



Programming

Tips and Tricks

Those slides will be available on Arche

How to Search

Always look at the error message

```
File "C:\Users\shine\Documents\nancy\temp4.py", line 2
    print(f"{msg} (from {speaker}))
                                ^
SyntaxError: EOL while scanning string literal
```

How to Search

Always look at the error message

```
def say(msg, speaker):  
    print(f"{msg} (from {speaker})")  
  
say("hello")
```

```
File "C:\Users\shine\Documents\nancy\temp4.py", line 2  
    print(f"{msg} (from {speaker})")  
                                ^  
SyntaxError: EOL while scanning string literal
```

The line with the issue

How to Search

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The line with the error

The error
type

Google it if you are stuck!
Every programmer uses search engines

How to Search

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SyntaxError: EOL while scanning string literal
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The line with the error

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How to Search

Always look at the error message!

Useful websites for programmers:

- <https://stackoverflow.com/questions/tagged/python+python-3.x>
- <https://www.google.com/>
- <https://www.w3schools.com/python/default.asp>

The Holy Grail 🙌

Better than the
other engines

(duckduckgo is the
second best)

Very nice website. Convenient verify some notions very quickly.

Naming a File

Game files should be as a python (.py) file.

- Easier to run and test
- Can easily add metadata and versions

To name a file:

- Follow variable conventions: (starts with a lowercase, no space, etc.)
- For you game: `firstname_lastname_rpg_2.0.1.py`

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To name a file:

- Follow variable conventions: (starts with a lowercase, no space, etc.)
- For you game: `firstname_lastname_rpg_4.2.1.py`

`gael_guibon_rpg_2.0.1.py`

 **4 . 2 . 1**
version **MAJOR** *Minor* patch

Useful Common Shortcuts


- Toggle comment for selected line(s): **CTRL + /**
- Explicitly ask autocompletion/syntax help: **CTRL + space**
- Indent multiple lines to the right: **TAB**
- Indent multiple lines to the left: **SHIFT + TAB**
- Run current cell (in ipynb and colab): **CTRL + ENTER**
- Automatic word-wrap: **ALT + Z**

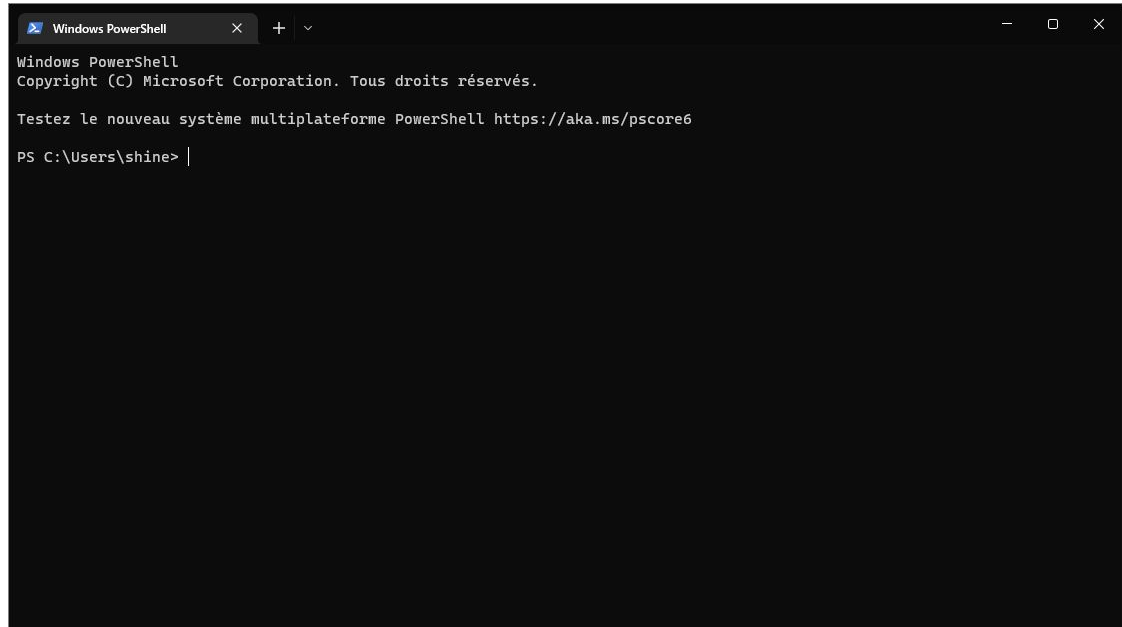
File System

Open a Terminal

 Windows key ; "terminal" ; Enter key

 CMD + Space ; "terminal" ; Enter key

 CTRL + ALT + T



```
Windows PowerShell
Copyright (C) Microsoft Corporation. Tous droits réservés.

Testez le nouveau système multiplateforme PowerShell https://aka.ms/pscore6

PS C:\Users\shine> |
```

