# Python 學習筆記

## Functions

### 方法的定義方式：

def 方法名稱(參數):

方法內容

return 值

### 使用函式庫：import

* + 1. Import math

print math.sqrt(25)

* + 1. from math import sqrt

print sqrt(25)

* + 1. from math import \*

print sqrt(25)

### 查詢函式庫有哪些方法：

* + 1. import math

everything=dir(math)

print everything

### 最大值、最小值、絕對值、及多參數

def biggest\_number(\*args):

print max(args)

return max(args)

def smallest\_number(\*args):

print min(args)

return min(args)

def distance\_from\_zero(arg):

print abs(arg)

return abs(arg)

biggest\_number(-10, -5, 5, 10)

smallest\_number(-10, -5, 5, 10)

distance\_from\_zero(-10)

### 檢查變數類型

Print type(55) 🡪<type ‘int’>

Print type(55.0) 🡪<type ‘float’>

Print type(‘adc’) 🡪 <type ‘str’>

### 條件判斷

def shut\_down(s):

if s=='yes':

return 'Shutting down'

elif s=='no':

return 'Shutdown aborted'

else:

return 'Sorry'

## LISTS 與dICTIONARIES

### LIST宣告方式：

list\_name=[item\_1,item\_2]

empty\_list=[]

### LIST長度：

Len(list\_name)

### 取代LIST值：

Zoo\_animals=[“pangolin”,”cassowary”,”sloth”,”triger”]

Zoo\_animals[2]=”hyena”

### 在LIST後方附加新值：

Zoo\_animals.append(“fish”)

### 切割LIST：

Suitcase=[“sunglasses”,”hat”,”passport”]

First=Suitcase[0:2] #取出索引0,1的值並重組成新的LIST

### 切割字串：

Animals=”catdogfrog”

Dog=[3:6]

### 取得LIST值的索引：

animals = ["aardvark", "badger", "duck", "emu", "fennec fox"]

duck\_index =animals.index("duck")

### 在LIST中插入新元素：

animals.insert(duck\_index,"cobra")

### 遍歷LIST：

my\_list = [1,9,3,8,5,7]

for number in my\_list:

print 2\*number

### list排序：

start\_list = [5, 3, 1, 2, 4]

square\_list = []

for number in start\_list:

square\_list.append(number \*\* 2)

square\_list.sort()

print square\_list

### Dictionary是一種KEY-VALUE的結構：

residents = {'Puffin' : 104, 'Sloth' : 105, 'Burmese Python' : 106}

print residents['Puffin'] # Prints 104

### 在dictionary中加入新的實體：

menu = {} # Empty dictionary

menu['Chicken Alfredo'] = 14.50 # Adding new key-value pair

print menu['Chicken Alfredo']

### 從DICTIONARY中刪除實體：

zoo\_animals = { 'Unicorn' : 'Cotton Candy House',

'Sloth' : 'Rainforest Exhibit',

'Bengal Tiger' : 'Jungle House',

'Atlantic Puffin' : 'Arctic Exhibit',

'Rockhopper Penguin' : 'Arctic Exhibit'}

del zoo\_animals['Unicorn']

### 從DICTIONARY中刪除實體：REMOVE

backpack = ['xylophone', 'dagger', 'tent', 'bread loaf']

backpack.remove("dagger")

### 從DICTIONARY中改變KEY關聯的值：

zoo\_animals['Rockhopper Penguin']="babala"

### 整合運用：

inventory = {

'gold' : 500,

'pouch' : ['flint', 'twine', 'gemstone'], # Assigned a new list to 'pouch' key

'backpack' : ['xylophone','dagger', 'bedroll','bread loaf']

}

inventory['burlap bag'] = ['apple', 'small ruby', 'three-toed sloth']

inventory['pouch'].sort()

inventory['pocket']=['seashell','strange berry','lint']

inventory['backpack'].sort()

inventory['backpack'].remove('dagger')

inventory['gold']=500+50