VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

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19BEC1204

ATOM

TASK-2

AIM:

For the given images perform various operations using OpenCV library, the operations are completely your wish but the minimum expected number is 5, doing more than that is also welcome.

SOFTWARE USED:

Python using Pycharm , numpy , opencv.

OBJECTIVE:

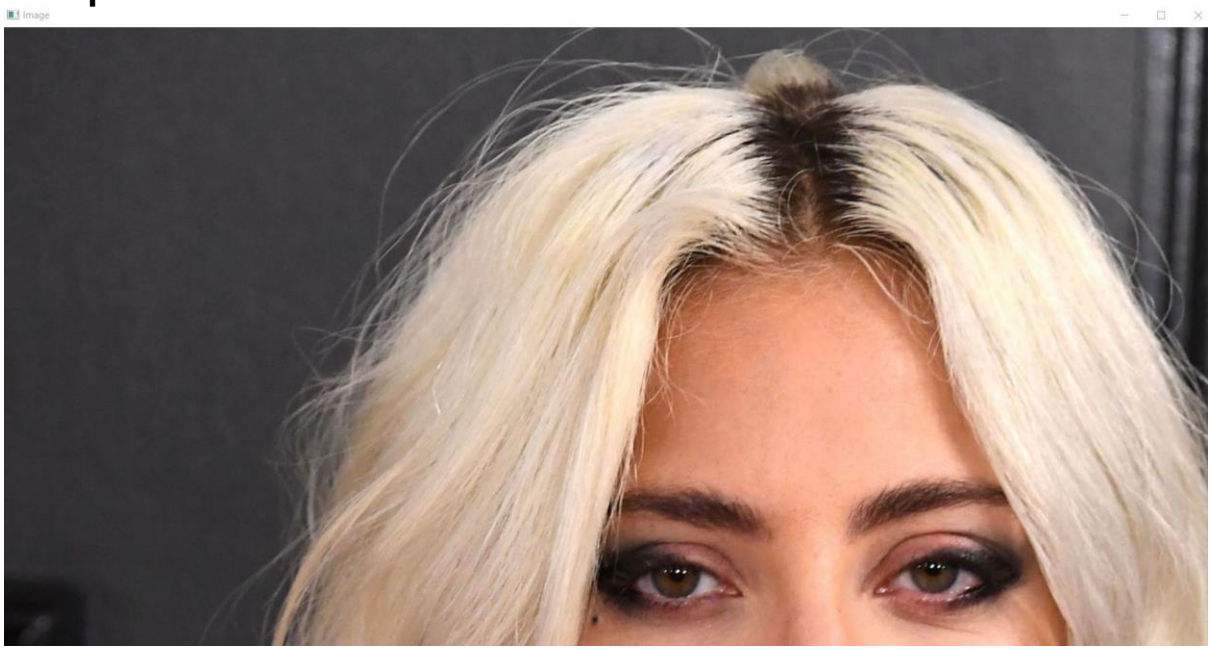
To process and get the images required.