Change Directory to Documents

Commands

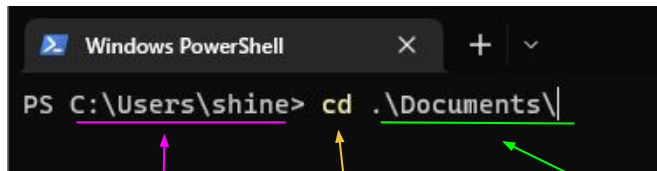
cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**cd** Documents"



```
Windows PowerShell
PS C:\Users\shine> cd .\Documents\
```

Where I am

cd command

Where I want to go, destination

Change Directory to Documents

Commands

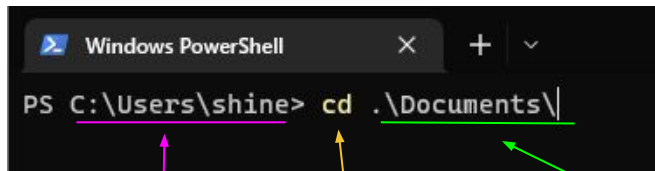
cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**cd** Documents"
2. Tap Enter key



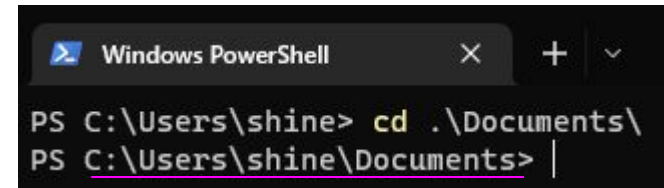
```
PS C:\Users\shine> cd .\Documents\
```

The screenshot shows a Windows PowerShell window with the command `cd .\Documents\` entered. A purple arrow points from the text 'Where I am' to the current directory `C:\Users\shine` in the prompt. An orange arrow points from the text '**cd** command' to the `cd` command. A green arrow points from the text 'Where I want to go, destination' to the destination `.\Documents\`.

Where I am

cd command

Where I want to go, destination



```
PS C:\Users\shine> cd .\Documents\  
PS C:\Users\shine\Documents> |
```

The screenshot shows the same Windows PowerShell window after the command has been executed. The prompt has changed to `PS C:\Users\shine\Documents>`, indicating the current directory has been successfully changed to the Documents folder.

Going back to Parent Folder/Directory

Commands

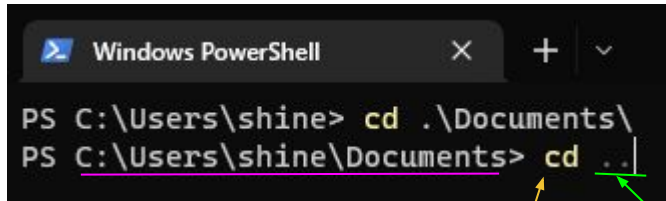
cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**cd ..**"



```
Windows PowerShell
PS C:\Users\shine> cd .\Documents\
PS C:\Users\shine\Documents> cd ..
```

The screenshot shows a Windows PowerShell window. The first line shows the user in the directory C:\Users\shine, typing 'cd .\Documents\' to move into the Documents directory. The second line shows the user now in C:\Users\shine\Documents, typing 'cd ..' to move back to the parent directory. Colored arrows point from the text below to specific parts of the command: a purple arrow from 'Where I am' to 'C:\Users\shine', a brown arrow from 'cd command' to 'cd', and a green arrow from 'Where I want to go, destination' to '..'.

