

# Lab131 : Pandas Getting Started

## Pandas從零開始

(別怕! 跟著做你就會!)

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請至 [www.hcdtech.com.tw](http://www.hcdtech.com.tw) 下載教材



<http://www.hcdtech.com.tw/Python.htm>



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所有的考卷都可以考100分，是我們自己錯過了！

## 學習秘訣=發問+練習

考卷發下去，時間到了收回來，如果沒有考到100分，這很正常。重點來了，不會的可以問，問完了練習，準備好了考卷再發下去。第二次還是沒有考到100分，這也很正常。沒關係，再來一次，不會的可以問，問完了練習，準備好了考卷第三次再發下去，.....，考到第N次如果還是沒有考到100分。沒關係，再來，不會的可以問，問完了練習，N+1次、N+2次、.....，你們都很聰明，知道我在說什麼，到最後考卷一定可以考100分！看懂了妳/你就會知道，原來學習的秘訣就是發問和練習！今天開始不懂就問，問完了練習，明年的妳/你肯定不一樣！

# 學習如何學習！

1

1 2

1 2 3

.....

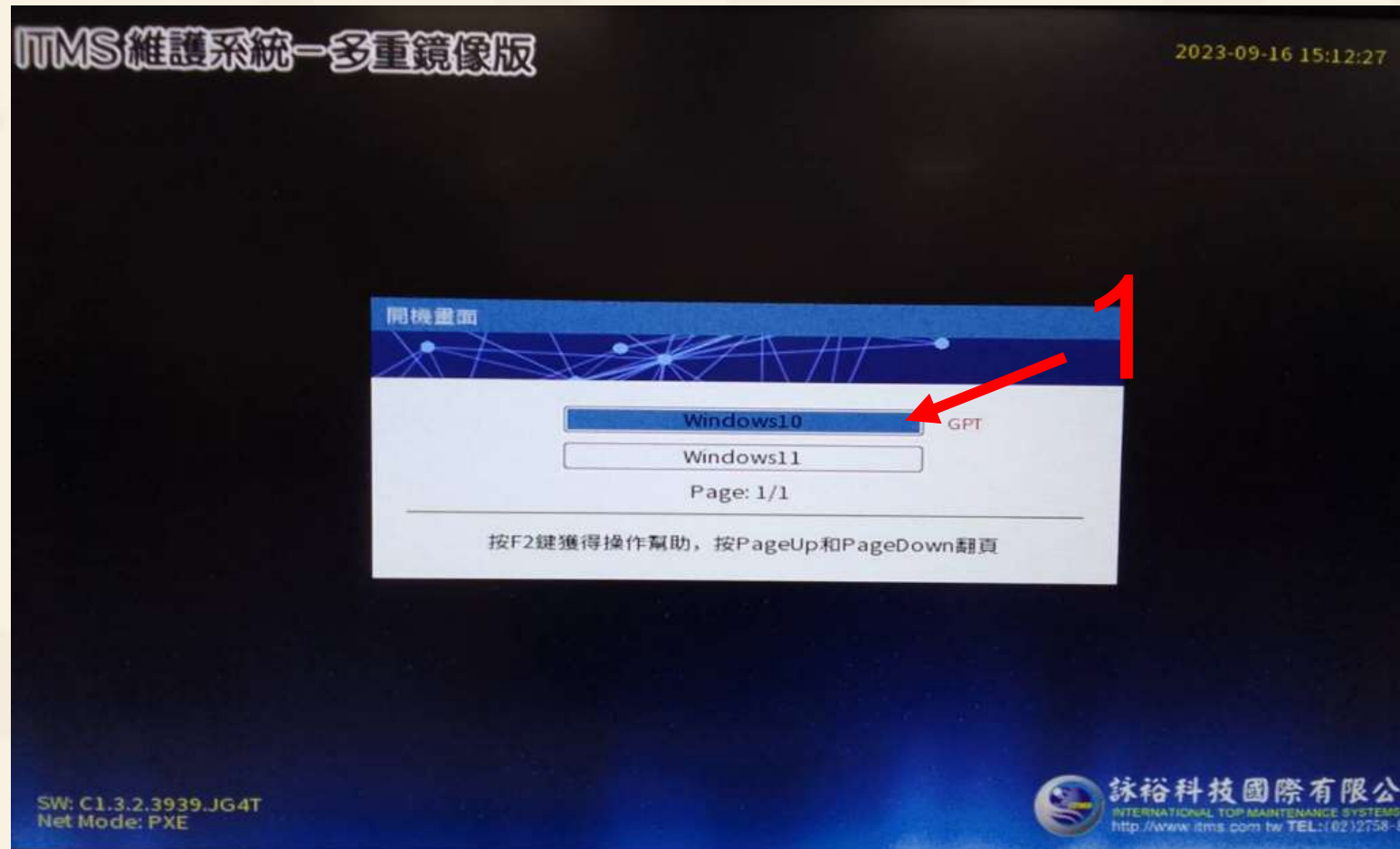
1 2 3 4 5 6 7 8 9 10

## 金字塔念書法



如果一本書有10個章節！先看第1章，在看第2章之前再把第1章看一遍，在看第3章之前再把第1, 2章看一遍，.....，等看到第10章的時候，第1, 2, 3, 4章恐怕已經背起來了！我稱這種念書法為金字塔念書法，今天開始照著做，明年的妳/你肯定不一樣！

# 請使用 Windows 10



## 1. 選用 Windows 10.

# 善用 Google 翻譯



# 請先開啟網頁閱讀

Pandas Getting Started

w3schools.com/python/pandas/pandas\_getting\_started.asp

請用善用 Google 翻譯 讀懂 網頁 內容

Pandas Tutorial

- Pandas HOME
- Pandas Intro
- Pandas Getting Started**
- Pandas Series
- Pandas DataFrames
- Pandas Read CSV
- Pandas Read JSON
- Pandas Analyzing Data

Cleaning Data

- Cleaning Data
- Cleaning Empty Cells
- Cleaning Wrong Format
- Cleaning Wrong Data
- Removing Duplicates

## Pandas Getting started

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### Installation of Pandas

If you have Python and PIP already installed on a system, then installation of Pandas is very easy.

Install it using this command:

```
C:\Users\Your Name>pip install pandas
```

If this command fails, then use a python distribution that already has Pandas installed like, Anaconda, Spyder etc.

Full Access.

