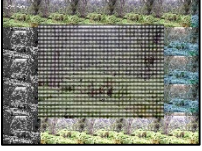


# Gracie Herring

Completed



Original



```
#Gracie Herring  
#03/10/26
```

```
from mediaComp import*  
setMediaFolder()
```

```
def Original(picture):  
    picture=makePicture(getMediaFolder("jungle2.jpg"))  
    return(picture)
```

```
def Lighten(picture):  
    picture=makePicture(getMediaFolder("jungle2.jpg"))  
    for pixel in getPixels(picture):  
        x = getX(pixel)  
        color = getColor(pixel)  
        color = makeLighter(color)  
        setColor(pixel, color)  
    return(picture)
```

```
def ColorSwap(picture):  
    picture=makePicture(getMediaFolder("jungle2.jpg"))  
    for pixel in getPixels(picture):  
        R = getRed(pixel)  
        B = getBlue(pixel)  
        G = getGreen(pixel)  
        setBlue(pixel, G)  
        setGreen(pixel, R)  
        setRed(pixel, B)  
    return(picture)
```

```
def Posterize(picture):  
    picture=makePicture(getMediaFolder("jungle2.jpg"))  
    for pixel in getPixels(picture):  
        red_value = getRed(pixel)  
        green_value = getGreen(pixel)  
        blue_value = getBlue(pixel)  
        luminance = (red_value + green_value + blue_value) // 3  
        if luminance < 50:  
            setColor(pixel,black)  
        if 50 <= luminance <= 150:  
            setColor(pixel,darkGray)  
        if 151 <= luminance <= 200:  
            setColor(pixel,lightGray)  
        if luminance > 200:  
            setColor(pixel,white)  
    return(picture)
```

```
def Waffle(picture):  
    picture = makePicture(getMediaFolder("jungle2.jpg"))
```

```

for pixel in getPixels(picture):
    x = getX(pixel)
    y = getY(pixel)
    if x in range (0, 736, 2):
        if y in range (0, 736, 2):
            color = getColor(pixel)
            color = makeLighter(color)
            color = makeLighter(color)
            color = makeLighter(color)
            color = makeLighter(color)
            setColor(pixel, color)
        if y in range (1, 736, 2):
            if y in range (1, 736, 2):
                color = getColor(pixel)
                color = makeDarker(color)
                color = makeDarker(color)
                color = makeDarker(color)
                setColor(pixel, color)
return(picture)

def Input(picture_in, picture_out, target_x, target_y):
    for x in range(0, getWidth(picture_in)):
        for y in range(0, getHeight(picture_in)):
            source_pixel = getPixelAt(picture_in, x, y)
            color = getColor(source_pixel)
            target_pixel = getPixelAt(picture_out, x + target_x, y + target_y)
            setColor(target_pixel, color)
    return picture_out

def Scale(source, scale_factor):
    new_width = int(getWidth(source) * scale_factor)
    new_height = int(getHeight(source) * scale_factor)
    new_picture = makeEmptyPicture(new_width, new_height)
    for new_x in range(0, new_width):
        for new_y in range(0, new_height):
            source_x = int(new_x // scale_factor)
            source_y = int(new_y // scale_factor)
            color = getColor(getPixelAt(source, source_x, source_y))
            setColor(getPixelAt(new_picture, new_x, new_y), color)
    return new_picture

def Signature(signature_picture, canvas, target_x, target_y):
    for x in range(0, getWidth(signature_picture)):
        for y in range(0, getHeight(signature_picture)):
            pixel = getPixelAt(signature_picture, x, y)
            color = getColor(pixel)
            if distance(color, white) > 50:
                target_pixel = getPixelAt(canvas, target_x + x, target_y + y)
                setColor(target_pixel, white)

def Collage():
    canvas = makeEmptyPicture(1000, 736, black)
    picture = makePicture(getMediaFolder("jungle2.jpg"))

    signature = makePicture(getMediaFolder("signature.jpg"))
    new_signature = Scale(signature, 0.2)

    scale_original = Scale(Original(picture), 0.3)
    scale_lighten = Scale(Lighten(picture), 0.3)
    scale_colorSwap = Scale(ColorSwap(picture), 0.3)

```

```
scale_posterize = Scale(Posterize(picture), 0.3)

width=getWidth(scale_original)
height=getHeight(scale_original)
for i in range (0,5):
    Input(scale_colorSwap, canvas, 1000 - width, i * height)
for i in range (0,5):
    Input(scale_lighten, canvas, 1000 - ((i + 1) * width), 736 - height)
for i in range (5):
    Input(scale_posterize, canvas, 0, 736 - ((i + 1) * height))
for i in range (0,5):
    Input(scale_original, canvas, i * width, 0)
x = (1000 - getWidth(Waffle(picture))) // 2
y = (736 - getHeight(Waffle(picture))) // 2
Input(Waffle(picture), canvas, x, y)

signature_x = 0
signature_y = 0
Signature(new_signature, canvas, signature_x, signature_y)
show(canvas)
```