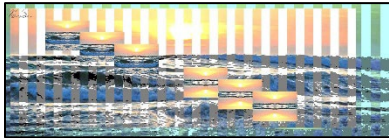


Kate Swope

Completed



Original



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#Kate Swope
#3/14/2022
def collage():
    base_pic = makePicture(getMediaPath("waves.jpg"))
    base_light = lighter(base_pic)
    s = 1.5
    big_pic = makeEmptyPicture(int(getWidth(base_pic)*s),int( getHeight(base_pic)*s))
    scale(base_pic, big_pic, s)
    poster_a = poster(base_pic)
    canvas_2 = makeEmptyPicture(int(getWidth(poster_a)*s), int(getHeight(poster_a)*s))
    b_w = scale(poster_a, canvas_2, s)
    x = 20
    picture_1_height = getHeight(big_pic)
    picture_1_width = getWidth(big_pic)
    bar_width_1 = picture_1_width / x
    picture_2_width = getWidth(b_w)
    bar_width_2 = picture_2_width / x
    new_picture_width = (880)
    canvas_3 = makeEmptyPicture(new_picture_width, picture_1_height)
    for slice in range (0,x):
        copy_1(big_pic, canvas_3, bar_width_1*slice, bar_width_1*(slice+1), (slice*bar_width_2)+(bar_width_1*slice))
        copy_2(b_w, canvas_3, bar_width_2*slice, bar_width_2*(slice+1), ((slice+1)*bar_width_1)+(bar_width_2*slice))
    mirror = mirrorPic(big_pic)
    z = .25
    small_pic = makeEmptyPicture(int(getWidth(big_pic)*z),int(getHeight(big_pic)*z))
    small_light = makeEmptyPicture(int(getWidth(big_pic)*.75),int(getHeight(big_pic)*.75))
    mirrorSmall = scale(big_pic, small_pic, z)
    copy(mirrorSmall, canvas_3, (getWidth(canvas_3)/10), (getHeight(canvas_3)/10))
    copy(mirrorSmall, canvas_3, (getWidth(canvas_3)/10)*2, (getHeight(canvas_3)/10)*2)
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copy(mirrorSmall, canvas_3, (getWidth(canvas_3)/10)*3, (getHeight(canvas_3)/10)*3)
mirror_2 = mirrorPic_2(mirrorSmall)
copy(mirror_2, canvas_3, (getWidth(canvas_3)/10)*5, (getHeight(canvas_3)/10)*5)
copy(mirror_2, canvas_3, (getWidth(canvas_3)/10)*6, (getHeight(canvas_3)/10)*6)
copy(mirror_2, canvas_3, (getWidth(canvas_3)/10)*7, (getHeight(canvas_3)/10)*7)
center_pic = makeEmptyPicture(int(getWidth(canvas_3)*.9),int(getHeight(canvas_3)*.9))
scale(canvas_3, center_pic, .9)
canvas_final = color_change(canvas_3)
copy(center_pic, canvas_final, 10, 10)
signature = makePicture(getMediaPath("signature.jpg"))
small_sig = makeEmptyPicture(int(getWidth(signature)*.015),int(getHeight(signature)*.015))
scale(signature, small_sig, .015)
lighter(small_sig)
final = chromakey(small_sig, canvas_final)
final_2 = copy(final, canvas_final, 0, 0)
explore(final_2)
def copy(target, canvas, target_x, target_y):
    targetX = target_x
    for sourceX in range(0, getWidth(target)):
        targetY = target_y
        for sourceY in range(0,getHeight(target)):
            color = getColor(getPixel(target,sourceX,sourceY))
            setColor(getPixel(canvas,targetX,targetY), color)
            targetY = targetY + 1
        targetX = targetX + 1
    return canvas
def lighter(picture):
    for x in range(0,getWidth(picture)):
        for y in range(0,getHeight(picture)):
            px = getPixel(picture,x,y)
            color = getColor(px)
            color = makeLighter(color)
            setColor(px,color)
    return picture
def mirrorPic(picture):
    mirrorPoint = getWidth(picture) / 2
    width = getWidth(picture)
    for y in range(0,getHeight(picture)):
        for x in range(0,mirrorPoint):
            leftPixel = getPixel(picture,x,y)
            rightPixel = getPixel(picture,width - x - 1,y)
            color = getColor(leftPixel)
            setColor(rightPixel,color)
def mirrorPic_2(picture):
    mirrorPoint = getHeight(picture) / 2

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height = getHeight (picture)
for y in range(0,mirrorPoint):
    for x in range(0,getWidth (picture)):
        leftPixel = getPixel (picture,x,y)
        rightPixel = getPixel (picture,x, height -y -1)
        color = getColor (leftPixel)
        setColor (rightPixel,color)
return picture
def scale (picture_in, picture_out, s):
    sourceX = 0
    for targetX in range(0,getWidth (picture_out)):
        sourceY = 0
        for targetY in range(0,getHeight (picture_out)):
            color = getColor (getPixel (picture_in,int (sourceX),int (sourceY)))
            setColor (getPixel (picture_out,targetX,targetY), color)
            sourceY = sourceY + 1.0/s
        sourceX = sourceX + 1.0/s
    return picture_out
def poster (picture):
    for p in getPixels (picture):
        r = getRed (p)
        g = getGreen (p)
        b = getBlue (p)
        luminance = (r+g+b)/3
        if luminance < 50:
            setColor (p,black)
        if (50 <= luminance <= 165):
            setColor (p,gray)
        if luminance > 165:
            setColor (p,white)
    return picture
def copy_1 (pic_1, canvas, bar_start, bar_stop, targetX):
    targetX = targetX
    for sourceX in range (bar_start, bar_stop):
        for sourceY in range (0,getHeight (pic_1)):
            color = getColor (getPixel (pic_1,sourceX,sourceY))
            setColor (getPixel (canvas,targetX,sourceY), color)
        targetX = targetX + 1
def copy_2 (pic_2, canvas, bar_start, bar_stop, targetX):
    targetX = targetX
    for sourceX in range (bar_start, bar_stop):
        for sourceY in range (0,getHeight (pic_2)):
            color = getColor (getPixel (pic_2,sourceX,sourceY))
            setColor (getPixel (canvas,targetX,sourceY), color)
        targetX = targetX + 1

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def color_change(picture):
    for pixel in getPixels(picture):
        value = getRed(pixel)
        setRed(pixel,value * .1)
    for pixel in getPixels(picture):
        value = getBlue(pixel)
        setRed(pixel,value * .5)
    for pixel in getPixels(picture):
        value = getGreen(pixel)
        setRed(pixel,value * 0.75)
    return picture
def chromakey(source, bg):
    for p in getPixels(source):
        x = getX(p)
        y = getY(p)
        if (getRed(p)> 100 and getGreen(p)> 100 and getBlue(p)> 100):
            bgpx = getPixel(bg,x,y)
            bgcol = getColor(bgpx)
            setColor(p,bgcol)
    return source
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