Olivia Britton

Completed

Originals

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from mediaComp import *

"""
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"""
def collage():
    falls=makePicture(getMediaFolder("waterfall.jpg"))
    flower=makePicture(getMediaFolder("passionFlower.jpg"))
    signature=makePicture(getMediaFolder("signature.png"))
    canvas=makeEmptyPicture(715,579,pink)
    flower=cropflower(flower)
    flower=shrink(flower,361,349,.33)
    falls=shrink(falls,640,480,.745)
    fawidth=getWidth(falls)
    faheight=getHeight(falls)
    flwidth=getWidth(flower)
    flheight=getHeight(flower)
    Cwidth=getWidth(canvas)
    Cheight=getHeight(canvas)
    scrambledfl=scramble(duplicatePicture(flower),flwidth,flheight)
    shrunkfl=shrink(flower,flwidth,flheight,.5) #width 59 height 57
    setfl(shrunkfl,canvas,2,60,59,57)#top left small flower to be changed later
    startcx=61
    startcy=2
    setfl(flower,canvas,startcx,startcy,flwidth,flheight) #org flower
    grayfl=grayit(duplicatePicture(flower))
    boxedfl=box(duplicatePicture(flower),flwidth,flheight)
    pkblfl=pinkblackfl(duplicatePicture(flower))
    hrfl=horrorfl(duplicatePicture(flower))
    lwoerfl=lwoerf(duplicatePicture(flower),flheight,flwidth)
    mirrorfl=mirroredfl(duplicatePicture(flower),flwidth,flheight)
    layerfl=layered(duplicatePicture(flower),flwidth,flheight)
    darklight=darkenlightenedfl(duplicatePicture(flower),flwidth,flheight)
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startcx=flwidth+61
setfl(grayfl,canvas,startcx,startcy,flwidth,flheight)
colorfl=colorchange(duplicatePicture(flower))
startcx=(flwidth*2)+61
setfl(colorfl,canvas,startcx,startcy,flwidth,flheight)
setfa(falls,canvas,121,117,fawidth,faheight)
startcy=flheight+2
startcx=2
setfl(hrfl,canvas,startcx,startcy,flwidth,flheight)
startcy=startcy+flheight
setfl(lwoerfl,canvas,startcx,startcy,flwidth,flheight)
startcy=startcy+flheight
setfl(colorfl,canvas,startcx,startcy,flwidth,flheight)
startcy=117
#setfl(shiftfl,canvas,startcx,startcy,flwidth,flheight)#upper left middle large flower to be changed later
startcx=Cwidth-(flwidth+2)
setfl(shrunkfl,canvas,2,(Cheight-117),59,57) #bottom left small flower to be changed later
setfl(shrunkfl,canvas,Cwidth-61,(Cheight-117),59,57) #bottom right small flower to be changed later
holefl=holes(duplicatePicture(flower),flwidth,flheight)
setfl(holefl,canvas,startcx,startcy,flwidth,flheight)#upper right middle large flower to be changed later
startcy=startcy+flheight
setfl(colorfl,canvas,startcx,startcy,flwidth,flheight)
startcy=startcy+flheight
setfl(pkblfl,canvas,startcx,startcy,flwidth,flheight)
startcx=startcx-57
startcy=Cheight-(flheight+2)
weirdfl=graychange(duplicatePicture(flower))
setfl(weirdfl,canvas,startcx,startcy,flwidth,flheight) #bottom right large flower to be changed later
startcx=61
setfl(scrambledfl,canvas,startcx,startcy,flwidth,flheight)#bottom left large flower to be changed later
startcx=startcx+flwidth
setfl(boxedfl,canvas,startcx,startcy,flwidth,flheight)#bottom middle left
startcx=startcx+flwidth
setfl(mirrorfl,canvas,startcx,startcy,flwidth,flheight)#bottom middle
startcx=startcx+flwidth
setfl(colorfl,canvas,startcx,startcy,flwidth,flheight)
startcy=2
setfl(layerfl,canvas,startcx,startcy,flwidth,flheight)
startcx=startcx-flwidth
setfl(colorfl,canvas,startcx,startcy,flwidth,flheight)
startcx=Cwidth-61
startcy=flheight//2+3
setfl(shrunkfl,canvas,startcx,startcy,59,57)
startcx=startcx-flwidth
startcy=2
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    setfl(darklight,canvas,startcx,startcy,flwidth,flheight)
    sig(signature,canvas,Cwidth,Cheight)
    pictureTool(canvas)