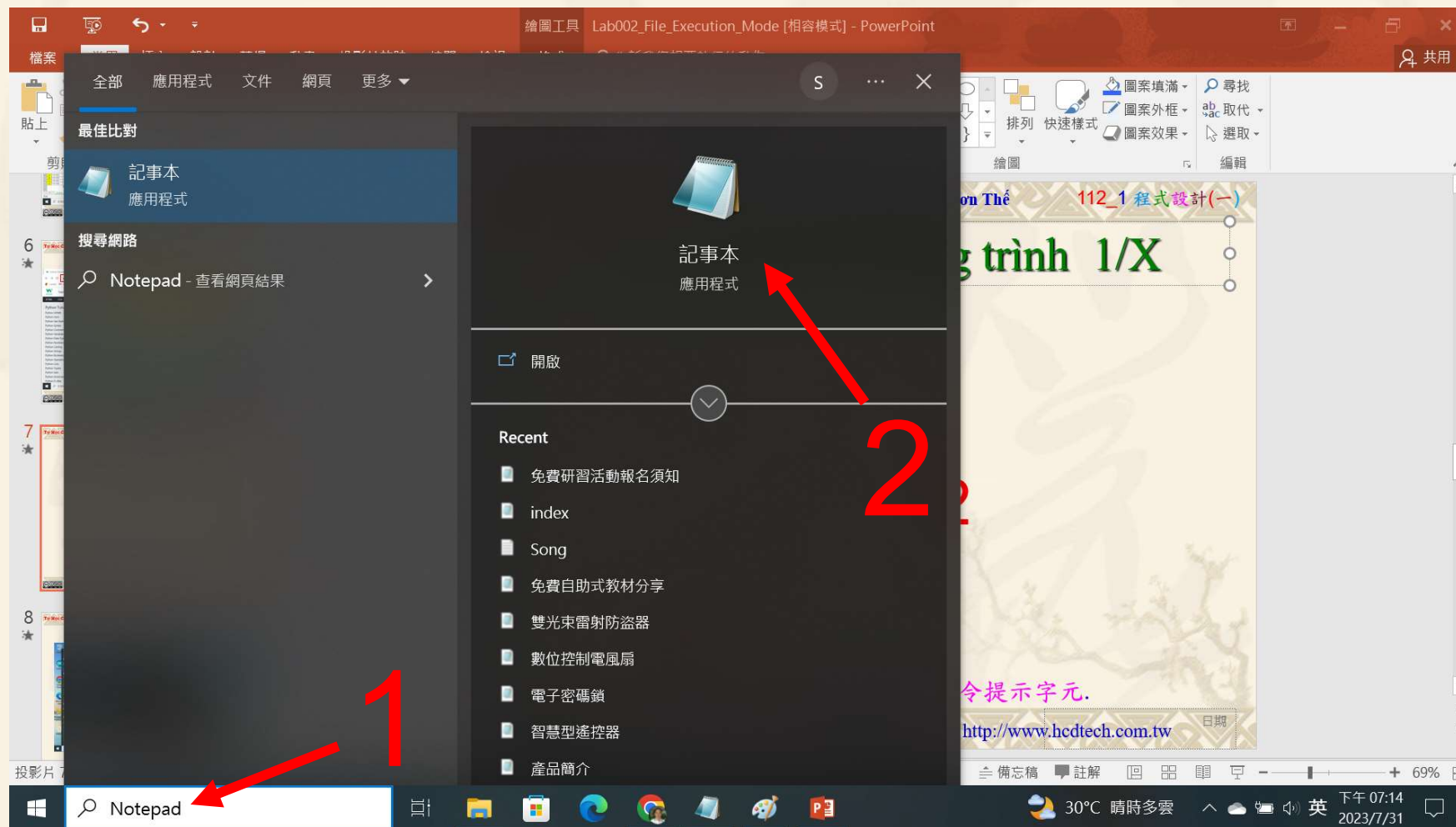
Lifelong access to all W3Schools courses and certifications!

SAVE 775\$

Start today

Windows taskbar: 在 這裡輸入文字來搜尋, EUR/TWD -0.42%, 下午 08:36 2023/12/20

# 建立程式文件 1/5



1. 鍵盤輸入Notepad. 2. 用滑鼠點選記事本.



# 建立程式文件 2/5

```

*未命名 - 記事本
檔案(F) 編輯(E) 格式(O) 檢視(V) 說明
print("P11211XXX practices Lab131.")

import pandas as pd
MyDataset = {"Cars": ["BENZ", "Volvo", "Ford"], "InStock": [3, 4, 2]}
MyVar = pd.DataFrame(MyDataset)
print(MyVar)
print()
print("Create a simple Pandas Series from a list:")
x = [5, 3, 2]
MyVar = pd.Series(x)
print(MyVar)
print("MyVar[0] = ", MyVar[0], " MyVar[1] = ", MyVar[1])
print()
print("Create labels as I, II, III:")
MyVar = pd.Series(x, index = ["I", "II", "III"])
print(MyVar)
print("MyVar[III] = ", MyVar["III"], " MyVar[II] = ", MyVar["II"])
print()
    
```

將P11211XXX修改為您的學號



1. 用鍵盤輸入程式代碼(待續).

