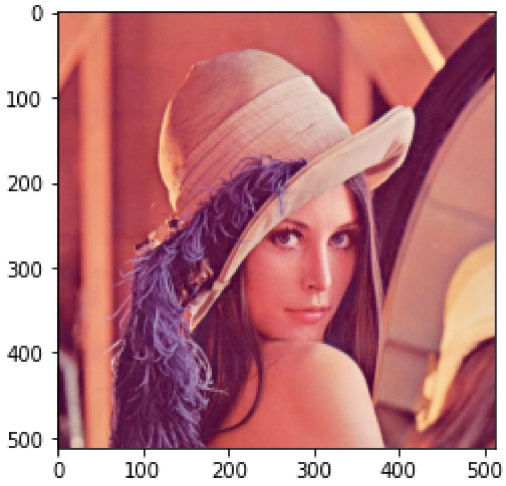
Coba coba citra digital fahruraji

```
import cv2
import matplotlib.pyplot as plt
import numpy as np
```

Menampilkan Citra Original

```
img = cv2.imread('./lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
print(img.shape)

plt.imshow(img)
```

```
(512, 512, 3)
<matplotlib.image.AxesImage at 0x7f2d9c528c90>
```

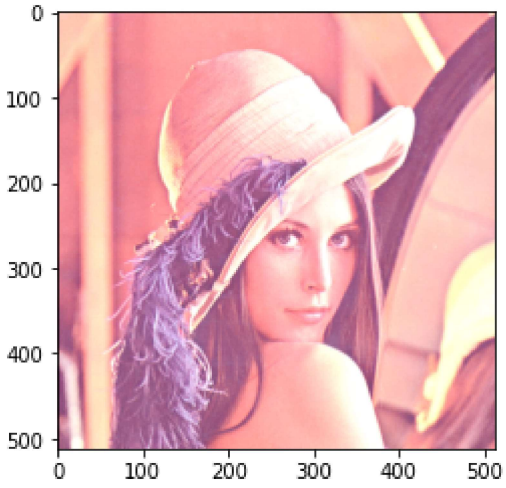


BerCoba kecerahan

```
img = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
new_img_holder = np.zeros(img.shape, img.dtype)
print(img.shape)

bright = 70  ##kalo plus berarti naik, minus berarti kurang

for x in range(img.shape[0]):
    for y in range(img.shape[1]):
```

```
        for rgb in range(img.shape[2]):
            new_img_holder[x,y,rgb] = 255 if (img[x,y,rgb] + bright) > 255 else (img[x,y,rgb]

plt.imshow(img)
plt.imshow(new_img_holder)
```

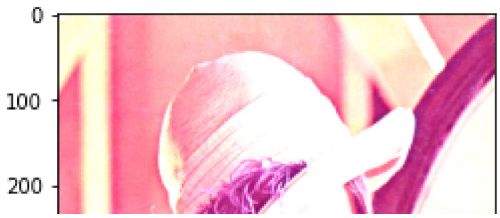
```
(512, 512, 3)
<matplotlib.image.AxesImage at 0x7f2d9bbd5b90>
```



BerCoba kontras

```
img = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)

new_img_holder = np.zeros(img.shape, img.dtype)
print(img.shape)

kontras = 2  ##kalo plus berarti naik, minus berarti kurang

for x in range(img.shape[0]):
    for y in range(img.shape[1]):
        for rgb in range(img.shape[2]):
            new_img_holder[x,y,rgb] = 255 if (img[x,y,rgb] * kontras) > 255 else (img[x,y,rgb

plt.imshow(img)
plt.imshow(new_img_holder)
```

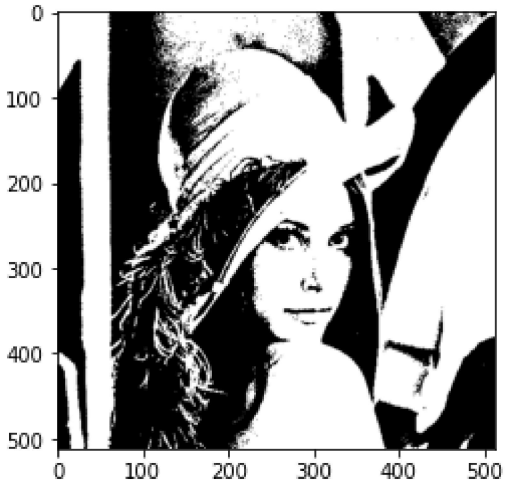
```
(512, 512, 3)
<matplotlib.image.AxesImage at 0x7f2d9b3fed90>
```



