# Windows Batch File Basic

Command line (命令式程序集)，作為Developer日常最經常使用的工具之一；
執行這些程序通常不需要有GUI，並且執行一些簡單的動作比方說：

1. 檔案整理
2. 檔案 QC (Quality Check)
3. 歸檔，打包，紀錄內容

它具備了快速開發的特性，目的在於快速地提出解決方案。
由於Artist直接使用Python檔案比較不方便，
因此需要一個Batch File作為一個橋樑來執行並且接收使用者參數。

## Variable Declare, Define and Print

- Declare a variable using double "%"
- Define (set) using "SET"
- ECHO = print

```
@ECHO OFF

SET MAYA_SCRIPT_PATH=D:\Maya\2022\scripts
SET MY_CUSTOM_VALUE=chia xin lin

ECHO %MAYA_SCRIPT_PATH%
ECHO %MY_CUSTOM_VALUE%
```

## String

If the string have space must define with double quote.

```
C:\Program Files\Autodesk\Maya2023\bin\maya.exe
REM Error! It just called "C:\Program

"C:\Program Files\Autodesk\Maya2023\bin\maya.exe"
REM OK! It got full path.
```

### Concat string

```
SET CUSTOM_PATH=D:\custom_directory\scripts
SET SUBPATH_FOR_DEV=%CUSTOM_PATH%\sub-folder\dev
```

# Comment

- Using "REM" or "::" at head of line

```
:: This is comment
:: Next line
REM This is another comment
REM Next line
```

# Call Python Script

## IF statement and EXIST command

- Format : IF EXIST <FILE> <ACTION>
- Get current directory : %~dp0



python          build.bat

```
@ECHO off
SET CURRENT=%~dp0
SET SCRIPT=%CURRENT%\python\builder.py

IF EXIST %SCRIPT% (
    python %SCRIPT% arg1 arg2 arg3
) ELSE (
    ECHO %SCRIPT% is not found!
)
```

# User Input and Arguments

## In Python Script

```
import sys
arguments = sys.ARGV
```

## In Batch File Script

The arguments will called "%" number.
For example when call proc.bat abc 123 def 456

```
ECHO %1
REM abc
ECHO %2
REM 123
ECHO %3
REM def
ECHO %4
REM 456
```

## User Inputs

```
SET /P name=Please enter your name:
ECHO Name : %name%
```

## Output to text file

```
ECHO %OuputInfo% > temp.txt
```

# Utility

## Get current directory from this batch file

```
SET CURRENT=%~dp0
ECHO %CURRENT%
```

## Using Windows Environment Variable

```
ECHO %PROGRAMFILES%\Autodesk\Maya2022\bin\maya.exe
ECHO %USERPROFILE$\documents\maya\2022\Maya.env
```

# Break command line

- Using "^" at every break end.

```
REM If command line is too long.
"C:\Program Files\Autodesk\Maya2022\bin\mayapy.exe" -arg1 value1^
 -arg2 value2 -arg3 value3 -arg4 value4^
 -arg5 value5 -arg6 value6^
 %TargetFile%
```