



# 程式設計概論 Programming 101 —input function (輸入的函數)

授課老師：邱淑怡

Get user input data  
use input() function

# input() function

3

## ► Example

- `a = input('Please enter 1st number: ')`
- `b = input('Please enter 2nd number: ')`
- `print(a + b)`

Result ?

# input() function (cont.)

4

- ▶ Any data entered by the user is defined as a string.

## Python code

```
a = input('Please enter 1st number: ')\nb = input('Please enter 2nd number: ')\nprint(int(a)+ int(b))
```

type(a) and type(b)  
→ <class 'str'>

```
a = int(input('Please enter 1st number: '))\nb = int(input('Please enter 2nd number: '))\nprint(a + b)
```

type(a) and type(b)  
→ <class 'int'>

# Practice

5

- ▶ Please write a Python program that allows the user to input the top base, bottom base, and height of a trapezoid (梯形), calculates the area of the trapezoid, and prints this area
  - ▶  $\text{area} = (\text{top\_base} + \text{bottom\_base}) * \text{height} / 2$
  - ▶ Round the area to one decimal place

# Student Exercise\_3

# Question 1

7

2. Please write a Python program that allows the user to input the x and y coordinates of two points, then calculates the distance between them, prints it, and rounds it to two decimal places."

\* The two point are  $(x_1, y_1)$  and  $(x_2, y_2)$ ,

$$\text{distance} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$



# Question 2

8

At a university, each student is assigned a system login name, which the student uses to log into the campus computer system. You will use the following algorithm to generate a login name:

1. *Get the first three characters of the student's first name. (The first name is more than two characters in length)*
  2. *Get the first three characters of the student's last name. (The last name is more than two characters in length)*
  3. *Get the last three characters of the student's ID number. (If the ID number is more than two characters in length)*
  4. *Concatenate the three sets of characters to generate the login name.*
- For example, if a **student's name** is Amanda Spencer, and her **ID number** is ENG6721, her login name would be AmaSpe721.



# Review

- ▶ Textbook: chapter 2: 2.6