def cropflower(flower):
    newflower=makeEmptyPicture(361,349,black)
    newx=0
    startingy=0
    for flx in range(129,490):
        newy=startingy
        for fly in range(65,414):
            flpix=getPixelAt(flower,flx,fly)
            color=getColor(flpix)
            newpix=getPixelAt(newflower,newx,newy)
            setColor(newpix,color)
            newy=newy+1
        newx=newx+1
    return newflower

def setfa(falls,canvas,startcx,startcy,fawidth,faheight):
    cx=startcx
    for fax in range(0,fawidth):
        cy=startcy
        for fay in range(0,faheight):
            fapix=getPixelAt(falls,fax,fay)
            color=getColor(fapix)
            newpix=getPixelAt(canvas,cx,cy)
            setColor(newpix,color)
            cy=cy+1
        cx=cx+1

def setfl(flower,canvas,startcx,startcy,flwidth,flheight):
    cx=startcx
    for flx in range(0,flwidth):
        cy=startcy
        for fly in range(0,flheight):
            flpix=getPixelAt(flower,flx,fly)
            color=getColor(flpix)
            newpix=getPixelAt(canvas,cx,cy)
            setColor(newpix,color)
            cy=cy+1
        cx=cx+1

def shrink(pic,width,height,x):
    newwidth=width*x
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    newheight=height*x
    newpic=makeEmptyPicture(newwidth,newheight)
    oldx=0
    for newx in range(0,getWidth(newpic)):
        oldy=0
        for newy in range(0,getHeight(newpic)):
            oldpix=getPixelAt(pic,oldx,oldy)
            color=getColor(oldpix)
            setColor(getPixelAt(newpic,newx,newy),color)
            oldy=oldy+1/x
        oldx=oldx+1/x
    return newpic

def grayit(flower):
    for pixel in getPixels(flower):
        if getRed(pixel) < 80 and getGreen(pixel) < 120 and getBlue(pixel)< 100 :
            setColor(pixel,red)
        else:
            color=((getRed(pixel) + getBlue(pixel) + getGreen(pixel))//5)
            setColor(pixel,makeColor(color,color,color))
    return flower

def graychange(weirdfl):
    for pixel in getPixels(weirdfl):
        redpix=getRed(pixel)*2
        greenpix=getGreen(pixel)*2
        bluepix=getBlue(pixel)*2
        setColor(pixel,makeColor(greenpix,bluepix,redpix))
    return weirdfl

def colorchange(flower):
    for pixel in getPixels(flower):
        setColor(pixel,makeColor(getRed(pixel)//2,getGreen(pixel)*3,getBlue(pixel)*8))
    return flower

def holes(holedflower,flwidth,flheight):
    start=0
    holeshelper(holedflower,start,flwidth,flheight)
    start=1
    holeshelper(holedflower,start,flwidth,flheight)
    return holedflower

def holeshelper(holedflower,start,flwidth,flheight):
    for y in range(start,flheight,2):
        for x in range(start,flwidth,2):
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            pixel=getPixelAt(holedflower,x,y)
            setColor(pixel,pink)

def box(boxflower,flwidth,flheight):
    boxdrawer(boxflower,red,int(flwidth*.20),int(flwidth*.80),int(flheight*.20),int(flheight*.20))#top line
    boxdrawer(boxflower,green,int(flwidth*.20),int(flwidth*.20),int(flheight*.20+1),int(flheight*.80-1))#left line
    boxdrawer(boxflower,yellow,int(flwidth*.80),int(flwidth*.80),int(flheight*.20+1),int(flheight*.80-1))#right
line
    boxdrawer(boxflower,pink,int(flwidth*.20),int(flwidth*.80),int(flheight*.80),int(flheight*.80))#bottom line
    return boxflower

