1.

from PIL import Image

pictobj = Image.new('RGB',(300,180),'LightGreen')

pictobj.save('out.jpg')

2.

from PIL import Image

from PIL import ImageColor

newImage = Image.open('out.jpg')

for x in range(50, 251):

for y in range(40, 91):

newImage.putpixel((x, y), ImageColor.getcolor('Blue', 'RGB'))

for x in range(50, 251):

for y in range(91, 141):

newImage.putpixel((x, y), ImageColor.getcolor('Red', 'RGB'))

newImage.save('out1.jpg')

3.

from PIL import Image

pict = Image.open('大頭照.jpg')

width, height = pict.size

newPict1 = pict.resize((int(width\*1.2), int(height)))

newPict1.save('3-w1.2.jpg')

newPict2 = pict.resize((int(width\*1.5), int(height)))

newPict2.save('3-w1.5.jpg')

newPict3 = pict.resize((int(width\*0.5), int(height)))

newPict3.save('3-w0.5.jpg')

newPict4 = pict.resize((int(width\*0.8), int(height)))

newPict4.save('3-w0.8.jpg')

newPict5 = pict.resize((int(width), int(height\*1.2)))

newPict5.save('3-h1.2.jpg')

newPict6 = pict.resize((int(width), int(height\*1.5)))

newPict6.save('3-h1.5.jpg')

newPict7 = pict.resize((int(width), int(height\*0.8)))

newPict7.save('3-h0.8.jpg')

newPict8 = pict.resize((int(width), int(height\*0.5)))

newPict8.save('3-h0.5.jpg')

4.

from PIL import Image

pict = Image.open('大頭照.jpg')

newPict1 = pict.resize((350, 500))

newPict2 = Image.new('RGB',(350+100, 500+100),'Yellow')

newPict2.paste(newPict1, (50, 50))

newPict2.save('myfig.jpg')

5.

from PIL import Image

pict = Image.open('dog.jpg')

newPict = Image.new('RGB',(800+100, 400+100),'Yellow')

for x in range(0, 8):

for y in range(0, 4):

newPict.paste(pict, (50+100\*x, 50+100\*y))

newPict.save('5xxx.jpg')

6.

from PIL import Image

pict = Image.open('大頭照.jpg')

newPict = Image.new('RGB',(3306+100, 2836+100),'Yellow')

for x in range(0, 6):

for y in range(0, 4):

newPict.paste(pict, (50+551\*x, 50+709\*y))

newPict.save('myfig1.jpg')

7.

from PIL import Image

from PIL import ImageFilter

pict = Image.open('路思義.jpg')

filterPict = pict.filter(ImageFilter.BLUR)

filterPict.save('7BLUR.jpg')

filterPict = pict.filter(ImageFilter.CONTOUR)

filterPict.save('7CONTOUR.jpg')

filterPict = pict.filter(ImageFilter.DETAIL)

filterPict.save('7DETAIL.jpg')

filterPict = pict.filter(ImageFilter.EDGE\_ENHANCE)

filterPict.save('7EDGE\_ENHANCE.jpg')

filterPict = pict.filter(ImageFilter.EDGE\_ENHANCE\_MORE)

filterPict.save('7EDGE\_ENHANCE\_MORE.jpg')

filterPict = pict.filter(ImageFilter.EMBOSS)

filterPict.save('7EMBOSS.jpg')

filterPict = pict.filter(ImageFilter.FIND\_EDGES)

filterPict.save('7FIND\_EDGES.jpg')

filterPict = pict.filter(ImageFilter.SMOOTH)

filterPict.save('7SMOOTH.jpg')

filterPict = pict.filter(ImageFilter.SMOOTH\_MORE)

filterPict.save('7SMOOTH\_MORE.jpg')

filterPict = pict.filter(ImageFilter.SHARPEN)

filterPict.save('7SHARPEN.jpg')

8.

from PIL import Image, ImageDraw

newImage = Image.new('RGB', (300, 300), 'Yellow')

drawObj = ImageDraw.Draw(newImage)

for x in range(100, 200, 3):

for y in range(100, 200, 3):

drawObj.point([x, y], fill = 'Green')

drawObj.line([(0, 0), (299, 0), (299, 299), (0, 299), (0, 0)], fill = 'Black')

for x in range(150, 300, 10):

drawObj.line([(x, 0), (300, x-150)], fill = 'Blue')

for x in range(150, 0, -10):

drawObj.line([(x, 0), (0, 150-x)], fill = 'Blue')

for y in range(150, 300, 10):

drawObj.line([(0, y), (y-150, 300)], fill = 'Blue')

for y in range(300, 150, -10):

drawObj.line([(300, 450-y), (y, 300)], fill = 'Blue')

newImage.save('8xxx.jpg')

9.

from PIL import Image, ImageDraw, ImageFont

pict = Image.open('大頭照.jpg')

newPict1 = pict.resize((350, 500))

newPict2 = Image.new('RGB',(350+100, 500+250),'Yellow')

newPict2.paste(newPict1, (50, 50))

drawObj = ImageDraw.Draw(newPict2)

strCtext = '吳咸澄'

fontInfo = ImageFont.truetype('

drawObj.text((155, 620), strCtext, fill = 'Blue', font = fontInfo)

newPict2.save('myfig2.jpg')

10.

import qrcode

codeText = 'http://cdn.thu.edu.tw/'

img = qrcode.make(codeText)

print('檔案格式', type(img))

img.save('thu.jpg')