

# 图像类型转换

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- 将图像由一种类型转换为另外一种类型

# 彩色转灰度

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原始图像

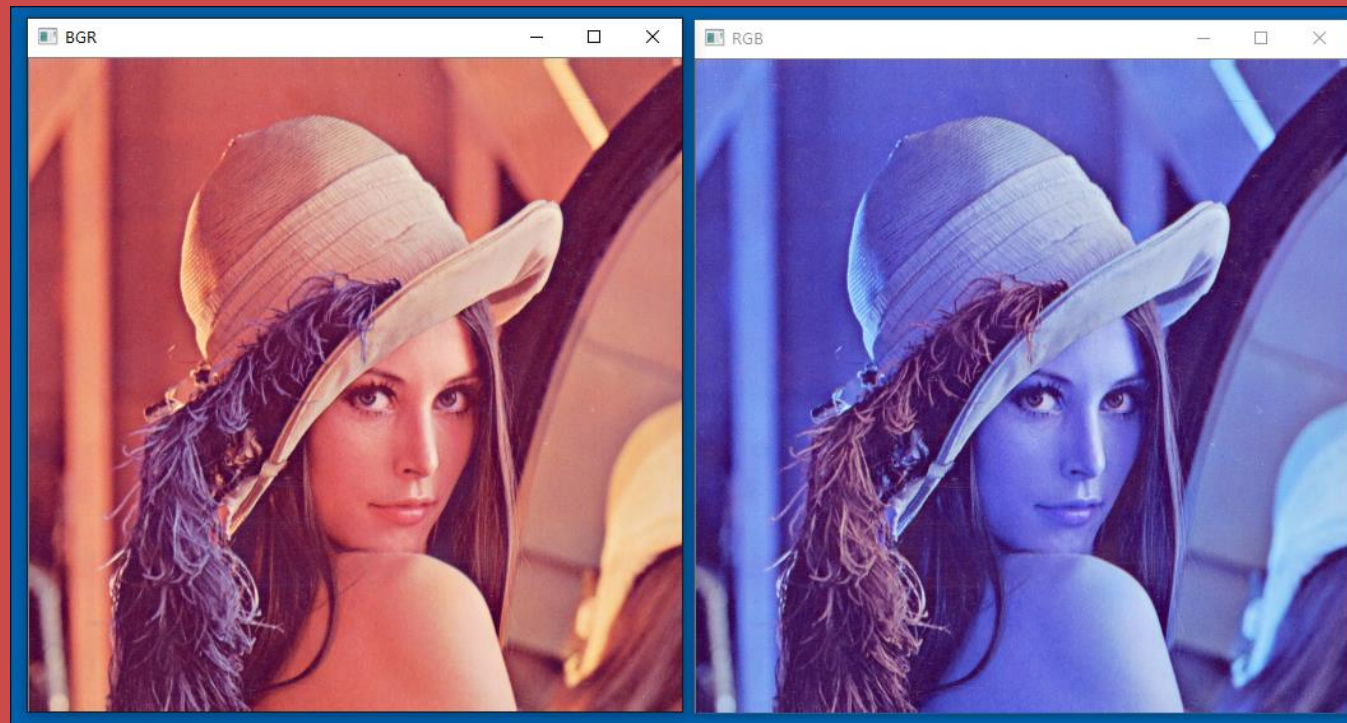


灰度图像



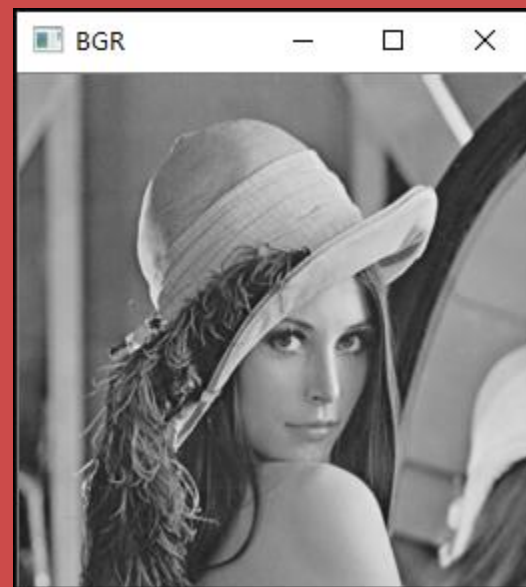
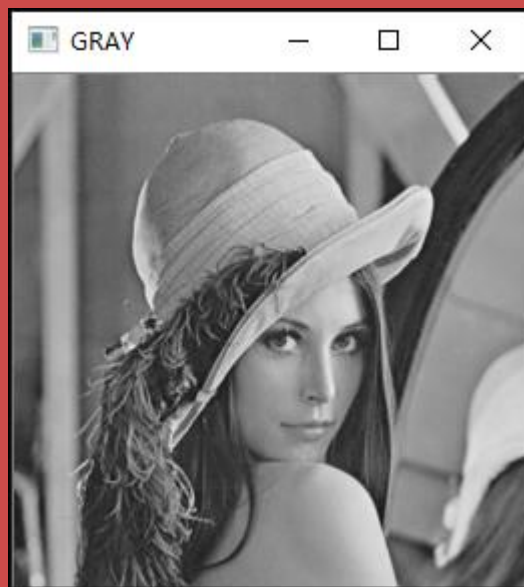
# BGR转RGB