def boxdrawer(boxflower,color,startx,stopx,starty,stopy):
    for x in range(startx,stopx):
        for y in range(starty,stopy):
            pixel=getPixelAt(boxflower,x,y)
            setColor(pixel,color)

def layered(flower,flwidth,flheight):
    empty=makeEmptyPicture(flwidth,flheight,black)
    shrunkfl=shrink(duplicatePicture(flower),flwidth,flheight,.80)
    shrunkenfl=shrink(duplicatePicture(flower),flwidth,flheight,.70)
    bigfl=horrorfl(duplicatePicture(flower))
    shrunkflwidth=getWidth(shrunkfl)
    shrunkflheight=getHeight(shrunkfl)
    shrunkenflwidth=getWidth(shrunkenfl)
    shrunkenflheight=getHeight(shrunkenfl)
    startx=0
    endx=flwidth
    starty=0
    endy=flheight
    setlayer(bigfl,empty,startx,endx,starty,endy)
    startx=flwidth // 4
    endx=shrunkflwidth
    starty=flheight // 4
    endy=shrunkflheight
    grayit(shrunkfl)
    setlayer(shrunkfl,empty,startx,endx,starty,endy)
    startx=flwidth // 3
    endx=shrunkenflwidth
    starty=flheight // 3
    endy=shrunkenflheight
    pinkblackfl(shrunkenfl)
    setlayer(shrunkenfl,empty,startx,endx,starty,endy)
    return empty
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def setlayer(fl,empty,startx,endx,starty,endy):
    oldx=0
    oldy=0
    oly=oldy
    for x in range(startx,endx):
        oly=oldy
        for y in range(starty,endy):
            flpix=getPixelAt(fl,oldx,oly)
            color=getColor(flpix)
            epix=getPixelAt(empty,x,y)
            setColor(epix,color)
            oly=oly+1
        oldx=oldx+1
    return empty

def scramble(flower,flwidth,flheight):
    grayit(flower)
    colorchange(flower)
    scrambledflower=makeEmptyPicture(flwidth,flheight,black)
    newx=flwidth//2
    newy=0
    startx=0
    endx=flwidth//2
    starty=0
    endy=flheight//2
    mover(flower,scrambledflower,startx,endx,starty,endy,newx,newy)
    newy=flheight//2
    startx=flwidth//2
    endx=flwidth
    mover(flower,scrambledflower,startx,endx,starty,endy,newx,newy)
    startx=flwidth//2
    starty=flheight//2
    endy=flheight
    newx=0
    newy=flheight//2
    mover(flower,scrambledflower,startx,endx,starty,endy,newx,newy)
    startx=0
    starty=flheight//2
    endx=flwidth//2
    endy=flheight
    newy=0
    mover(flower,scrambledflower,startx,endx,starty,endy,newx,newy)
    return scrambledflower
```

```
def mover(flower,scrambledflower,startx,endx,starty,endy,newx,newy):
    x1=newx
    for x in range(startx,endx):
        y1=newy
        for y in range(starty,endy):
            pixel = getPixelAt(flower,x,y)
            newpixel=getPixelAt(scrambledflower,x1,y1)
            setColor(newpixel,getColor(pixel))
            y1=y1+1
        x1=x1+1

def pinkblackfl(flower):
    for pixel in getPixels(flower):
        red_value = getRed(pixel)
        green_value = getGreen(pixel)
        blue_value = getBlue(pixel)
        luminance = (red_value + green_value + blue_value) // 3
        if luminance < 50:
            setColor(pixel, black)
        else:
            setColor(pixel, makeColor(255,30,120))
    return flower

