

電腦科學1第五課

變數、注釋

Computer Science 1 - Lesson 5
Variable and Comment

做準備：登錄到網站

Preparation: Login to the website

<https://codecombat.com/>



關卡任務
Task Goals

遊戲界面
Game GUI



方法
Method



運行 Python 程式碼
Run your Python Program

詞彙 Vocabulary

英語單詞	中文意思
variable	變數
find	尋找
nearest	最近的
enemy	敵人
near	附近

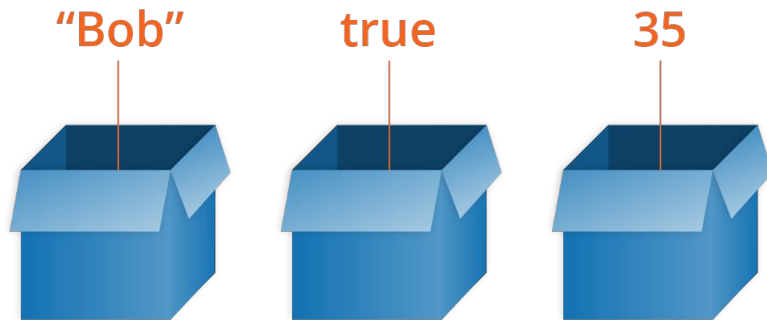
複習 Revision



while-True loop

```
1 ▾ while True:  
2     rain.moveDown()  
3  
4  
5
```





變數 Variables

- 變數是存放數據值的容器。
- 與其他編程語言不同，Python 沒有聲明變數的命令。
- 首次為其賦值時，才會創建變數。
- Variables are containers for data values.
- Unlike other programming languages, Python does not have a command to declare variables.
- The variable is created the first time it is assigned a value.

變數 Variables

變數：可以變化的數值，需要一個名字

數學中：x+2

生活中：比如

今天 = 星期一

天氣 = 晴

值日生 = 小明

Variables: the value that can be changed, requires a name

In mathematics: $x + 2$

Daily life examples:

Today = monday

Weather = sunny

Duty = Xiao Ming

變數

定義

賦值

使用

Variable

Define

Assign

Use

使用鍵盤輸入以下Python語句

Enter the following Python statements using the keyboard

1. `enemy = hero.findNearestEnemy()`
2. `hero.attack(enemy)`
3. `hero.attack(enemy)`

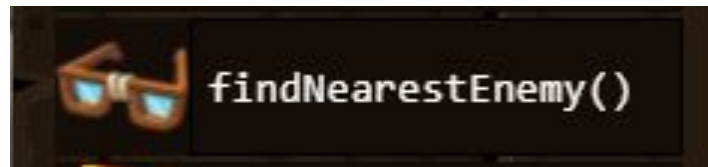
思考題 Concept Questions

1. 用自己的話說說變數是什麼
2. 舉個生活中變數的例子吧
3. 在CodeCombat你是如何使用變數的?

1. Use your own words to describe what a variable is
2. Use a real life variable example
3. How do you use variables in CodeCombat?

findNearestEnemy()

1. `enemy = hero.findNearestEnemy()`
2. `hero.attack(enemy)`
3. `hero.attack(enemy)`



METHODS ▾

-  `attack(target)`
-  `while-true loop`
-  `findNearestEnemy...`
-  `moveDown()`
`moveLeft()`
`moveRight()`
`moveUp()`

hero.findNearestEnemy() - method

Returns the closest living enemy within eyesight (60m and line-of-sight), or null if there aren't any.

Example:

```
enemy = hero.findNearestEnemy()
hero.attack(enemy)
hero.attack(enemy)
```

Granted by Crude Glasses.

注釋

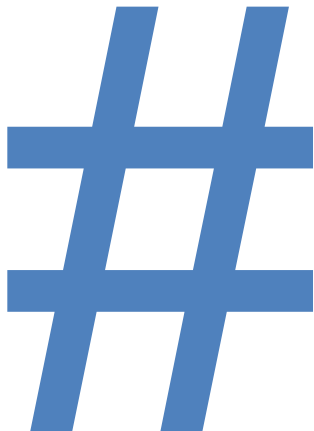
開首的都是注釋。
電腦會自動跳過，不運行。

注釋是寫給人讀的：

寫給自己看，以後再看代碼的時候知道這個代碼是做什么。

寫給別的程式員看，別人可以知道這個代碼做什么。

也可用來作為偵錯工具。



```
PROGRAMMING LANGUAGE
```

```
1 # There is a mistake in the code below.  
2 # Try to figure out what it is, then fix it!  
3  
4 ✓ enemy1 = hero.findNearestEnemy()  
5 ▶ hero.attack(enemy1)  
6 hero.attack(enemy1)
```

at the beginning of the line are all comments.

The computer will automatically skip and not run the line.

The comments are written for you to:

Write to yourself and know what this code is for when you look at it later.

Write to other programmers, so others can know what this code does.

It can also be used as a debugging tool.

編程任務 CS 1: 關卡 15-18 (20 分鐘)

Programming Practice CS1: Task 15-18
(20 minutes)

總結交流 (5 分鐘)

Summary
(5 minutes)

思考題 Concept Questions

1. CS1所有關卡中哪一關是最難的？你是怎麼解決的？
2. 為findNearestEnemy寫個用戶手冊。

1. Which level of CS1 is the hardest? How did you solve it?
2. Write a user manual for findNearestEnemy.

編程日誌 Programming Logs:

Codecombat Task : Codecombat 關卡:	
Learning Objective: 學習目標:	
I have learned: 我已學會了:	
Difficulty: 難處:	
Logs: 日誌:	

分享環節：

Sharing Section:

