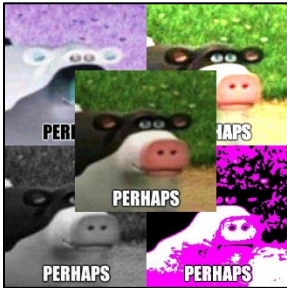# Mikhayla Palicte

Completed   Original


```
# setMediaPath("/Users/mick/cs120")
def collage():
  pic = makePicture("perhaps.jpg")
  pic2 = makePicture("perhaps.jpg")
  pic3 = makePicture("perhaps.jpg")
  pic4 = makePicture("perhaps.jpg")
  pic5 = makePicture("perhaps.jpg")
  sig = makePicture("sign.png")
  sound = makeSound("Boom.wav")
  big_picture = makeEmptyPicture(int(getWidth(pic) * 2), int(getHeight(pic) * 2))
  canvas = makeEmptyPicture(getWidth(big_picture), getHeight(big_picture))

  negative(pic2)
  expose(pic3)
  grayScale(pic4)
  post(pic5)

  copy(pic2,canvas,0,0)
  copy(pic3,canvas,getWidth(pic),0)
  copy(pic4,canvas,0,getHeight(canvas)-getHeight(pic))
  copy(pic5,canvas,280,280)
  copy(pic,canvas,138,131)
  add(canvas,sig,0,0,black)

  show(canvas)
  play(sound)


def negative(pic2):
  for p in getPixels(pic2):
    r = getRed(p)
    g = getGreen(p)
    b = getBlue(p)
    neg=makeColor(255-r, 255-g, 255-b)
    setColor(p,neg)


def expose(pic3):
  for x in range (0,getWidth(pic3)):
    for y in range (0,getHeight(pic3)):
      p = getPixel(pic3, x, y)
      setColor(p, makeLighter(makeLighter(getColor(p))))
```

```
def grayScale(pic4):
  for p in getPixels(pic4):
    intensity = (getRed(p)+getGreen(p)+getBlue(p))/3
    setColor(p,makeColor(intensity, intensity, intensity))

def post(pic5):
  for p in getPixels(pic5):
    r = getRed(p)
    g = getGreen(p)
    b = getBlue(p)
    lum = (r+g+b)/3
    if lum < 64:
      setColor(p,black)
    elif lum > 120:
      setColor(p,white)
    else:
      setColor(p,magenta)


def copy(source,target,targX,targY):
  targetX = targX
  for sourceX in range(0,getWidth(source)):
    targetY = targY
    for sourceY in range(0, getHeight(source)):
      p = getPixel(source,sourceX,sourceY)
      t = getPixel(target, targetX, targetY)
      setColor(t,getColor(p))
      targetY=targetY +1
    targetX = targetX + 1

def add(target, sig, toX, toY, color):
  toYStart = toY
  for x in range(0, getWidth(sig)):
    toY = toYStart
    for y in range(0,getHeight(sig)):
      p = getPixel(sig, x, y)
      if (getRed(p) < 225 and getGreen(p) < 225 and getBlue(p) < 225):
        setColor(getPixel(target, toX, toY), color)
      toY = toY + 1
    toX = toX + 1
  return target
```