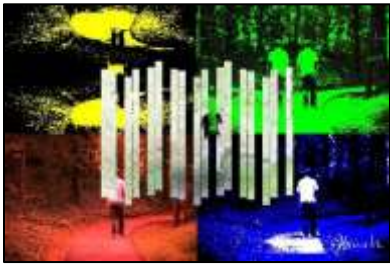


# Hannah Johnston

Completed



Original



#Hannah Johnston October 21 2021

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def collage ():
    setMediaPath()
    pic1 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic2 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic3 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic4 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic5 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic6 = makePicture(getMediaPath("IMG_9947.JPG"))
    pic7 = makePicture(getMediaPath("IMG_9947.JPG"))
    canvas = makeEmptyPicture(getWidth(pic1) * 2 ,getHeight(pic1) * 2)
    sig = makePicture(getMediaPath("sig.jpg"))

    hw = getWidth(pic1)/2
    hv = getHeight(pic1)/2

    # this is the original picture
    copy(pic3, canvas, getWidth(pic3),0)

    lighten(pic3)
    mirrorrl(pic3)
    chromaSig3(pic3, canvas, getWidth(pic3),0)

    lighten(pic4)
    posterize(pic4)
    copy(pic4, canvas, getWidth(pic4), getHeight(pic4))

    morered(pic5, 4)
    copy(pic5, canvas, 0, getHeight(pic5))

    darken(pic6)
    darken(pic6)
    darken(pic6)
    darken(pic6)
    darken(pic6)
    darken(pic6)
    darken(pic6)
    copy(pic6, canvas, 0,0)

    mirrorbt(pic7)
    chromaSig4(pic7, canvas, 0,0)
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lighten(pic2)
negative(pic2)
lighten(pic1)
copyslice(pic2, 0, 20, canvas, hw, hv)
copyslice(pic2, 21, 40, canvas, hw + 21, hv + 5)
copyslice(pic2, 61, 80, canvas, hw + 61, hv + 20)
copyslice(pic2, 81, 100, canvas, hw + 81, hv)
copyslice(pic2, 121, 140, canvas, hw + 121, hv - 5)
copyslice(pic2, 141, 160, canvas, hw + 141, hv - 20)
copyslice(pic2, 181, 200, canvas, hw + 181, hv)
copyslice(pic2, 201, 220, canvas, hw + 201, hv + 5)
copyslice(pic2, 241, 260, canvas, hw + 241, hv + 20)
copyslice(pic2, 261, 280, canvas, hw + 261, hv)
copyslice(pic2, 301, 320, canvas, hw + 301, hv - 5)
copyslice(pic2, 321, 340, canvas, hw + 321, hv - 20)
copyslice(pic2, 361, 380, canvas, hw + 361, hv)
copyslice(pic2, 381, 400, canvas, hw + 381, hv + 5)
copyslice(pic2, 421, 440, canvas, hw + 421, hv + 20)
copyslice(pic2, 441, 460, canvas, hw + 441, hv)
copyslice(pic2, 481, 500, canvas, hw + 481, hv - 5)
copyslice(pic2, 501, getWidth(pic2), canvas, hw + 501, hv - 20)

chromaSig5(sig, canvas, getWidth(pic1) * 2 - 150, getHeight(pic1) * 2 - 98 )

save(canvas)
show(canvas)

def save(canvas):
    file = r"done.jpg"
    writePictureTo(canvas, file)

def morered(pic, factor):
    for p in getPixels(pic):
        value=getRed(p)
        setRed(p, value * factor)

def posterize(picture):
    for pixel in getPixels(picture):
        rval = getRed(pixel)
        bval = getBlue(pixel)
        gval = getGreen(pixel)
        lumi = (rval + bval + gval)/3
        if lumi < 60:
            setColor (pixel, black)
        elif lumi > 130:
            setColor (pixel,white)
        else:
            setColor (pixel, blue)

def negative(pic):
    for ep in getPixels(pic):
        r = getRed(ep)
        b = getBlue(ep)
        g = getGreen(ep)
        neg = makeColor (255 - r , 255 - b , 255 - g)
        setColor(ep,neg)

def darken(pic):
    for each_pixel in getPixels(pic):

