```
import numpy as np
import matplotlib.pyplot as plt
import cv2 as cv
#image loading
plt.figure(figsize=(20,5))
plt.subplot(1,2,1)
plt.title('input')
image = cv.imread("cat1.jpg",0)
plt.imshow(image,cmap='gray')

def formula(x):
    c = 255/np.log(1+255)
    return c*np.log(1+x)
for i in range(image.shape[0]):
    for j in range(image.shape[1]):
        image[i][j] = formula(image[i][j])
plt.subplot(1,2,2)
plt.title('output')
plt.imshow(image,cmap="gray")
plt.axis(False)
plt.show()
```

```
C:\Users\nazmu\AppData\Local\Temp\ipykernel_9600\3636713417.py:13:
RuntimeWarning: overflow encountered in scalar add
  return c*np.log(1+x)
C:\Users\nazmu\AppData\Local\Temp\ipykernel_9600\3636713417.py:13:
RuntimeWarning: divide by zero encountered in log
  return c*np.log(1+x)
C:\Users\nazmu\AppData\Local\Temp\ipykernel_9600\3636713417.py:16:
RuntimeWarning: invalid value encountered in cast
  image[i][j] = formula(image[i][j])
```