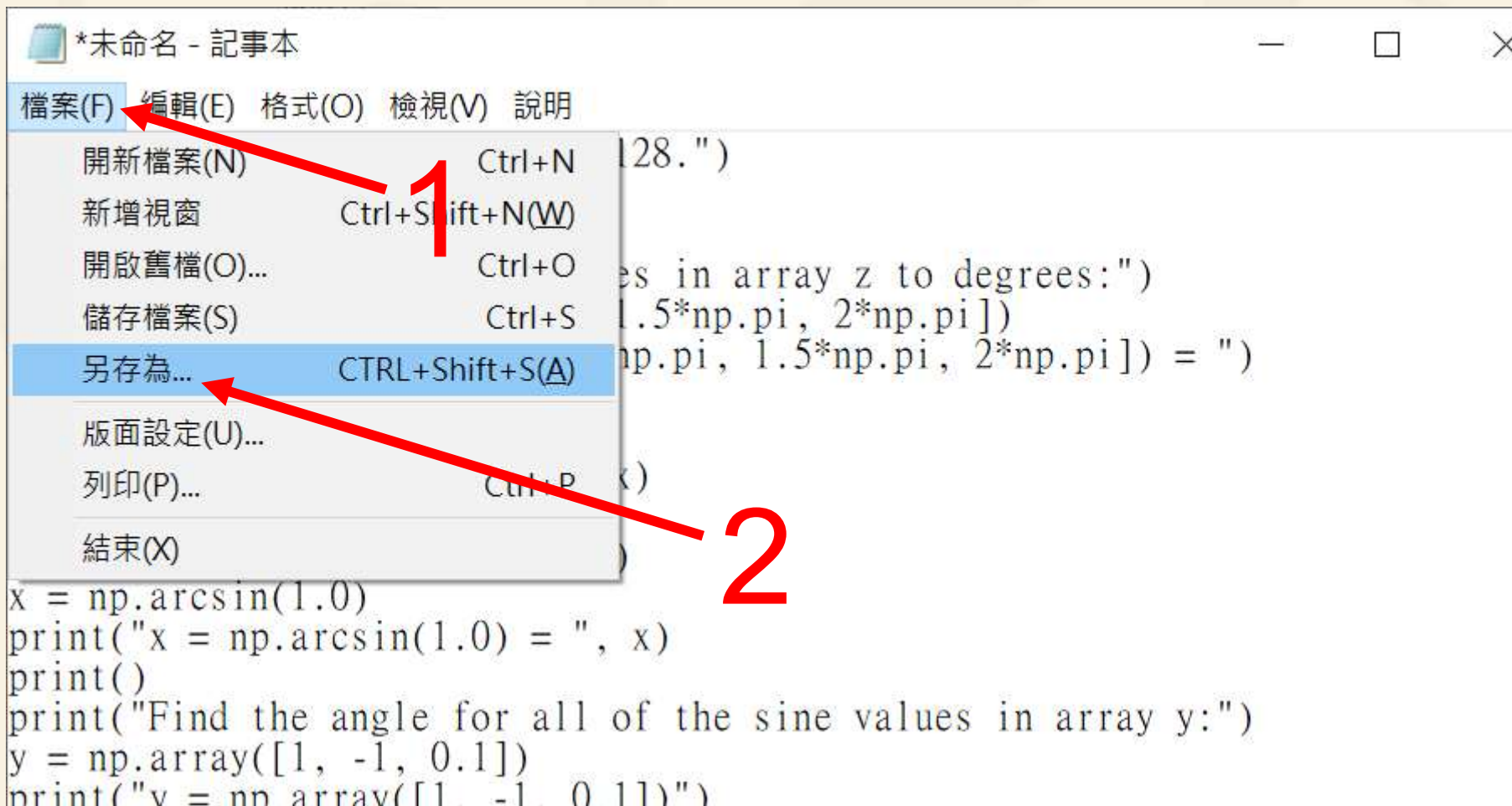
# 建立程式文件 3/5

```
print("Create a simple Pandas Series from a dictionary:")
Calories = {"day1": 420, "day2": 380, "day3": 390}
MyVar = pd.Series(Calories)
print(MyVar)
print('Create a Series using only data from "day1" and "day2":')
MyVar = pd.Series(Calories, index = ["day1", "day2"])
print(MyVar)
print()
print("Create a DataFrame from two Series:")
data = {"calories": [420, 380, 390], "duration": [50, 40, 45]}
MyVar = pd.DataFrame(data)
print(MyVar)
```



