

Conner Welton

Completed



Original



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#Name: Conner Welton
#Date: October 6th, 2021
def collage():
    setMediaPath()
    startX = 0; endX = 1000; startY = 0; endY = 736
    sun = makePicture("Project2Image.png")
    collage = makeEmptyPicture(1000, 736, black)
    neg = negative(sun)
    grayS = grayScale(sun)
    sepina = sepinaTint(sun)
    greenS = greenSun(sun)
    yellowS = yellowSun(sun)
    whiteS = whiteSun(sun)
    sign = signatureOne()

    smallHalf(sun, collage, 250, 184)
    smallTwentyOne(neg, collage, 220, 600)
    smallThirtyThree(neg, collage, 820, 330)
    smallThirteen(grayS, collage, 145, 640)
    smallThirteen(sepina, collage, 670, 550)
    smallTwentyOne(greenS, collage, 720, 45)
    smallThirteen(yellowS, collage, 650, 660)
    smallThirteen(whiteS, collage, 720, 170)
    smallThirteen(whiteS, collage, 839, 530)
    smallThirteen(whiteS, collage, 123, 209)
    smallThirteen(sepina, collage, 805, 385)
    smallThirteen(grayS, collage, 489, 143)
    smallThirteen(grayS, collage, 295, 536)
    smallThirteen(yellowS, collage, 186, 405)
    smallThirteen(greenS, collage, 256, 33)
    smallThirteen(greenS, collage, 486, 653)
    smallThirteen(neg, collage, 75, 330)
    smallTwentyOne(neg, collage, 12, 54)
    smallTwentyOne(neg, collage, 900, 680)
    smallTwentyOne(grayS, collage, 53, 33)
    smallTwentyOne(grayS, collage, 892, 44)
    smallTwentyOne(sepina, collage, 920, 133)
    smallTwentyOne(sepina, collage, 550, 60)
    smallTwentyOne(sepina, collage, 120, 570)
    smallTwentyOne(yellowS, collage, 270, 150)
    smallTwentyOne(yellowS, collage, 750, 480)
    smallTwentyOne(greenS, collage, 140, 530)
    smallTwentyOne(whiteS, collage, 903, 360)
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smallThirtyThree(neg, collage, 642, 130)
smallThirtyThree(neg, collage, 566, 680)
smallThirtyThree(neg, collage, 10, 702)
smallThirtyThree(grayS, collage, 300, 456)
smallThirtyThree(grayS, collage, 743, 245)
smallThirtyThree(grayS, collage, 843, 643)
smallThirtyThree(grayS, collage, 912, 223)
smallThirtyThree(sepina, collage, 20, 325)
smallThirtyThree(sepina, collage, 362, 655)
smallThirtyThree(sepina, collage, 145, 356)
smallThirtyThree(sepina, collage, 234, 563)
smallThirtyThree(sepina, collage, 356, 23)
smallThirtyThree(yellowS, collage, 123, 390)
smallThirtyThree(yellowS, collage, 634, 243)
smallThirtyThree(greenS, collage, 943, 256)
smallThirtyThree(greenS, collage, 234, 333)
smallThirtyThree(whiteS, collage, 764, 145)
smallThirtyThree(whiteS, collage, 562, 520)
copyInto(sign, collage, 700, 0)
show (collage)

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def negative(sun):
    negSun = duplicatePicture(sun)
    startX = 0; endX = 1000; startY = 0; endY = 736
    for px in getAllPixels(negSun):
        redValue = getRed(px)
        greenValue = getGreen(px)
        blueValue = getBlue(px)
        myRed = (255 - redValue)
        myBlue = (255 - blueValue)
        myGreen = (255 - greenValue)
        negColor = makeColor(myRed, myGreen, myBlue)
        setColor (px, negColor)
    for x in range(startX,endX):
        for y in range(startY,endY):
            currentPx=getPixel(negSun, x, y)
            currentColor=getColor(currentPx)
            removedPxColor=setColor(px, white)
            if (distance (white,currentColor)<100):
                setColor(currentPx,black)
    return negSun

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def grayScale(sun):
    graySun = duplicatePicture(sun)
    for px in getAllPixels(graySun):
        redValue = getRed(px)
        greenValue = getGreen(px)
        blueValue = getBlue(px)
        grayValue = ((redValue + greenValue + blueValue) / 3.0)
        myGrayColor = makeColor(grayValue, grayValue, grayValue)
        setColor (px, myGrayColor)
    return graySun

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def sepinaTint(sun):
    sepinaSun = duplicatePicture(sun)
    for px in getAllPixels (sepinaSun):
        redValue = getRed(px)
        blueValue = getBlue(px)
        if (redValue < 63):
            redValue = redValue * 1.1

