

# Cory Paynes

Completed



Original



#Cory Paynes

#Thursday March 7th, 2024

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def p2():
    pic = makePicture(getMediaPath("passionFlower.jpg"))
    pic1 = duplicatePicture(pic)
    pic2 = duplicatePicture(pic)
    pic3 = duplicatePicture(pic)
    pic4 = duplicatePicture(pic)
    height = getHeight(pic)
    width = getWidth(pic)
    sig = makePicture(getMediaPath("signature.jpg"))
    canvas = makeEmptyPicture(width * 2, height * 2, black)
    grayPosterize(pic1)
    copyTL(pic1, canvas, height, width)
    grayScale(pic2)
    copyTR(pic2, canvas, height, width)
    reder(pic3)
    copyBL(pic3, canvas, height, width)
    negative(pic4)
    copyBR(pic4, canvas, height, width)
    copyM(pic, canvas, height, width)
    explore(sig)
    chromakeyGreen(sig, canvas)
    explore(canvas)

def chromakeyGreen(source, bg):
    for px in getPixels(source):
        x = getX(px)
        y = getY(px)
        if (getGreen(px) < 255):
            bgpx = getPixel(source, x, y)
            bgcol = getColor(bgpx)
            target = getPixel(bg, x, y)
            setColor(target, bgcol)
    return (bg)

def reder(picture):
    for p in getPixels(picture):
        r = getRed(p)
        g = getGreen(p)
        b = getBlue(p)
        newr = r*2
        newg = g/2
        newb = b/2
        setColor(p, makeColor(newr, newg, newb))
    return (picture)
```

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def grayPosterize(picture):
    for p in getPixels(picture):
        intensity = (getRed(p)+getGreen(p)+getBlue(p))/3
        setColor(p,makeColor(intensity,intensity,intensity))
    for p in getPixels(picture):
        r = getRed(p)
        g = getGreen(p)
        b = getBlue(p)
        luminance = (r+g+b)/3
        if luminance < 64:
            setColor(p,black)
        if luminance >= 64:
            setColor(p,white)
    return(picture)

def grayScale(picture):
    for p in getPixels(picture):
        intensity = (getRed(p)+getGreen(p)+getBlue(p))/3
        setColor(p,makeColor(intensity,intensity,intensity))
    return(picture)

def negative(picture):
    for px in getPixels(picture):
        red=getRed(px)
        green=getGreen(px)
        blue=getBlue(px)
        negColor=makeColor(255-red, 255-green, 255-blue)
        setColor(px,negColor)
    return(picture)

def copyTL(pic, canvas, height, width):
    for px in range(width):
        for py in range(height):
            color=getColor(getPixel(pic,px,py))
            target=getPixel(canvas,px,py)
            setColor(target,color)

def copyTR(pic, canvas, height, width):
    for px in range(width):
        for py in range(height):
            color=getColor(getPixel(pic,px,py))
            target=getPixel(canvas,px+width,py)
            setColor(target,color)

def copyBL(pic, canvas, height, width):
    for px in range(width):
        for py in range(height):
            color=getColor(getPixel(pic,px,py))
            target=getPixel(canvas,px,py+height)
            setColor(target,color)

def copyBR(pic, canvas, height, width):
    for px in range(width):
        for py in range(height):
            color=getColor(getPixel(pic,px,py))
            target=getPixel(canvas,px+width,py+height)
            setColor(target,color)

```

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def copyM(pic, canvas, height, width):
    for px in range(width):
        for py in range(height):
            color=getColor(getPixel(pic,px,py))
            target=getPixel(canvas,px+(width/2),py+(height/2))
            setColor(target,color)
```