

Terry Moriarity

Completed



Original



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setMediaPath()
def collage():
    # Define the canvas size
    #canvas_width = 1000
    #canvas_height = 736
    # Create a blank canvas
    collage_canvas = makeEmptyPicture(1000,736)
    # Load the panda image
    panda = makePicture(getMediaPath("Red panda.jpg"))
    explore(panda)
    picA = scale(panda, 0.50)
    #duplicate
    picB = duplicatePicture(picA)
    copyPicture(picA, collage_canvas, 370, 258)
    #Grayscale
    picC = duplicatePicture(picB)
    grayPicB = grayScale(picB)
    copyPicture(grayPicB, collage_canvas, 0, 0)
    #MakeLighter
    picD = duplicatePicture(picC)
    width = getWidth(picC)
    height = getHeight(picC)
    print height
    print width
    LighterPicC = Lighter(picC,width,height)
    copyPicture(LighterPicC, collage_canvas, 615, 0)
    #Darker picture
    picE = duplicatePicture(picD)
    DarderPicD = Darker(picD,width,height)
    copyPicture(LighterPicC, collage_canvas, 0, 285)
    #swapColor
    picF = duplicatePicture(picE)
    swapColorPicE =swapColor(picE)
    copyPicture(swapColorPicE, collage_canvas, 618, 285)
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#MirrorV
picG = duplicatePicture(picF)
mirrorVpicF= MirrorV(picF,width,height)
copyPicture(mirrorVpicF, collage_canvas, 308, 0)
copyPicture(picA, collage_canvas, 370, 258)
copyPicture(DarderPicD, collage_canvas,0 ,285)
copyPicture(grayPicB, collage_canvas, 0, 0)
explore(collage_canvas)

def scale(picture_in, factor):
    picture_out = makeEmptyPicture(int(getWidth(picture_in) * factor),int(getHeight(picture_in) * factor))
    in_x = 0
    for out_x in range(0, int(getWidth(picture_in) * factor)):
        in_y = 0
        for out_y in range(0, int(getHeight(picture_in) * factor)):
            color = getColor(getPixel(picture_in, int(in_x), int(in_y)))
            setColor(getPixel(picture_out, out_x, out_y), color)
            in_y = in_y + 1.0 / factor
            in_x = in_x + 1.0 / factor
    return picture_out

#The copy function that takes in two pictures
def copyPicture(picture_in, picture_out, targ_x, targ_y):
    target_x = targ_x
    for x in range(0, getWidth(picture_in)):
        target_y = targ_y
        for y in range(0, getHeight(picture_in)):
            pixel = getPixel(picture_in, x, y)
            new_pixel = getPixel(picture_out, target_x, target_y)
            setColor(new_pixel, getColor(pixel))
            target_y = target_y + 1
            target_x = target_x + 1

def grayScale(panda):
    for p in getPixels(panda):
        intensity = (getRed(p)+getGreen(p)+getBlue(p))/3
        setColor(p,makeColor(intensity,intensity,intensity))
    #Original Code:
    #repaint(panda)
    return panda

def Lighter(panda,width,height):
    for x in range(0,width):
        for y in range (0,height):
            pixel = getPixel(panda,x,y)
            setColor (pixel,makeLighter(makeLighter(getColor(pixel))))

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    return panda
def Darker(panda,width,height):
    for x in range(0,width):
        for y in range (0,height):
            pixel = getPixel(panda,x,y)
            setColor (pixel,makeDarker(makeDarker(getColor(pixel))))
    return panda
def swapColor(panda):
    for p in getPixels(panda):
        B = getBlue(p)
        R = getRed(p)
        G = getGreen(p)
        setRed(p, B)
        setBlue(p,G)
        setGreen(p,R)
    return panda
def MirrorV(panda,width,height):
    fourth = width/4
    for x in range(0,fourth):
        for y in range(0,height):
            leftPx = getPixel(panda,x,y)
            rightPx = getPixel(panda,width - x- 1,y)
            setColor(rightPx,getColor(leftPx))
    return panda
```