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    blueValue = blueValue * 0.90
    setRed(px, redValue)
    setBlue(px, blueValue)
if (redValue > 62 and redValue < 192):
    redValue = redValue * 1.2
    blueValue = blueValue * 0.80
    setRed(px, redValue)
    setBlue(px, blueValue)
if (redValue > 191):
    redValue = redValue * 1.08
if (redValue > 255):
    redValue = 255
    blueValue = blueValue * 0.93
    setRed(px, redValue)
    setBlue(px, blueValue)
return sepinaSun

def greenSun(sun):
    greensun = duplicatePicture(sun)
    for px in getAllPixels(greensun):
        redValue = getRed(px)
        greenValue = getGreen(px)
        blueValue = getBlue(px)
        setRed(px, redValue * 0.15)
        setGreen(px, greenValue * 2)
        setBlue(px, blueValue * 1.5)
    return greensun

def yellowSun(sun):
    yellowsun = duplicatePicture(sun)
    for px in getAllPixels(yellowsun):
        redValue = getRed(px)
        greenValue = getGreen(px)
        blueValue = getBlue(px)
        setRed(px, redValue * 1.1)
        setGreen(px, greenValue * 4)
        setBlue(px, blueValue * 0.2)
    return yellowsun

def whiteSun(sun):
    whitesun = duplicatePicture(sun)
    for px in getAllPixels(whitesun):
        redValue = getRed(px)
        greenValue = getGreen(px)
        blueValue = getBlue(px)
        whiteColor = (redValue + greenValue + blueValue)
        myWhite = makeColor(whiteColor, whiteColor, whiteColor)
        setColor(px, myWhite)
    return whitesun

def smallHalf(negSun, collage, startX, startY):
    sunX=0
    for targetX in range (startX, startX+getWidth (negSun) /2):
        sunY=0
        for targetY in range (startY, startY+getHeight (negSun) /2):
            sourcePx=getPixel (negSun, int (sunX) , int (sunY))
            sourceColor=getColor (sourcePx)
            targetPx=getPixelAt (collage, targetX, targetY)
            setColor (targetPx, sourceColor)
            sunY=sunY+1/0.5

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sunX=sunX+1/0.5

def smallNine(negSun,collage,startX,startY):
    sunX=0
    for targetX in range (startX,startX+getWidth(negSun)/9):
        sunY=0
        for targetY in range(startY,startY+getHeight(negSun)/9):
            sourcePx=getPixel(negSun,int(sunX), int(sunY))
            sourceColor=getColor(sourcePx)
            targetPx=getPixelAt(collage, targetX, targetY)
            setColor(targetPx, sourceColor)
            sunY=sunY+1/0.11111
        sunX=sunX+1/0.11111

def smallThirteen(negSun,collage,startX,startY):
    sunX=0
    for targetX in range (startX,startX+getWidth(negSun)/13):
        sunY=0
        for targetY in range(startY,startY+getHeight(negSun)/13):
            sourcePx=getPixel(negSun,int(sunX), int(sunY))
            sourceColor=getColor(sourcePx)
            targetPx=getPixelAt(collage, targetX, targetY)
            setColor(targetPx, sourceColor)
            sunY=sunY+1/0.076823
        sunX=sunX+1/0.076823

def smallThirtyThree(negSun,collage,startX,startY):
    sunX=0
    for targetX in range (startX,startX+getWidth(negSun)/33):
        sunY=0
        for targetY in range(startY,startY+getHeight(negSun)/33):
            sourcePx=getPixel(negSun,int(sunX), int(sunY))
            sourceColor=getColor(sourcePx)
            targetPx=getPixelAt(collage, targetX, targetY)
            setColor(targetPx, sourceColor)
            sunY=sunY+1/0.030303
        sunX=sunX+1/0.030303

def smallTwentyOne(negSun,collage,startX,startY):
    sunX=0
    for targetX in range (startX,startX+getWidth(negSun)/21):
        sunY=0
        for targetY in range(startY,startY+getHeight(negSun)/21):
            sourcePx=getPixel(negSun,int(sunX), int(sunY))
            sourceColor=getColor(sourcePx)
            targetPx=getPixelAt(collage, targetX, targetY)
            setColor(targetPx, sourceColor)
            sunY=sunY+1/0.047619
        sunX=sunX+1/0.047619

def signatureOne():
    sign = makePicture("Project2Signature.png")
    for x in range(0,300):
        for y in range(0,100):
            currentPx=getPixel(sign, x, y)
            currentColor=getColor(currentPx)
            removedPxColor=makeColor(255,255,255)
            if (distance (removedPxColor,currentColor)<100):
                setColor(currentPx,black)
    return sign

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