def horrorfl(flower):
    for pixel in getPixels(flower):
        intensity=(getBlue(pixel) + getRed(pixel) + getGreen(pixel))//5
        setColor(pixel,makeColor(intensity,intensity,intensity))
        color=getColor(pixel)
        makeDarker(color)
        setColor(pixel,color)
    return flower

def lwoerf(flower,flheight,flwidth):
    color=red
    intervalx=1
    intervaly=1
    z=20
    x=flwidth//5
    y=(flheight//5)*3
    lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
    intervalx=1
    intervaly=0
    z=30
    x=(flwidth//5)+20
    y=((flheight//5)*3)+20
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```
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
intervalx=1
intervaly=-1
z=20
x=(flwidth//5)+50
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=40
intervalx=1/2
intervaly=1
x=flwidth//5
y=(flheight//5)*3
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=30
intervaly=0
intervalx=1
x=(flwidth//5)+20
y=((flheight//5)*3)+40
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=40
intervalx=1/2
intervaly=-1
x=(flwidth//5)+50
y=(flheight//5)*4+17
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
color=white
intervalx=1
intervaly=0
z=48
x=flwidth//5+11
y=(flheight//5)*3+21
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=47
x=x+1
y=y+1
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=46
y=y+1
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=45
y=y+1
x=x+1
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
z=44
y=y+1
lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
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    z=43
    y=y+1
    x=x+1
    lwoerfhelper(flower,x,y,z,intervalx,intervaly,color)
    return flower

def lwoerfhelper(flower,x,y,z,intervalx,intervaly,color):
    for extention in range(z):
        pixel=getPixelAt(flower,int(x),int(y))
        setColor(pixel,color)
        x=x+intervalx
        y=y+intervaly

def darkenlightenedfl(flower,flwidth,flheight):
    for loops in range(0,3):
        darken(flower,flwidth,flheight)
        lighten(flower,flwidth,flheight)
    return flower

def darken(flower,flwidth,flheight):
    for x in range(0,flwidth,2):
        for y in range(0,flheight):
            pixel=getPixelAt(flower,x,y)
            color=getColor(pixel)
            color=makeDarker(color)
            setColor(pixel,color)

def lighten(flower,flwidth,flheight):
    for x in range(1,flwidth,2):
        for y in range(0,flheight):
            pixel=getPixelAt(flower,x,y)
            color=getColor(pixel)
            color=makeLighter(color)
            setColor(pixel,color)

def mirroredfl(flower,flwidth,flheight):
    grayit(flower)
    mirrorpointw = flwidth // 2
    mirrorpointh = flheight // 2
    for x in range(0, mirrorpointw):
        for y in range(0, flheight):
            leftpixel = getPixelAt(flower, x, y)
            rightpixel = getPixelAt(flower, flwidth - x - 1, y)
            color = getColor(leftpixel)
            setColor(rightpixel, color)
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    for x in range(0, flwidth):
        for y in range(0,mirrorpointh):
            leftpixel= getPixelAt(flower,x,y)
            rightpixel= getPixelAt(flower,x,flheight-y-1)
            color = getColor(leftpixel)
            setColor(rightpixel,color)
    return flower

def sig(signature,canvas,Cwidth,Cheight):
    sigwidth=getWidth(signature)
    sigheight=getHeight(signature)
    startcx=Cwidth-(sigwidth+3)
    startcy=Cheight-(sigheight+3)
    setsignature(signature,canvas,startcx,startcy,sigwidth,sigheight)

def setsignature(signature,canvas,startcx,startcy,sigwidth,sigheight):
    cx=startcx
    for sigx in range(0,sigwidth):
        cy=startcy
        for sigy in range(0,sigheight):
            sigpix=getPixelAt(signature,sigx,sigy)
            color=getColor(sigpix)
            newpix=getPixelAt(canvas,cx,cy)
            color2=getColor(newpix)
            if getRed(sigpix) == 255 and getGreen(sigpix) == 255 and getBlue(sigpix) == 255 :
                setColor(newpix,color2)
            else:
                setColor(newpix,color)
            cy=cy+1
        cx=cx+1
```