Python 的逆襲
- 例外處理

段維瀚 老師

例外處理

- 語法 1
  - ```
    try:
        <敘述>
    except <例外名稱 1>:
        <敘述>
    except <例外名稱 2>:
        <敘述>
    else:
        <敘述>
    ```


    ```

例外處理

例外名稱	描述
AttributeError	呼叫不存在的方法資源
EOFError	讀到檔尾
ImportError	匯入模組錯誤
IndexError	陣列超過最大index範圍
IOError	I/O操作錯誤
KeyError	Key不存在
NameError	使用不存在的變數名稱
TabError	敘述區塊縮排不正確
ValueError	搜尋列表中不存在的值
ZeroDivisionError	除數為0的錯誤

例外處理

```
a = 100
b = 0
try:
    c = a / b
except:
    print('ZeroDivisionError')
else:
    print(c)
```

捕捉所有例外

```
a = 100
b = 0
try:
    c = a / b
except ZeroDivisionError:
    print('ZeroDivisionError')
else:
    print(c)
```

捕捉特定例外

例外處理

- 取得原始錯誤原因

```
a = 100
b = 0

try:
    c = a / b
except ZeroDivisionError as value:
    print(value)
else:
    print(c)
```

例外處理

- 多重錯誤捕捉

```
a = 100
b = 0

try:
    c = a / b
except ZeroDivisionError as value:
    print(value)
except IndexError as value:
    print(value)
else:
    print(c)
```

例外處理

- 多重錯誤捕捉

```
a = 100
b = 0

try:
    c = a / b
except (ZeroDivisionError, IndexError) as value:
    print(value)
else:
    print(c)
```

例外處理

- 語法 2
  - try:
        <敘述>
    except <例外名稱 1>:
        <敘述>
    except <例外名稱 2>:
        <敘述>
    finally:
        <敘述>

例外處理

```
a = 100
b = 0

try:
    c = a / b
except ZeroDivisionError:
    print('ZeroDivisionError')
else:
    print(c)
finally:
    print('must be done')
```

例外處理-拋出例外 raise

```
a = 100
b = 0

try:
    if b==0:
        raise Exception('b is zero')
    c = a / b
except Exception as value:
    print(value)
else:
    print(c)
```

例外處理-拋出例外方法

```
def calc(a, b):
    if b==0:
        raise Exception('b is zero')
    c = a / b
    print(c)

try:
   calc(100, 0)
except Exception as value:
    print(value)
```

例外處理- 拋出自訂例外

```
class LoginException(Exception):
    def __init__(self, message):
         self.message = message
    def __str__(self):
        return 'Error message : ' + self.message

def login(username, password):
    if (username == 'admin' and password == '1234'):
        print('Pass')
    else:
        raise LoginException('Login Error')

try:
    login('admin', '5678')
except LoginException as value:
    print(value)
```