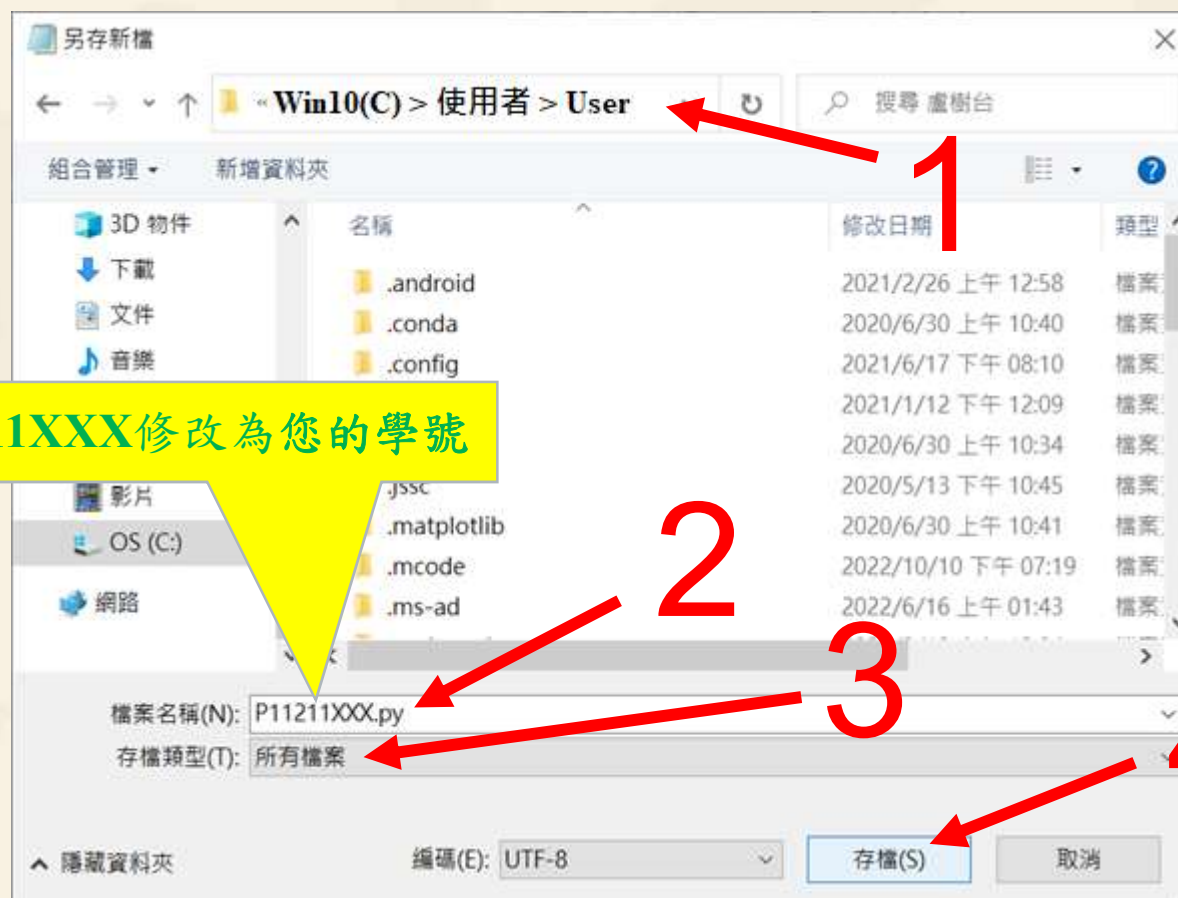
## 1. 用鍵盤輸入程式代碼.