Coba Citra Biner


```
img = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)

new_img_holder = np.zeros(img.shape, img.dtype)
print(img.shape)


for x in range(img.shape[0]):
    for y in range(img.shape[1]):
        sumrgb = 0
        for rgb in range(img.shape[2]):
            sumrgb = sumrgb + img[x,y,rgb]
        new_img_holder[x,y] = [255 if (sumrgb/3) > 127 else 0]*3

plt.imshow(img)
plt.imshow(new_img_holder)
```

```
(512, 512, 3)
<matplotlib.image.AxesImage at 0x7f2d9b896950>
```

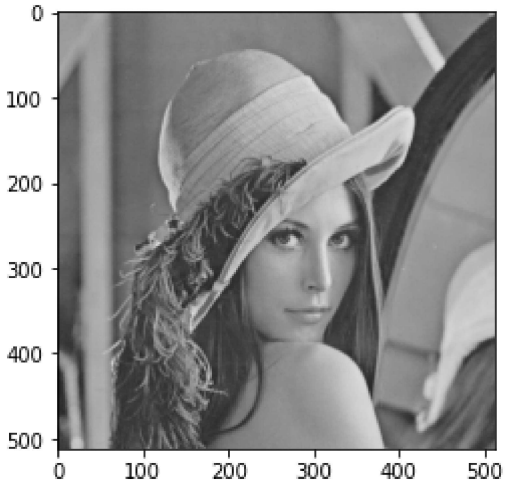


Coba grayscale

```
img = cv2.imread('lenna.png')
```

```
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)

new_img_holder = np.zeros(img.shape, img.dtype)
print(img.shape)


for x in range(img.shape[0]):
    for y in range(img.shape[1]):
        sumrgb = 0
        for rgb in range(img.shape[2]):
            sumrgb = sumrgb + img[x,y,rgb]
        new_img_holder[x,y] = [(sumrgb/3)]*3

plt.imshow(img)
plt.imshow(new_img_holder)
```

```
(512, 512, 3)
<matplotlib.image.AxesImage at 0x7f2d9b654690>
```

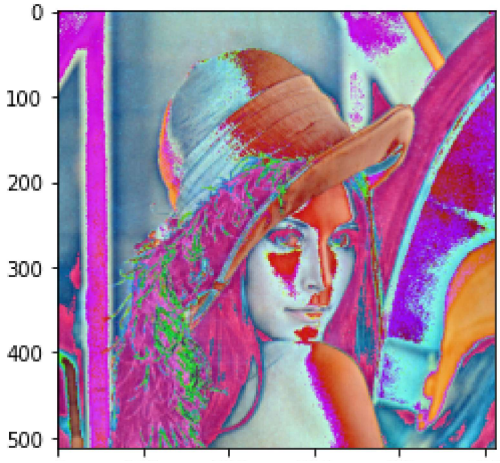


Gambar 1 + gambar 2

ga nemu gambar lain pak, mau pakai gambar pak jhonny g plate takut ilang

```
img = cv2.imread('lenna.png')
img2 = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
img2 = cv2.cvtColor(img2, cv2.COLOR_BGR2RGB)

new_img_holder = img+img2
new_img_holder[new_img_holder > 255] = 255

plt.imshow(img)
plt.imshow(new_img_holder)
```