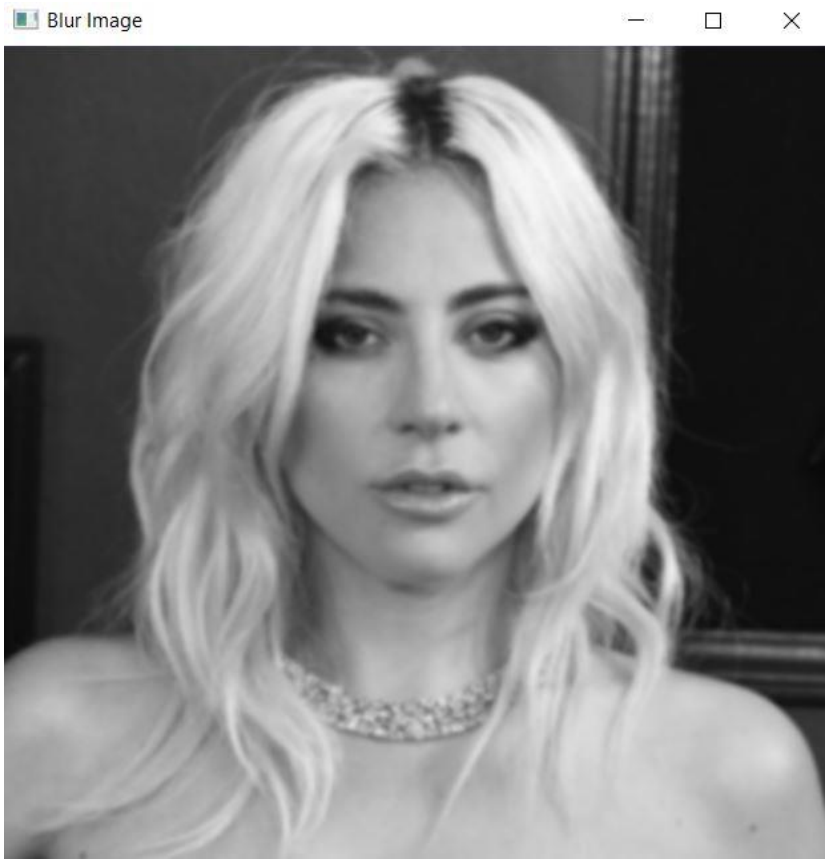
CODE:

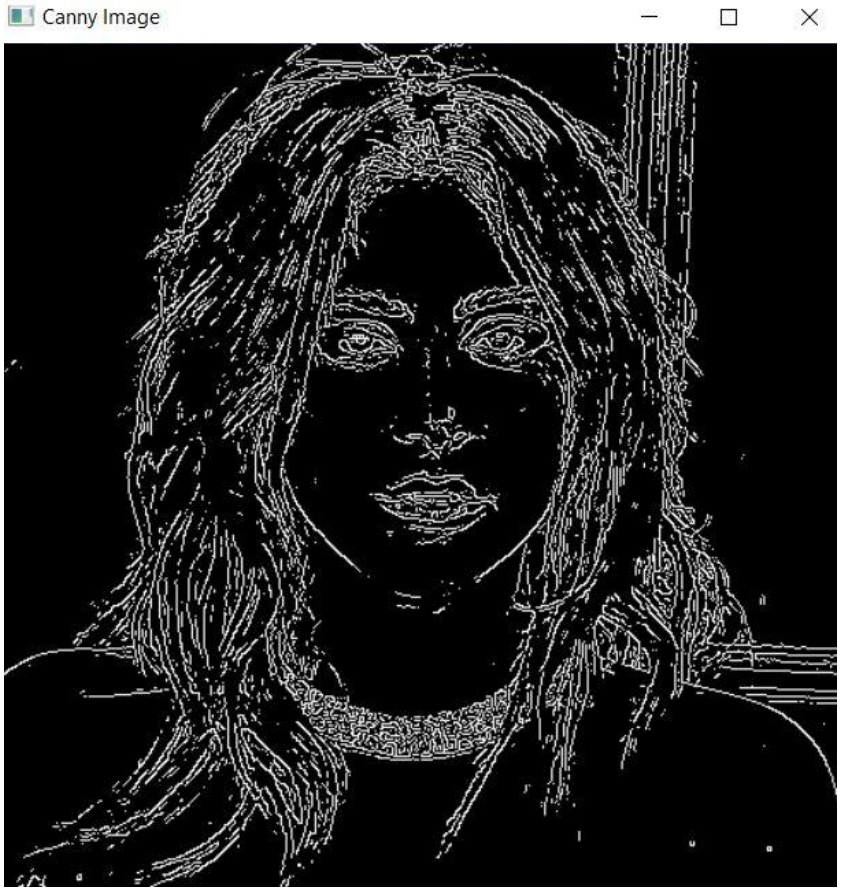
```
import numpy as np
import cv2 as cv
kernel = np.ones((5, 5), np.uint8)
img = cv.imread("lady1.jpg")

imgResize = cv.resize(img, (500, 500))
imgCropped = imgResize[10:400, 100:400]

print(img.shape)
print(imgResize.shape)
print(imgCropped.shape)

imgGray = cv.cvtColor(imgResize, cv.COLOR_BGR2GRAY)
imgBlur = cv.GaussianBlur(imgGray,(7,7),0)
imgCanny = cv.Canny(imgResize,100,100)
imgDialation = cv.dilate(imgCanny,kernel,iterations=1)
imgEroded = cv.erode(imgDialation,kernel,iterations=1)

cv.imshow("Image",img)
cv.imshow("Gray Image",imgGray)
cv.imshow("Blur Image",imgBlur)
cv.imshow("Canny Image",imgCanny)
cv.imshow("Dilate Image",imgDialation)
```

```
cv.imshow("Eroded Image",imgEroded)
cv.imshow("Resized Image", imgResize)
cv.imshow("Cropped Image", imgCropped)

cv.waitKey(0)
```

