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# GAMMA CORRECTION

## MODUL 5 PCVK

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Arranged By:

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PROGRAM STUDI D-IV TEKNIK INFORMATIKA

JURUSAN TEKNOLOGI INFORMASI

POLITEKNIK NEGERI MALANG



## 1. Mount Image From Drive

```
Week_5.ipynb
File Edit Lihat Sisipkan Runtime Fitur Bantuan Tidak dapat menyimpan perubahan

+ Kode + Teks Salin ke Drive

[1] from google.colab import drive
drive.mount('/content/drive')
```

[https://github.com/Rjndrkha/PCVK\\_Genap\\_2022.git](https://github.com/Rjndrkha/PCVK_Genap_2022.git)

## 2. Gamma Correction Image to value 3

```
Week_5.ipynb
File Edit Lihat Sisipkan Runtime Fitur Bantuan Tidak dapat menyimpan perubahan

+ Kode + Teks Salin ke Drive

# No 1
import cv2 as cv
import numpy as np
from google.colab.patches import cv2_imshow

print('Gamma correction pada citra')
print('-----')
try:
    gamma = int(input('Masukkan nilai Gamma: '))
except ValueError:
    print('Error, not a number')

original = cv.imread('/content/drive/MyDrive/PCVK/female.jpg')
gamma_image = np.zeros(original.shape, original.dtype)









#akses per piksel
for y in range(original.shape[0]):
    for x in range(original.shape[1]):
        for c in range(original.shape[2]):
            gamma_image[y,x,c] = np.clip(255 * pow(original[y,x,c]/255,(1/gamma)), 0, 255)

final_frame = cv.hconcat((original, gamma_image))
cv2_imshow(final_frame)

Gamma correction pada citra
-----
Masukkan nilai Gamma: 3
```

NO	IMAGES AVERAGES (dB)	BEFORE	AFTER . PSNR VALUE(dB)
1	5		


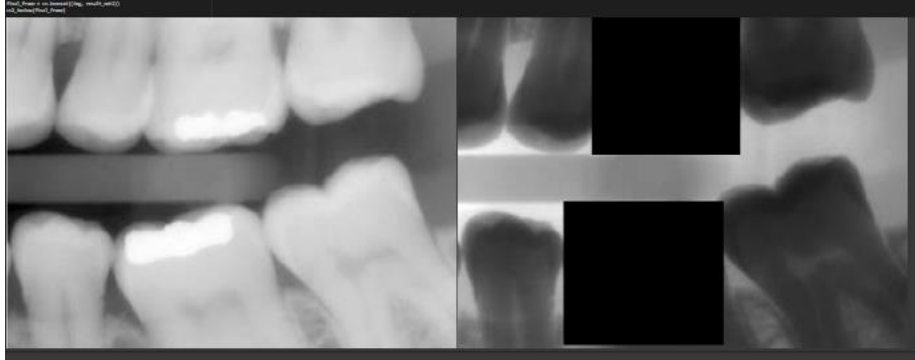
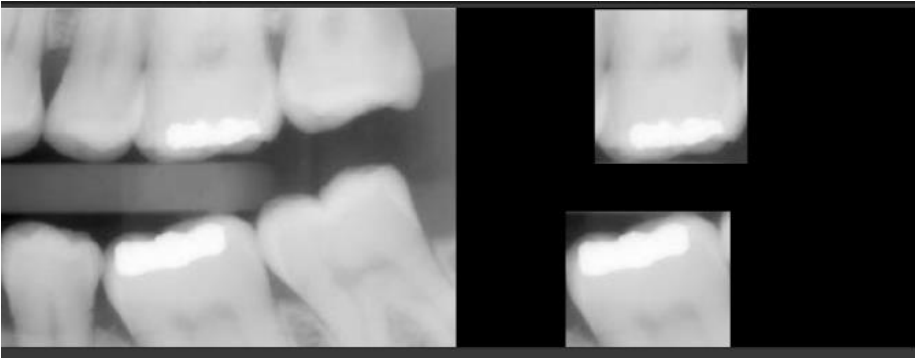
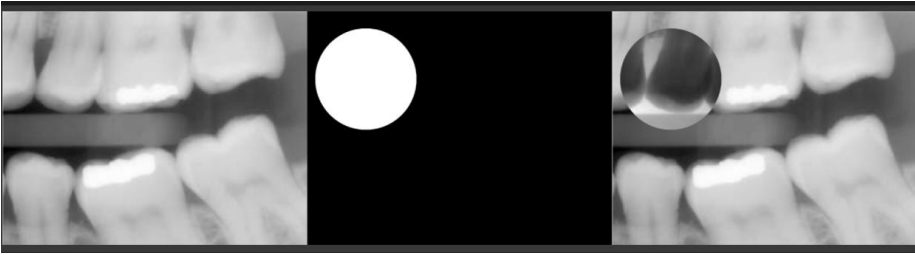


2	30		
3	60		
4	80		
5	100		

**Conclusion :** Peak Signal to Noise Ratio (PSNR) is a parameter commonly used in the image compression process to determine the quality of the final image reconstruction.

An image that is too large so that it takes up a lot of memory. To overcome this, the concept of image compression is used so that even though the image data has been compressed (compression), it does not eliminate the existing information.



NO	OPERATOR	RESULT
1	OR	
2	NOT	
3	NAND	
4	XOR	

**My Analysis :** The analysis of the code above is used to detect the existing color differences so that these differences will be highlighted.