# 建立程式文件 4/5



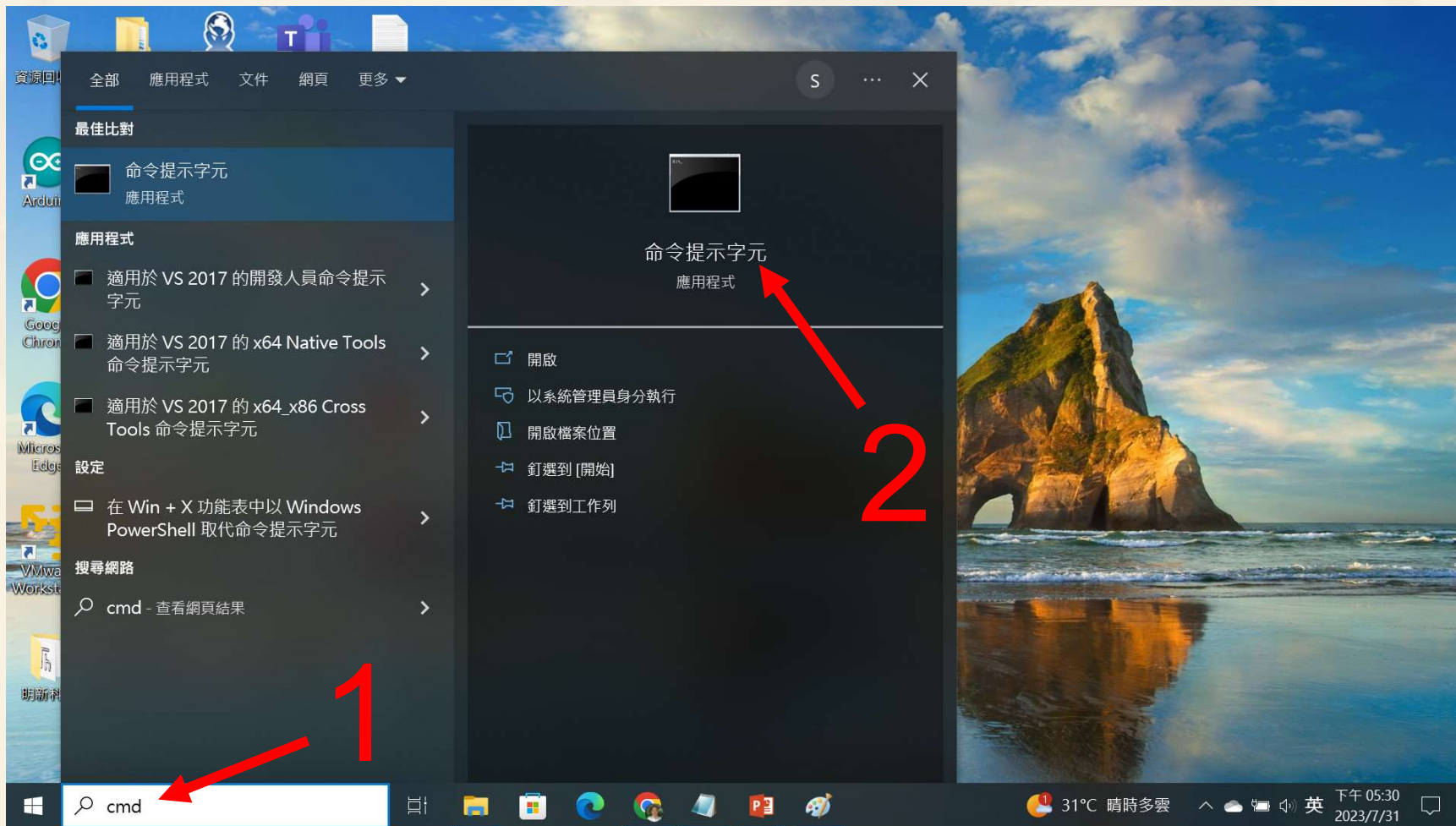
1. 用滑鼠點選檔案. 2. 用滑鼠點選另存為....

