Python编程：从入门到实践10

从文件中读取数据

1. 用 with open()来打开文件。
2. 通过传输路径让python准确找到文件，在mac，linux用/区分文件路径，windows中用\（反斜杠）区分文件路径
3. 读取文件内容用read()方法 (用rstrip()方法删除末尾的空白)
4. 要以逐行的方式查看文件内容可以用for循环
5. readline()将读取文件中的每一行并存储在一个列表中

```
with open('chapter_10/pi_digits.txt') as file_object:
        contents = file_object.read()
        print(contents.rstrip())

with open('chapter_10/pi_digits.txt') as file_object:
    for line in file_object:
        print(line.rstrip())

with open('chapter_10/pi_million_digits.txt') as file_object:
    lines = file_object.readline()
pi_string = ''
for line in lines:
    pi_string += line.strip()

print(pi_string[:52] + '...')
print(len(pi_string))

birthady = input('Enter your birthady, in the form mmddyy: ')
if birthady in pi_string:
    print('Your birthady appears in the first million digits of pi!')
else:
    print('Your birthday does not appear in the first million digiths of pi
!')
```

写入文件

1. 传递‘w'让Python指导你要写入打开的文件
2. 传递‘a'让Python指导要添加内容而不是覆盖原有的内容（如果指定的文件不存在，

Python会创建一个新的空文件）

```
with open('chapter_10/programming1.txt', 'w') as file_object:
    file_object.write('I Love programming.\n')
    file_object.write('I Love creating new games.\n')

with open('chapter_10/programming1.txt', 'a') as file_object:
    file_object.write('I also Love programming.\n')
    file_object.write('I also Love creating new games.\n')
```

处理异常

1. 使用try-exceopt处理可能引发的异常。当捕捉到异常后，将运行except其中的代码。同时如果try-except之后还有代码Python会继续运行。、
2. 有时候让用户看到Traceback，他将指导你的程序文件名称，还有部分不能正确运行的代码。有时候训练有素的攻击者可以根据这些信息判断可以对你的代码发起怎么的攻击！

```
print("Give me two numbers, and I'll divide them.")
print("Enter 'q' to quit.")
while True:
    first_number = input("\nFirst number: ")
    if first_number == 'q':
        break
    second_number = input("Second number: ")
    try:
        answer = int(first_number) / int(second_number)
    except ZeroDivisionError:
        print("You can't divide by 0!")
    else:
        print(answer)
```

存储数据

1. 使用json.dump()存储文件，json.load()提取文件
2. 代码能够正常运行，但可以做进一步的改进——将代码划分为一系列完成具体工作的函数，就称为**重构**

```
import json
numbers = [2,3,5,7,11,13]
filename = 'numbers.json'
```

```
with open(filename, 'a') as f_obj:
    json.dump(numbers,f_obj)

with open('numbers.json') as f_obj:
    numbers = json.load(f_obj)
print(numbers)
```