

Day12-Python 文件操作（打开、读取、写入、关闭）

一、学习目标

- 掌握 open() 的基本用法和文件模式
- 掌握 write() 写入文本到文件
- 掌握 read() / readline() / 遍历读取文件内容
- 理解 close() 与 with 上下文的区别
- 能完成简单的文件写入与读取任务

二、知识点讲解

1. 文件的打开（open）

使用 open(path, mode, encoding) 打开文件；推荐 with 语句自动关闭。

```
file_open_demo = "kp_open.txt"
with open(file_open_demo, mode="w", encoding="utf-8") as f:
    print("文件名:", f.name)
    print("模式:", f.mode)
    print("是否已关闭(上下文内):", f.closed)
print("是否已关闭(上下文外):", f.closed)
```

2. 文件的写入（write）

write() 写字符串，writelines() 写多行迭代对象。

```
file_write_demo = "kp_write.txt"
lines = [
    "行一：写入演示",
    "行二：write 会返回写入字符数",
    "行三：记得加换行\\n"
```

```
]
with open(file_write_demo, mode="w", encoding="utf-8") as f:
    written = 0
    for line in lines:
        written += f.write(line + "\n")
    print("总写入字符数:", written)
print("已写入文件:", file_write_demo)
```

3. 文件的读取 (read)

read() 一次读全部, readline() 读一行, 或迭代文件对象。

```
with open(file_write_demo, mode="r", encoding="utf-8") as f:
    content = f.read()
print("读取到的内容:\n" + content)
```

4. 文件的关闭 (close)

with 会自动关闭; 手动管理需要调用 close()。

```
f = open(file_write_demo, mode="r", encoding="utf-8")
print("打开后 closed=", f.closed)
_ = f.readline()
f.close()
print("close() 之后 closed=", f.closed)
```

三、任务实战

创建文本文件 my_quotes.txt, 写入 3 行名言并按行号打印。

```
task_file = "my_quotes.txt"
quotes = [
    "Stay hungry, stay foolish.",
    "Simplicity is the ultimate sophistication.",
```

```
"The only limit to our realization of tomorrow is our doubts of today."  
]  
with open(task_file, mode="w", encoding="utf-8") as f:  
    for q in quotes:  
        f.write(q + "\n")  
print("已写入:", task_file)  
  
with open(task_file, mode="r", encoding="utf-8") as f:  
    for idx, line in enumerate(f, start=1):  
        print(f"{idx}: {line.rstrip()}")
```