Output:

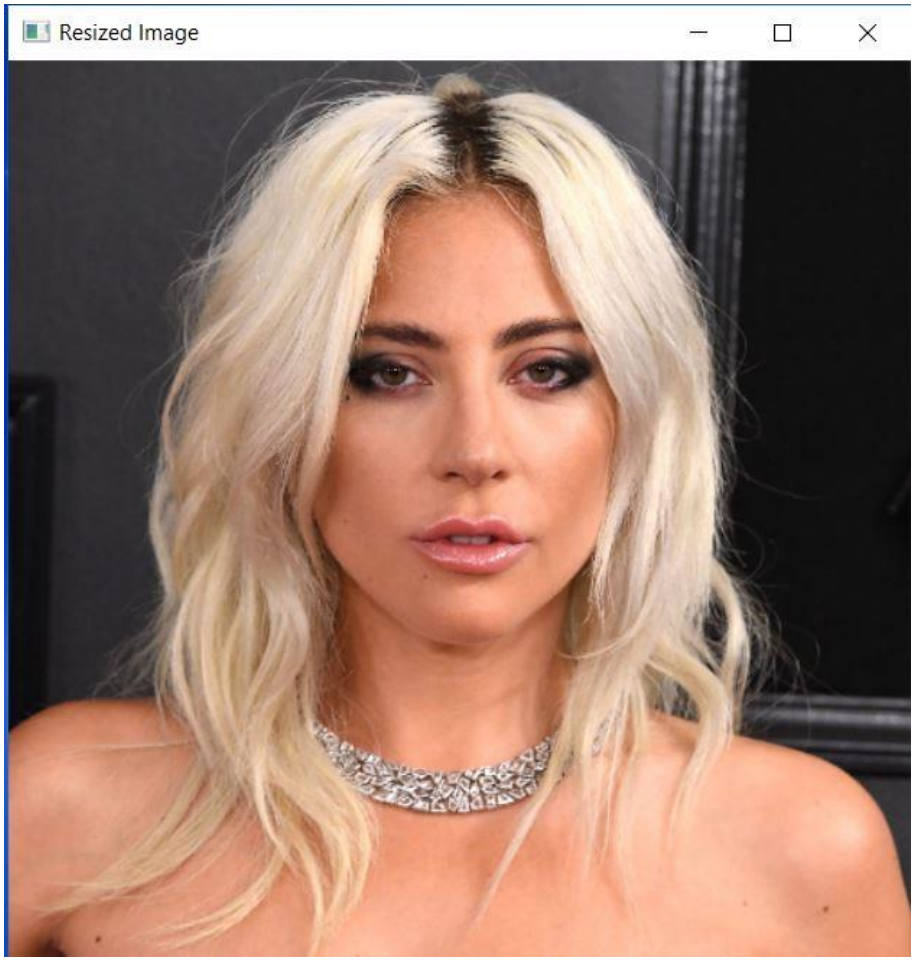



Blur Image


Canny Image


Dilate Image


Eroded Image


Resized Image


Cropped Image

INFERENCE –

We can use open cv to do different processes on a image which is very easy to learn and use.

RESULT –

Hence we have successfully generated different kind operations images.