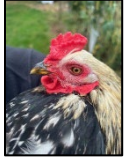


Favian Ramirez

Completed



Original



```
#Favian Ramirez October 20, 2023  
#pic Width is 240 and Height is 320
```

```
def collage():  
    setMediaPath()  
    #signiture = makePicture(getMediaPath("newSigniture.jpg"))  
    pic = makePicture(getMediaPath("rooster.jpg"))  
    pic1 = makePicture(getMediaPath("rooster.jpg"))  
    pic2 = makePicture(getMediaPath("rooster.jpg"))  
    pic3 = makePicture(getMediaPath("rooster.jpg"))  
    pic4 = makePicture(getMediaPath("rooster.jpg"))  
    explore(pic)  
    #explore(signiture)  
  
    canvas = makeEmptyPicture(480,640, black)  
  
    grayScale(pic2)  
    flipPicAndCopyHor(pic2, canvas)  
  
    turnRed(pic3)  
    flipPicAndCopyVert(pic3, canvas)  
  
    posterize(pic4)  
    flipPicAndCopyBoth(pic4, canvas)  
  
    copy(canvas, pic1)  
    copySmall(canvas, pic)  
  
    blur(canvas)  
    border(canvas)  
    #chromakeyBlue(signiture, canvas)  
    #print getWidth(signiture)  
    #print getHeight(signiture)  
    show(canvas)
```

```

def copy(canvas, pic1):
    #top left corner
    targetX = 0
    for sourceX in range(0,getWidth(pic1)):
        targetY = 0
        for sourceY in range(0,getHeight(pic1)):
            color = getColor(getPixel(pic1,sourceX,sourceY))
            setColor(getPixel(canvas,targetX,targetY), color)
            targetY = targetY + 1
        targetX = targetX + 1

def copySmall(canvas, pic):
    targetX = 142
    for sourceX in range(45,240):
        targetY = 255
        for sourceY in range(70,200):
            color = getColor(getPixel(pic,sourceX,sourceY))
            setColor(getPixel(canvas,targetX,targetY), color)
            targetY = targetY + 1
        targetX = targetX + 1

def flipPicAndCopyHor(pic, canvas):
    width = getWidth(pic)
    height = getHeight(pic)
    for y in range(0, height):
        for x in range(0, width):
            colour = getColor(getPixel(pic, x, y))
            setColor(getPixel(canvas,480 - x - 1, y), colour)
            #setColor(getPixel(canvas, x, height-y-1), colour)#upsidedown

def flipPicAndCopyVert(pic, canvas):
    width = getWidth(pic)
    height = getHeight(pic)
    for y in range(0, height):
        for x in range(0, width):
            colour = getColor(getPixel(pic, x, y))
            setColor(getPixel(canvas, x, 640-y-1), colour)

def flipPicAndCopyBoth(pic, canvas):
    width = getWidth(pic)
    height = getHeight(pic)
    for y in range(0, height):
        for x in range(0, width):
            colour = getColor(getPixel(pic, x, y))
            setColor(getPixel(canvas, 480 - x - 1, 640 - y - 1), colour)

```

```

def grayScale(picture):
    for px in getPixels(picture):
        newRed = getRed(px) * 0.299
        newGreen = getGreen(px) * 0.587
        newBlue = getBlue(px) * 0.114
        luminance = newRed+newGreen+newBlue
        setColor(px,makeColor(luminance,luminance,luminance))

def turnRed(picture):
    brown = makeColor(42, 25, 15)
    for px in getPixels(picture):
        color = getColor(px)
        if distance(color, brown) < 175.0:
            r = getRed(px) * 2
            b = getBlue(px)
            g = getGreen(px)
            setColor(px, makeColor(r, g, b))

def border(pic):
    bottom = getHeight(pic) - 10
    right = getWidth(pic) - 10
    for px in getPixels(pic):
        y = getY(px)
        if y < 10:
            setColor(px, blue)
        if y > bottom:
            setColor(px, blue)
        x = getX(px)
        if x < 10:
            setColor(px, blue)
        if x > right:
            setColor(px, blue)

def blur(source):
    target = duplicatePicture(source)
    for x in range(1, getWidth(source) - 1):
        for y in range(1, getHeight(source) - 1):
            top = getPixel(source, x, y - 1)
            left = getPixel(source, x - 1, y)
            bottom = getPixel(source, x, y + 1)
            right = getPixel(source, x + 1, y)
            center = getPixel(target, x,y)
            newRed=(getRed(top)+ getRed(left) + getRed(bottom) + getRed(right) + getRed(center)) / 5
            newGreen=(getGreen(top) + getGreen(left) + getGreen(bottom) + getGreen(right) + getGreen(center)) / 5

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newBlue=(getBlue(top) + getBlue(left) + getBlue(bottom) + getBlue(right) + getBlue(center)) / 5
setColor(center, makeColor(newRed, newGreen, newBlue))
```

```
def sepiaTint (picture):
    grayScale (picture)
    for p in getPixels (picture):
        red = getRed (p)
        blue = getBlue (p)
        if (red < 100):
            red = red*1.1
            blue = blue*0.9
        if (red > 100 and red < 192):
            red = red*1.15
            blue = blue*0.85
        if (red > 191):
            red = red*1.08
        if (red > 255):
            red = 255
            blue = blue*0.93
        setBlue (p, blue)
        setRed (p, red)
```

```
def posterize (picture):
    for p in getPixels (picture):
        red = getRed (p)
        green = getGreen (p)
        blue = getBlue (p)
        if (red < 64):
            setRed (p, 31)
        if (red > 63 and red < 128):
            setRed (p, 95)
        if (red > 127 and red < 192):
            setRed (p, 159)
        if (red > 191 and red < 256):
            setRed (p, 223)
        if (green < 64):
            setGreen (p, 31)
        if (green > 63 and green < 128):
            setGreen (p, 95)
        if (green > 127 and green < 192):
            setGreen (p, 159)
        if (green > 191 and green < 256):
            setGreen (p, 223)
        if (blue < 64):
            setBlue (p, 31)
```

```
    if(blue > 63 and blue < 128):
        setBlue(p, 95)
    if(blue > 127 and blue < 192):
        setBlue(p, 159)
    if(blue > 191 and blue < 256):
        setBlue(p, 223)

def chromakeyBlue(source, canvas):
    for px in getPixels(source):
        x = getX(px)
        y = getY(px)
        if (getRed(px) > getGreen(px) + getBlue(px)):
            for px in getPixels(canvas):
                bgpx = getPixel(source,x,y)
                bgcol = getColor(bgpx)
                setColor(px,bgcol)
```