國旗繪製

程式範例-1:

# 畫中華民國國旗

# 導入 doc

from browser import document as doc

# 以下將利用 html 產生所需的繪圖畫布

from browser import html

# 利用 math 函式庫執行三角函數運算

import math

canvas = html.CANVAS(width = 600, height = 400)

#canvas.style = {"width": "100%"}

canvas.id = "taiwan\_flag"

# 將圖畫至 id 為 brython\_div 的 cnavas 標註

brython\_div = doc["brython\_div"]

brython\_div <= canvas

# 準備繪圖畫布

canvas = doc["taiwan\_flag"]

ctx = canvas.getContext("2d")

# 進行座標轉換, x 軸不變, y 軸反向且移動 canvas.height 單位光點

# ctx.setTransform(1, 0, 0, -1, 0, canvas.height)

# 以下採用 canvas 原始座標繪圖

flag\_w = canvas.width

flag\_h = canvas.height

circle\_x = flag\_w/4

circle\_y = flag\_h/4

# 先畫滿地紅

ctx.fillStyle='rgb(255, 0, 0)'

ctx.fillRect(0,0,flag\_w,flag\_h)

# 再畫青天

ctx.fillStyle='rgb(0, 0, 150)'

ctx.fillRect(0,0,flag\_w/2,flag\_h/2)

# 畫十二道光芒白日

ctx.beginPath()

star\_radius = flag\_w/8

angle = 0

for i in range(24):

angle += 5\*math.pi\*2/12

toX = circle\_x + math.cos(angle)\*star\_radius

toY = circle\_y + math.sin(angle)\*star\_radius

# 只有 i 為 0 時移動到 toX, toY, 其餘都進行 lineTo

if (i):

ctx.lineTo(toX, toY)

else:

ctx.moveTo(toX, toY)

ctx.closePath()

# 將填色設為白色

ctx.fillStyle = '#fff'

ctx.fill()

# 白日:藍圈

ctx.beginPath()

ctx.arc(circle\_x, circle\_y, flag\_w\*17/240, 0, math.pi\*2, True)

ctx.closePath()

# 填色設為藍色

ctx.fillStyle = 'rgb(0, 0, 149)'

ctx.fill()

# 白日:白心

ctx.beginPath()

ctx.arc(circle\_x, circle\_y, flag\_w/16, 0, math.pi\*2, True)

ctx.closePath()

# 填色設為白色

ctx.fillStyle = '#fff'

ctx.fill()

程式範例-2

**import** UIKit**import** PlaygroundSupport// 畫國旗// 紅底**let** flag = CGRect(x: 0, y:0, width: 600,height: 400)// 藍底**let** blue = UIView(frame: CGRect(x: 0, y: 0, width: 300, height: 200))**let** flagImageView = UIImageView(frame: flag)flagImageView.addSubview(blue)flagImageView.backgroundColor = UIColor(red: 1, green: 0, blue: 0, alpha: 1)blue.backgroundColor = UIColor(red: 0, green: 0, blue: 0.6, alpha: 1)// 太陽尖角座標**let** stars = [(0.0, 200.0), (169.037019601, 154.706667107), (45.2933328929, 278.450353815), (90.5866657859, 109.413334214), (135.879998679, 278.450353815), (12.1363119712, 154.706667107), (181.173331572, 200.0), (12.1363119712, 245.293332893), (135.879998679, 121.549646185), (90.5866657859, 290.586665786), (45.2933328929, 121.549646185), (169.037019601, 245.293332893)]// 十二道光芒**let** sun = UIBezierPath()sun.move(to: CGPoint(x: 50.0, y: 100.0))**for** (xpos,ypos) **in** stars{sun.addLine(to: CGPoint(x: xpos+50.0, y: ypos-100.0))}sun.close()**let** sunLayer = CAShapeLayer()sunLayer.path = sun.cgPath**let** sunframe = CGRect(x: 0, y: 0, width: 300, height: 200)**let** sunView = UIView(frame: sunframe)sunView.backgroundColor = UIColor(red: 1, green: 1, blue: 1, alpha: 1)sunView.layer.mask = sunLayerflagImageView.addSubview(sunView)// 太陽中間的圓**let** path = UIBezierPath(ovalIn: CGRect(x: 50, y: 50, width: 100, height: 100))**let** circleLayer = CAShapeLayer()circleLayer.path = path.cgPath**let** circleframe = CGRect(x: 40, y: 0, width: 200, height: 200)**let** circleView = UIView(frame: circleframe)circleView.layer.mask = circleLayercircleView.backgroundColor = UIColor(red: 0, green: 0, blue: 0.6, alpha: 1)flagImageView.addSubview(circleView)**let** lilCircle = UIView(frame: CGRect(x: 95, y: 55, width: 90, height: 90))lilCircle.layer.cornerRadius = 45lilCircle.backgroundColor = UIColor(red: 1, green: 1, blue: 1, alpha: 1)flagImageView.addSubview(lilCircle)PlaygroundPage.current.liveView = flagImageView

結果