# 建立程式文件 5/5



1. 資料夾 = C:\使用者>User>.
2. 檔案名稱 = P11211XXX.py .
3. 存檔類型(T) = 所有檔案.
4. 用滑鼠點選存檔.

# 檔案執行模式 1/3



1. 鍵盤輸入cmd.
2. 用滑鼠點選命令提示字元.

# 檔案執行模式 2/3

```
C:\> 命令提示字元  
Microsoft Windows [版本 10.0.19045.3803]  
(c) Microsoft Corporation. 著作權所有，並保留一切權利。  
C:\Users\盧樹台>pip install pandas
```



1. 用鍵盤輸入pip install pandas.
2. 按一下Enter.

# 檔案執行模式 3/3

```
C:\> 命令提示字元

Microsoft Windows [版本 10.0.19045.3803]
(c) Microsoft Corporation. 著作權所有，並保留一切權利。

C:\Users\盧樹台>pip install pandas
Requirement already satisfied: pandas in c:\python39\lib\site-packages (2.1.3)
Requirement already satisfied: six>=1.5 in c:\python39\lib\site-packages (from
WARNING: Ignoring invalid distribution -ip (c:\python39\lib\site-packages)
WARNING: Ignoring invalid distribution - (c:\python39\lib\site-packages)

C:\Users\盧樹台>Python P11211XXX.py
```

將P11211XXX修改為您的學號



1. 用鍵盤輸入Python P11211XXX.py .
2. 按一下Enter.

# Verification Criteria of Lab131

## (Lab131的驗收規範) Pandas從零開始

**P11211XXX 必需  
更換為您的學號**

Ask the teacher to give you points after completing the illustrated results.

(完成右圖指定成果後請教師在您的座位驗收並讓您簽名加分)

```
C:\Users\盧樹台>Python P11211XXX.py
P11211XXX practices Lab131.
  Cars  InStock
0  BENZ      3
1  Volvo     4
2   Ford     2

Create a simple Pandas Series from a list:
0  5
1  3
2  2
dtype: int64
MyVar[0] = 5  MyVar[1] = 3

Create labels as I, II, III:
I      5
II     3
III    2
dtype: int64
MyVar[III] = 2  MyVar[II] = 3

Create a simple Pandas Series from a dictionary
day1  420
day2  380
day3  390
dtype: int64
Create a Series using only data from "day1" and
day1  420
day2  380
dtype: int64

Create a DataFrame from two Series:
  calories  duration
0      420        50
1      380        40
2      390        45

C:\Users\盧樹台>
```

```
P11211XXX - 記事本
檔案(F) 編輯(E) 格式(O) 檢視(V) 說明
print("P11211XXX practices Lab131.")

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data = {"calories": [420, 380, 390], "duration": [50, 40, 45]}
MyVar = pd.DataFrame(data)
print(MyVar)
```

每一個學生都要做Lab131至少一次!



# 養成良好的工作態度

- 離開實驗室時請整理自己的工作座位，為自己的工作態度加分：
  - (1)滑鼠鍵盤歸位 (2)電腦關機 (3)螢幕關閉電源 (4)椅背靠妥 (5)個人責任區(工作座位及週邊範圍)應整潔，不遺留垃圾紙屑等。

