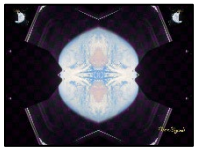
River Bogard

Completed



Original



```
from mediaComp import *

# Designed by River Bogard
# Date: 10/26/26
getMediaFolder()
picture1 = makePicture(getMediaFolder("Space.jpg"))
signature = makePicture(getMediaFolder("signature.jpg"))

def collage():
    kal = kaleidoscope(picture1)
    canvas = copypicture(kal)
    purple = duplicatePicture(copypicture1)
    purpleTint(purple)
    checker(purple, canvas)
    addoriginal(canvas, picture1)
    sign(canvas, signature)
    show(canvas)

def kaleidoscope(picture1):
    global copypicture1
    copypicture1 = duplicatePicture(picture1)
    halfWidth = getWidth(copypicture1) // 2
    halfHeight = getHeight(copypicture1) //2
    for x in range(0, halfWidth):
        for y in range(0, halfHeight):
            color = getColor(getPixelAt(picture1, halfWidth + x, halfHeight + y))
            setColor(getPixelAt(copypicture1, halfWidth + x, halfHeight + y), color)
            setColor(getPixelAt(copypicture1, halfWidth - 1 - x, halfHeight + y), color)
            setColor(getPixelAt(copypicture1, halfWidth + x, halfHeight - 1 - y), color)
            setColor(getPixelAt(copypicture1, halfWidth - 1 - x, halfHeight - 1 - y), color)
    return copypicture1
```

```
def copypicture(picture1):
    canvas = makeEmptyPicture(getWidth(picture1), getHeight(picture1))
    for x in range(0, getWidth(picture1)):
        for y in range(0, getHeight(picture1)):
            color = getColor(getPixelAt(picture1, x, y))
            setColor(getPixelAt(canvas, x, y), color)
    return canvas

def checker(purple, canvas):
    size = 25   # controls the size of the checkers
    for x in range(0, getWidth(purple)):
        for y in range(0, getHeight(purple)):
            if (x // size + y // size) % 2 == 0:
                basearea = getPixelAt(canvas, x, y)
                brightness = (getRed(basearea) + getGreen(basearea) + getBlue(basearea)) / 3
                if brightness < 90:
                    color = getColor(getPixelAt(purple, x, y))
                    setColor(getPixelAt(canvas, x, y), color)

def grayScale(picture1):
    for pixel in getPixels(picture1):
        intensity = (getRed(pixel) + getGreen(pixel) + getBlue(pixel)) / 3
        setColor(pixel, makeColor(intensity, intensity, intensity))

def purpleTint(copypicture1):
    grayScale(copypicture1)
    for pixel in getPixels(copypicture1):
        r = getRed(pixel)
        g = getGreen(pixel)
        b = getBlue(pixel)

        setRed(pixel, min(255, int(r * 1.3)+ 10)) # the + controls the color of the tint
        setGreen(pixel, int(g * 0.7))
        setBlue(pixel, min(255, int(b * 1.5)+10))

def sign(canvas, sig):
    step = getWidth(sig) // 120 + 1
    startX = getWidth(canvas) - getWidth(sig) // step - 10
    startY = getHeight(canvas) - getHeight(sig) // step - 10
    for x in range(0, getWidth(sig), step):
        for y in range(0, getHeight(sig), step):
            if getRed(getPixelAt(sig, x, y)) < 200:
                setColor(getPixelAt(canvas, startX + x // step, startY + y // step), makeColor(255, 255, 0))
```

```
def addoriginal(canvas, picture1):
    step = 8
    cw = getWidth(canvas)
    for x in range(0, getWidth(picture1), step):
        for y in range(0, getHeight(picture1), step):
            color = getColor(getPixelAt(picture1, x, y))
            setColor(getPixelAt(canvas, 10 + x // step, 10 + y // step), getColor(getPixelAt(picture1, x, y)))
            setColor(getPixelAt(canvas, cw - 11 - x // step, 10 + y // step), color)
```