Where I am

cd command

Where I want to go, destination

Going back to Parent Folder/Directory

Commands

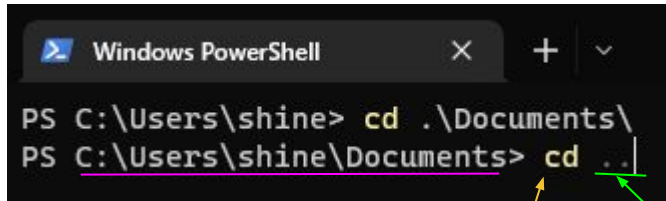
cd : change directory

ls : list elements in the current dir

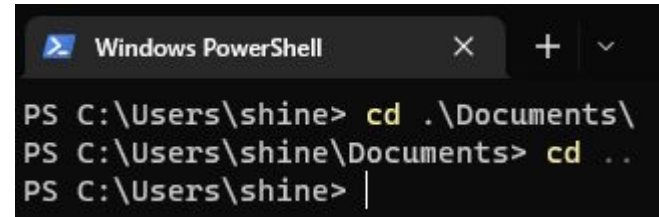
mkdir : make (create) directory

touch : create a new file

1. Type "**cd** .."
2. Tap Enter key



```
Windows PowerShell
PS C:\Users\shine> cd .\Documents\
PS C:\Users\shine\Documents> cd ..
```



```
Windows PowerShell
PS C:\Users\shine> cd .\Documents\
PS C:\Users\shine\Documents> cd ..
PS C:\Users\shine> |
```

Where I am

cd command

Where I want to go, destination

Create a new Folder/Directory

Commands

cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**mkdir** mydir"
2. Tap Enter key

```
PS C:\Users\shine\Documents\nancy> mkdir mydir

Répertoire : C:\Users\shine\Documents\nancy

Mode                LastWriteTime         Length Name
----                -
d-----          16/11/2022    21:44             mydir

PS C:\Users\shine\Documents\nancy> |
```


Create a new Folder/Directory

Commands

cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**cd** mydir"
2. Tap Enter key

```
PS C:\Users\shine\Documents\nancy> cd mydir
PS C:\Users\shine\Documents\nancy\mydir> |
```

List elements in current Folder/Directory

Commands

cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

1. Type "**cd** mydir"
2. Tap Enter key
3. Type "**ls**"
4. Tap Enter key

```
PS C:\Users\shine\Documents\nancy> cd mydir
PS C:\Users\shine\Documents\nancy\mydir> ls
PS C:\Users\shine\Documents\nancy\mydir> |
```

The current
directory is empty

Create a new file

Commands

cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

touch : create a new file

```
PS C:\Users\shine\Documents\nancy> cd mydir
PS C:\Users\shine\Documents\nancy\mydir> ls
PS C:\Users\shine\Documents\nancy\mydir> touch superprog.py
```

touch command

File to create



UNIX operating systems

1. Type "**touch** superprog.py"
2. Tap Enter key

Create a new file

Commands

cd : change directory

ls : list elements in the current dir

mkdir : make (create) directory

echo : display something (> put it in a file)



Specific to Windows

1. Type "**echo** > superprog.py"
2. Tap Enter key
3. Tap Enter key again

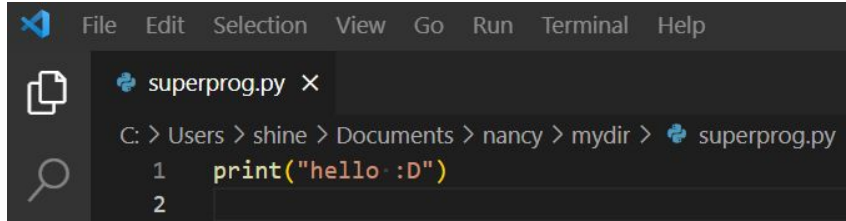
```
PS C:\Users\shine\Documents\nancy\mydir> ls
PS C:\Users\shine\Documents\nancy\mydir> echo > superprog.py

applet de commande Write-Output à la position 1 du pipeline de la commande
Fournissez des valeurs pour les paramètres suivants :
InputObject[0]:
PS C:\Users\shine\Documents\nancy\mydir>
```

echo command
with > target

File to create

Execute your Python file

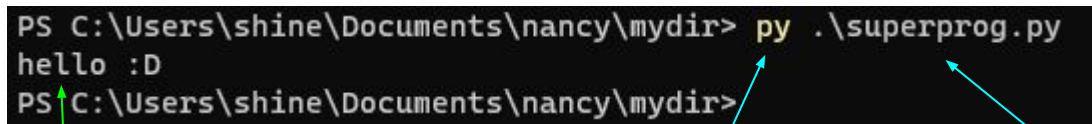


A screenshot of a code editor interface. The top menu bar includes 'File', 'Edit', 'Selection', 'View', 'Go', 'Run', 'Terminal', and 'Help'. Below the menu, a tab labeled 'superprog.py' is open. The file path 'C: > Users > shine > Documents > nancy > mydir > superprog.py' is displayed. The code content shows two lines: '1 print("hello :D")' and '2'.