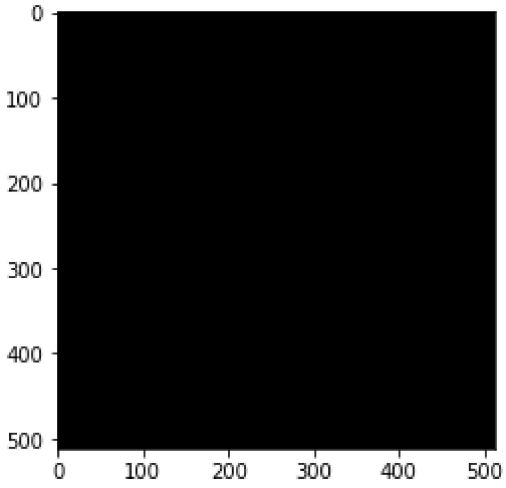
```
<matplotlib.image.AxesImage at 0x7f2d9bb71490>
```



Gambar 1 - Gambar 2

```
img = cv2.imread('lenna.png')
img2 = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_BGR2RGB)
img2 = cv2.cvtColor(img2, cv2.COLOR_BGR2RGB)

new_img_holder = img-img2
new_img_holder[new_img_holder > 255] = 255

plt.imshow(img)
plt.imshow(new_img_holder)
```

```
<matplotlib.image.AxesImage at 0x7f2d9b603e50>
```

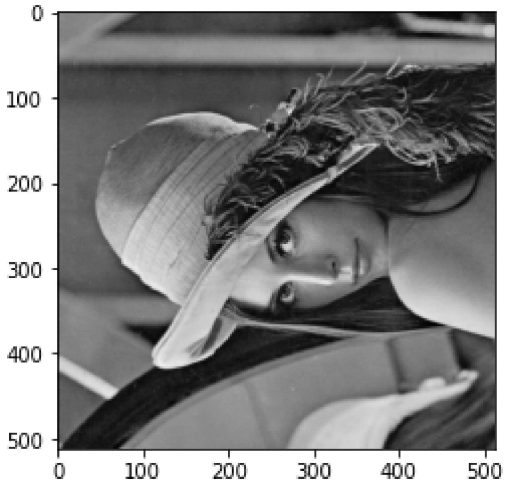


Coba rotasi 90 degree

```
img = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_RGB2GRAY) #maaf pak terpaksa pake fungsi dari opencvnya pak
```

```
new_img_holder = img.T

plt.imshow(img)
plt.imshow(new_img_holder, cmap="gray")
```

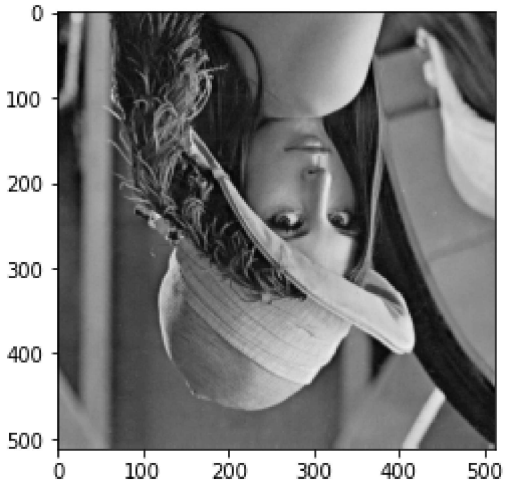
```
<matplotlib.image.AxesImage at 0x7f2d9b696d90>
```

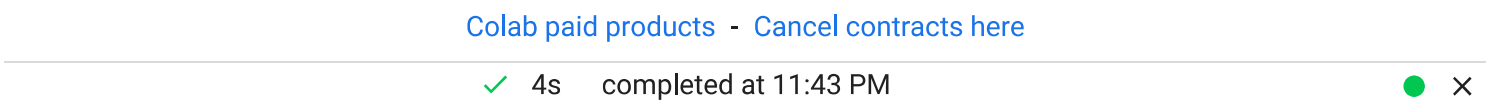


Coba Rotasi Flip

```
img = cv2.imread('lenna.png')
img = cv2.cvtColor(img, cv2.COLOR_RGB2GRAY) #maaf pak terpaksa pake fungsi dari opencvnya pak


new_img_holder = cv2.flip(img, 0) #maaf pak terpaksa pake fungsi dari opencvnya pak dah panik


plt.imshow(img)
plt.imshow(new_img_holder, cmap="gray")
```

```
<matplotlib.image.AxesImage at 0x7f2d9b724f10>
```




Colab paid products - Cancel contracts here
4s completed at 11:43 PM