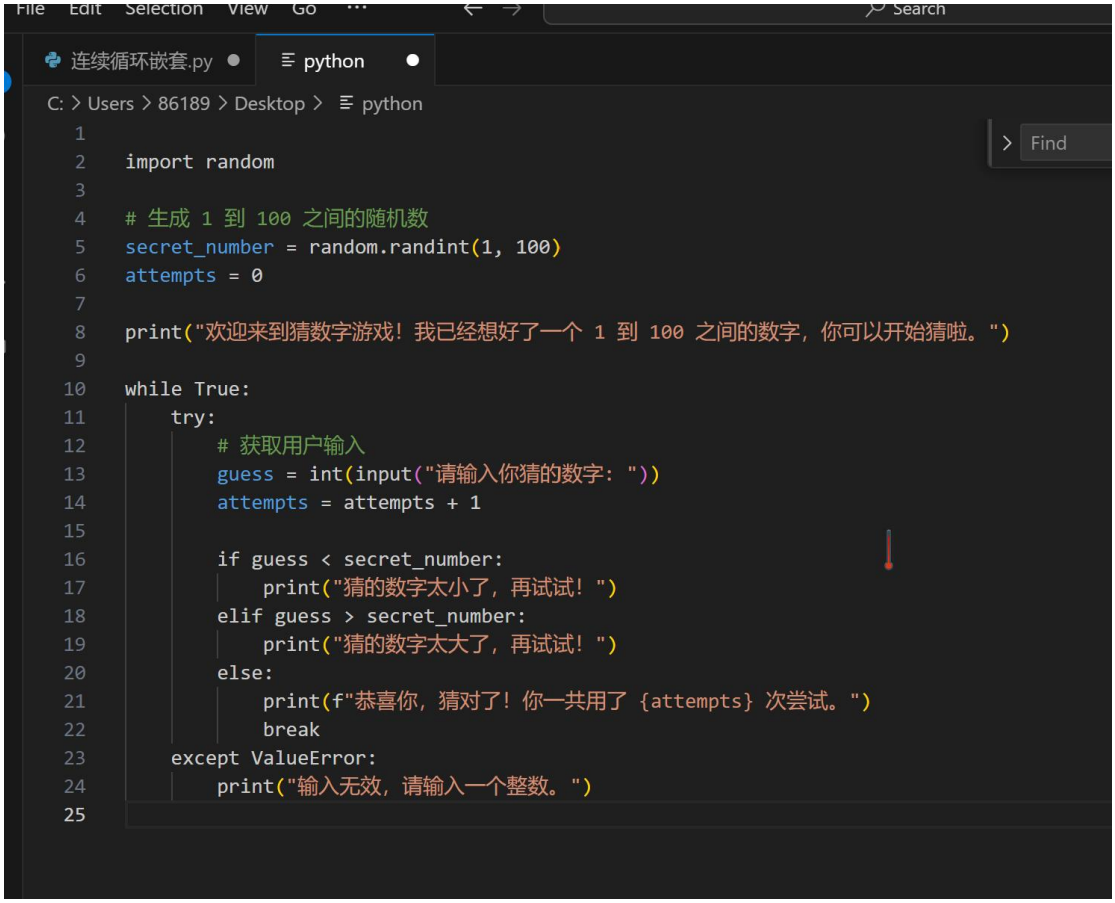
第六周作业

1 猜数字游戏



2 循环嵌套

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# for 迭代循环
print("for 迭代循环示例:")
fruits = ["apple", "banana", "cherry"]
for fruit in fruits:
    print(fruit)

# while 条件循环
print("\nwhile 条件循环示例:")
count = 0
while count < 3:
    print(f"Count is {count}")
    count = count + 1

# break 打断跳出循环
print("\nbreak 打断跳出循环示例:")
numbers = [1, 2, 3, 4, 5]
for num in numbers:
    if num == 3:
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            break
        print(num)

# continue 跳至下一轮循环
print("\ncontinue 跳至下一轮循环示例:")
for num in numbers:
        if num == 3:
            continue
        print(num)

# for...else 循环未被打断的处理
print("\nfor...else 循环未被打断的处理示例:")
for num in numbers:
        if num == 6:
            break
else:
        print("循环未被 break 打断")

# if 条件分支
print("\nif 条件分支示例:")
x = 10
if x > 5:
        print("x 大于 5")

# if...elif[...elif] 多重条件分支
print("\nif...elif 多重条件分支示例:")
y = 2
if y < 0:
        print("y 是负数")
elif y == 0:
        print("y 等于 0")
else:
        print("y 是正数")

# if...else 未满足条件的处理
print("\nif...else 未满足条件的处理示例:")
z = 3
if z > 5:
        print("z 大于 5")
else:
        print("z 不大于 5")

# try...except[...except...else...finally] 捕捉异常的处理
print("\ntry...except 捕捉异常的处理示例:")
```

```
try:
    result = 1 / 0
except ZeroDivisionError:
    print("除数不能为零")
else:
    print("没有发生异常")
finally:
    print("无论是否发生异常，此代码块都会执行")

# raise  主动抛出异常
print("\nraise  主动抛出异常示例:")
def check_age(age):
    if age < 0:
        raise ValueError("年龄不能为负数")
    return age

try:
    age = check_age(-5)
except ValueError as e:
    print(e)
```