Path of the current file

Run a python file

1. Type “(**py**|**python3**|**python**) superprog.py”
2. Tap Enter key



A screenshot of a terminal window. The prompt is 'PS C:\Users\shine\Documents\nancy\mydir>'. The command 'py .\superprog.py' has been entered. The output 'hello :D' is displayed on the next line. The prompt 'PS C:\Users\shine\Documents\nancy\mydir>' is shown again on the third line.

Standard Output

py command
or
python3 command
or
python command

File to run with
python

Your computer is your friend



Don't depend on mouse and trackpad

You need to know your shortcuts!

You WANT to look like this guy 😏



How to be more efficient?

With your computer:

- **ALT + TAB** : switch between windows / apps
 - CMD + TAB
- **WINDOWS + TAB** : overviews of your opened windows
- **WINDOWS + a few letters** : quickly access to an application
 - CMD + SPACE + a few letters

How to be more efficient?

With your browser:

- **CTRL + L** : address bar
- **CTRL + R** : reload the page
- **CTRL + SHIFT + R** : reload the page and the cache
- **CTRL + U** : see page source code
- **CTRL + SHIFT + I** : developer mode
- **CTRL + T** : open a new tab
- **CTRL + W** : close the current tab
- **CTRL + TAB** : switch between tabs

How to be more efficient?

With Visual Studio Code (and with many softwares) :

- **CTRL + S** : save
- **CTRL + Z** : cancel/go back to previous action
- **CTRL + C** : copy
- **CTRL + V** : paste
- **CTRL + X** : cut
- **CTRL + A** : select all
- **CTRL + TAB** : switch between tabs
- **CTRL + F** : search pattern
- **CTRL + H** : search and replace in the page

Training!

- Try to **use your computer without mouse / trackpad** for 1 hour
 - Do it regularly



Use your file system

- Don't put everything in the desktop. Try to avoid putting anything in it.

Nom	^	Date de modification	Taille	Type
▼ generation1		aujourd'hui à 15:00	--	Dossier
bulbizarre.txt		aujourd'hui à 15:00	Zéro octet	Format texte
carapuce.txt		aujourd'hui à 15:00	Zéro octet	Format texte
pikachu.txt		aujourd'hui à 15:00	Zéro octet	Format texte
salameche.txt		aujourd'hui à 15:00	Zéro octet	Format texte
▼ generation2		aujourd'hui à 15:02	--	Dossier
germignon.txt		aujourd'hui à 15:01	Zéro octet	Format texte
hericendre.txt		aujourd'hui à 15:01	Zéro octet	Format texte
kaiminus.txt		aujourd'hui à 15:02	Zéro octet	Format texte
▼ generation3		aujourd'hui à 15:03	--	Dossier
arcko.txt		aujourd'hui à 15:02	Zéro octet	Format texte
gobou.txt		aujourd'hui à 15:03	Zéro octet	Format texte
poussifeu.txt		aujourd'hui à 15:02	Zéro octet	Format texte

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Nom	Date de modification
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salameche.txt	aujourd'hui à 15:00
generation2	aujourd'hui à 15:02
germignon.txt	aujourd'hui à 15:01
hericendre.txt	aujourd'hui à 15:01
kaiminus.txt	aujourd'hui à 15:02
generation3	aujourd'hui à 15:03
arcko.txt	aujourd'hui à 15:02
gobou.txt	aujourd'hui à 15:03
poussifeu.txt	aujourd'hui à 15:02

```
gaelguibon@hs-idm-r-01 pokemons % tree
.
├── generation1
│   ├── bulbizarre.txt
│   ├── carapuce.txt
│   ├── pikachu.txt
│   └── salameche.txt
├── generation2
│   ├── germignon.txt
│   ├── hericendre.txt
│   └── kaiminus.txt
└── generation3
    ├── arcko.txt
    ├── gobou.txt
    └── poussifeu.txt

3 directories, 10 files
```