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    color = getColor(each_pixel)
    color = makeDarker(color)
    setColor(each_pixel, color)

def lighten(pic):
    for eachpx in getPixels(pic):
        color = getColor(eachpx)
        color = makeLighter(color)
        setColor(eachpx, color)

def chromaSig(pic, target, targetx, targety):
    for x in range(0, getWidth(pic)):
        for y in range(0, getHeight(pic)):
            px = getPixel(pic, x, y)
            color = getColor(px)
            targ = getPixel(target, x + targetx, y + targety)
            if distance (black, color) > 120:
                setColor(targ, red)

def chromaSig2(pic, target, targetx, targety):
    for x in range(0, getWidth(pic)):
        for y in range(0, getHeight(pic)):
            px = getPixel(pic, x, y)
            color = getColor(px)
            targ = getPixel(target, x + targetx, y + targety)
            if distance (black, color) > 120:
                setColor(targ, blue)

def chromaSig3(pic, target, targetx, targety):
    for x in range(0, getWidth(pic)):
        for y in range(0, getHeight(pic)):
            px = getPixel(pic, x, y)
            color = getColor(px)
            targ = getPixel(target, x + targetx, y + targety)
            if distance (black, color) > 120:
                setColor(targ, green)

def chromaSig4(pic, target, targetx, targety):
    for x in range(0, getWidth(pic)):
        for y in range(0, getHeight(pic)):
            px = getPixel(pic, x, y)
            color = getColor(px)
            targ = getPixel(target, x + targetx, y + targety)
            if distance (black, color) > 120:
                setColor(targ, yellow)

def chromaSig5(pic, target, targetx, targety):
    for x in range(0, getWidth(pic)):
        for y in range(0, getHeight(pic)):
            px = getPixel(pic, x, y)
            color = getColor(px)
            targ = getPixel(target, x + targetx, y + targety)
            if distance (black, color) < 120:
                setColor(targ, white)

def copy(pic, target, targx, targy):
    targetx = targx
    for x in range(getWidth(pic)):
        targy = targy
        for y in range(getHeight(pic)):

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    pixel = getPixel (pic, x, y)
    tx = getPixel(target, targetx, targety)
    setColor(tx, getColor(pixel))
    targety = targety + 1
    targetx = targetx + 1

def mirrorrl (picture):
    width = getWidth(picture)
    half = width / 2
    for y in range(0,getHeight(picture)):
        for x in range(0,half):
            left = getPixel (picture,x,y)
            right = getPixel (picture,width - x - 1,y)
            color = getColor(right)
            setColor(left, color)

def mirrorbt (picture):
    height = getHeight(picture)
    half = height / 2
    for x in range(0,getWidth(picture)):
        for y in range(0,half):
            top = getPixel (picture,x,y)
            bottom = getPixel (picture,x,height - y - 1)
            color = getColor(bottom)
            setColor(top, color)

def scale(src, canvas, factor):
    sourcex = 0
    for targetx in range(0, int(getWidth(src) * factor)):
        sourcey = 0
        for targety in range(0, int(getHeight(src) * factor)):
            color = getColor(getPixel (src, int(sourcex), int(sourcey)))
            setColor(getPixel (canvas, targetx, targety), color)
            sourcey = sourcey + 1.0 / factor
            sourcex = sourcex + 1.0 / factor

def copyslice(pic, start, end, target, targx, targy):
    targetx = targx
    for x in range(start, end):
        targety = targy
        for y in range(getHeight(pic)):
            pixel = getPixel (pic, x, y)
            tx = getPixel (target, targetx, targety)
            setColor(tx, getColor(pixel))
            targety = targety + 1
            targetx = targetx + 1

collage ()

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