requirement : 將一堆圖片塞成一個pdf，一頁一張圖，大小A4

image -> pdf

(.png) (.pdf)

(...)

\*\*License

\*版本更新速度 (修bug)

\*社群活躍度 (有人在用嗎)

\*文件完整性 (document)

依存性 (需要裝一堆東西)

使用便利性 (api/command line 好不好操作)

維護難易度 (tool?)

\*部署門檻 (客戶端好不好裝/用，需要額外機器嗎)

\*\*需求滿足程度 (png, jpg)

額外功能 (bonus)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 語言 | License | 需求 | 社群 | 文件 | 依存 | 便利 | 更新 | 部署 | bonus |
| \*Fpdf | Py  PHP | LGPL | V | V | V | V | V  api | 2015 | V | Jpg/gif |
| Libharu | C | ZLIB/LIBPNG | V | V | V | \*\* | V  api | 2013 | V | jpg |
| ImageMagic | Mul  $ | \*\*\* | V | V | V | V | V  Both | 2016 | V | $$ |
| Pdf Create | perl | GPL | --- | V | V | V | V  api | 2016 | V | jpg |

\* a python version. It's a php source originally.

\*\* need zlib & libpng to convert png to pdf

\*\*\* http://www.imagemagick.org/script/license.php

$ http://www.imagemagick.org/script/api.php

$$ JPEG, JPEG-2000, GIF, TIFF, DPX, EXR, WebP, Postscript, PDF, and SVG.

在處理 png → pdf 的問題上，最多人用ImageMagick.

(以stackoverflow的文章數為依據)

* fpdf (python / php)

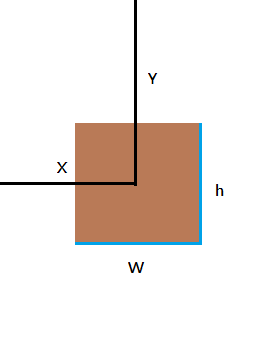
man page : https://pypi.python.org/pypi/fpdf

source code : https://github.com/reingart/pyfpdf

Support : .png/.jpg, need Python Imaging Library (PIL) if you want to support GIF

api :

fpdf1.PNG



ex. convert above picture(brown part) to a pdf

from fpdf import FPDF

pdf = FPDF()

pdf.add\_page()

pdf.image('brown.png', x, y, w, h)

pdf.output('image2pdf.pdf')

* libharu

http://libharu.org/

* ImageMagick

http://www.imagemagick.org/script/index.php

http://git.imagemagick.org/repos/ImageMagick

* 速度：.jpg file is converted from .png file using '*mogrify -format jpg'*

(.png file is smaller than .jpg file)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| tool \ pic | 10 | 50 | 100 | 200 | 432 | Pdf size  (432 pics) |
| Fpdf  (png/python) | 0.197 | 1.048 | 4.464 | 13.028 | 62.182 | 64.2MB |
| Fpdf  (jpg/python) | 0.680 | 2.183 | 7.168 | 24.228 | 103.184 | 116.4MB |
| Libharu  (png/perl) | 0.669 | 6.033 | 12.796 | 38.169 | 60.839 | 5GB/61.7MB |
| Libharu  (jpg/perl) | 0.127 | 0.334 | 0.583 | 1.413 | 3.606 | 116.5MB |
| Imagemagick  (png/command) | 1.667 | 7.537 | 168.983 | ---\* | ---\* | ---\* |
| Imagemagick  (jpg/command) | 0.946 | 5.368 | ---\* | ---\* | ---\* | ---\* |
| Pdf Create  (jpg/perl) | 0.119 | 0.637 | 1.239 | 2.574 | 4.046 | 116.5MB |

\* not enough memory

pdf Create 和 libharu (jpg) 時間與張數呈線性正相關，其餘到100張之後略呈指數成長。