

下載 youtube 並轉成 mp3

python 的 youtube-dl 第三方模組

- 使用 youtube-dl
 - 呼叫系統執行 command-line program
 - `os.system`
 - `Subprocess.run`
 - Embedding youtube-dl

```

File Edit Format Run Options Window Help
1 '''
2 4 additional files must exist:
3 (1) msver100.dll (by microsoft, 32bit version?)
4 (2) youtube-dl.exe (standalone)
5 (3) youtube_urls.txt (youtube urls)
6 (4) ffmpeg.exe
7
8 '''
9 import os
10 import time
11 import glob
12
13 def files_to_mp3(src, des):
14     '''
15     Input
16     src: source folder
17     des: destination folder
18     ...
19     var_filenames_input = './{}/' + '*.*'
20     var_filenames_input = var_filenames_input.format(src)
21
22     filenames_input = glob.glob(var_filenames_input)
23     number_input = '{0}目錄共有 '.format(len(filenames_input)) + '筆檔案'
24     number_input = number_input.format(src)
25     print(number_input)
26     time.sleep(3)
27
28     for filename_input in filenames_input:
29
30         print(filename_input)
31
32         basename_output = os.path.basename(filename_input)
33         basename_output_no_extension = basename_output.split('.')[0]
34
35         filename_output = './{0}/' + basename_output_no_extension + '{0}'
36         filename_output = filename_output.format(des)
37
38         cmd2mp3_template = 'ffmpeg -i "{}" -acodec libmp3lame -q:a 4 "{}"'
39         cmd2mp3 = cmd2mp3_template.format(filename_input, filename_output)
40         os.system(cmd2mp3)
41
42         print(filename_output)
43
44     os.makedirs('m4a', exist_ok=True)
45     os.makedirs('mp3', exist_ok=True)
46
47     # invoke youtube-dl to read youtube_urls.txt and download
48     audio_option = '-o /m4a/{(title)s.%(ext)s} -f 140'
49     cmd2 = ['youtube-dl', '-a ./youtube_urls.txt', audio_option]
50     cmd2_real = ' '.join(cmd2)
51     os.system(cmd2_real)
52     print(cmd2_real)
53
54     # invoke ffmpeg to convert m4a into mp3
55     files_to_mp3('m4a', 'mp3')

```

呼叫系統執行

使用 glob 模組尋找指定目錄內所有檔案

定義一個一般用途的函數來轉 mp3

每次處理一個檔案，並顯示其名稱

將輸入檔案的副檔名換掉來產生新輸出檔名

指定參數並呼叫外部的 ffmpeg 來轉 mp3

建立下載 youtube 的目錄和轉成 mp3 存放的目錄

指定參數並呼叫外部的 youtube-dl 讀取並下載存在 txt 檔案內的網址

呼叫定義好的函數來轉檔

youtube-dl + ffmpeg 包裝成 GUI



```

1 #from __future__ import unicode_literals # have no idea how this works
2 import PySimpleGUI as sg
3
4 hint = '''【youtube-dl GUI版的使用方式】\n
5 「RunFile」可執行放在「youtube_urls.txt」檔案內的youtube網址。
6 Option: 預設下載m4a。去掉-f 140的話下載最佳畫質影片。-F列出所有格式。
7 離開本不負責任程式: 按「Exit」鍵、視窗右上角的「X」或「Alt」+「F4」組合鍵。
8 '''
9
10 sg.theme('BluePurple')
11
12 default_url = 'https://www.youtube.com/watch?v=rtPaRyzDK4Y'
13 #default_opt = '-P' # list all formats
14 default_opt = '-o /m4a/%(title)s.%(ext)s -f 140' # download filename(path) + m4a
15 BA = 'm4a to mp3'
16 BV = 'mp4 to mp3'
17
18 layout = [[sg.Text(hint)],
19           [sg.Output(size=(80,10))],
20           [sg.Button('Url'), sg.Input(default_url, size=(70,1), key='-IN-')],
21           [sg.Text('Title: '), sg.Text(size=(60,1), key='-OUTPUT-')],
22           [sg.Text('Option'),sg.Input(default_opt, size=(60,1),key='-IN2-')],
23           [sg.Button(BA), sg.Button(BV),sg.Text(size=(60,1), key='-OUT2-')],
24           [sg.Button('RunUrl'), sg.Button('RunFile'),sg.Button('Exit')]]
25
26 window = sg.Window('youtube-dl & ffmpeg', layout)
27
28 #import youtube_dl
29 import os
30 #import subprocess
31 from subprocess import PIPE, run#, DEVNULL#, check_output, CREATE_NO_WINDOW
32 import time
33 import glob
34
35
36 def files_to_mp3(src, des):
37     '''
38     Input
39     src: source folder
40     des: destination folder
41     ...
42     var_filenames_input = './{}/' + '*.*'
43     var_filenames_input = var_filenames_input.format(src)
44
45     filenames_input = glob.glob(var_filenames_input)
46     number_input = '{0}目錄共有 {1} + str(len(filenames_input)) + '筆檔案'
47     number_input = number_input.format(src)
48     window['-OUT2-'].update(number_input)
49     time.sleep(3)
50
51     for filename_input in filenames_input:
52
53         print(filename_input)
54         window.Refresh()
55
56         basename_output = os.path.basename(filename_input)
57         basename_output_no_extension = basename_output.split('.')[0]
58
59         filename_output = './{0}/' + basename_output_no_extension + '{0}'
60         filename_output = filename_output.format(des)

```

```

62 cmd2mp3_template = 'ffmpeg -i "{}" -acodec libmp3lame -q:a 4 "{}"'
63 cmd2mp3 = cmd2mp3_template.format(filename_input, filename_output)
64 os.system(cmd2mp3)
65
66 print(filename_output)
67 window.Refresh()
68
69 os.makedirs('m4a', exist_ok=True)
70 os.makedirs('mp4', exist_ok=True)
71 os.makedirs('mp3', exist_ok=True)
72
73 while True: # Event Loop
74     event, values = window.read()
75     #print(event, values) # debug
76     if event == sg.WIN_CLOSED or event == 'Exit':
77         break
78
79     if event == 'Url':
80
81         command = ['youtube-dl', '-e', values['-IN-']]
82
83         # add stdin=PIPE to avoid error in executing standalone files
84         subprocess_opt = {'stdout':PIPE,
85                           'stderr':PIPE,
86                           'stdin':PIPE,
87                           'universal_newlines':True}
88         result = run(command, **subprocess_opt)
89         #print(result.returncode, result.stdout, result.stderr) #debug
90         title = result.stdout
91
92         #os.system(' '.join(command)) #struggle to get standard output this way
93         window['-OUTPUT-'].update(title)
94
95     if event == BA:
96         files_to_mp3('m4a', 'mp3')
97
98     if event == BV:
99         files_to_mp3('mp4', 'mp3')
100
101     if event == 'RunUrl':
102
103         user_url = values['-IN-']
104         option = values['-IN2-']
105
106         if not 'YOUTUBE' in user_url.upper():
107             if not 'Youtu.be' in user_url.upper():
108                 print('可能不是youtube網址')
109                 time.sleep(3)
110                 continue
111
112         cmd1 = ['youtube-dl', option, user_url]
113         os.system(' '.join(cmd1))
114
115     if event == 'RunFile':
116
117         option = values['-IN2-']
118         cmd2 = ['youtube-dl', '-a ./youtube_urls.txt', option]
119         cmd2_real = ' '.join(cmd2)
120         os.system(cmd2_real)
121         print(cmd2_real)
122         window.Refresh()
123
124 window.close()

```

圖形化使用介面