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# 灰度转BGR

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# 图像类型转换

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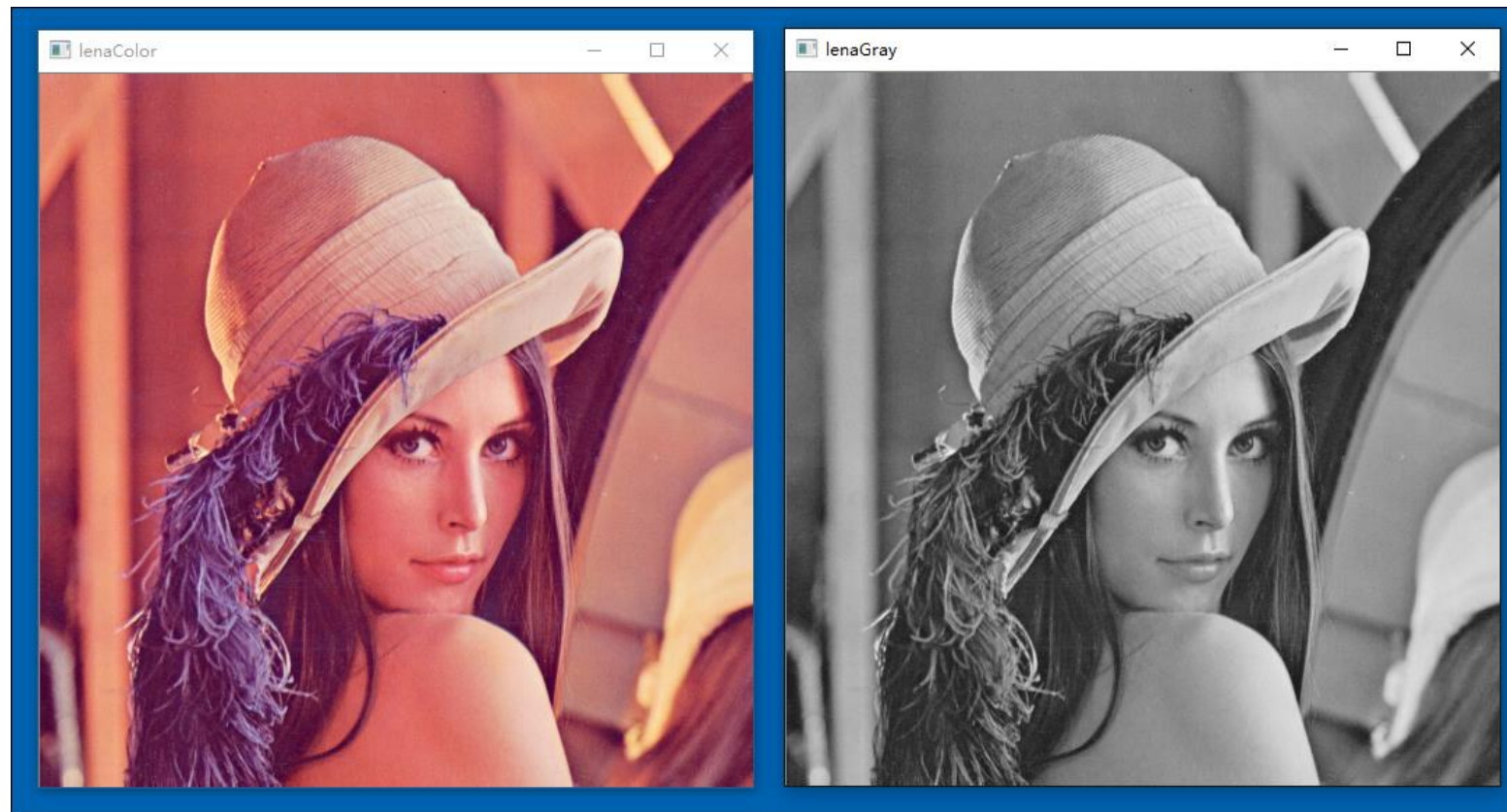
- OpenCV提供了200多种不同类型之间的转换。

`cv2.COLOR_BGR2GRAY`

`cv2.COLOR_BGR2RGB`

`cv2.COLOR_GRAY2BGR`

## 彩色变灰度



彩色

灰度

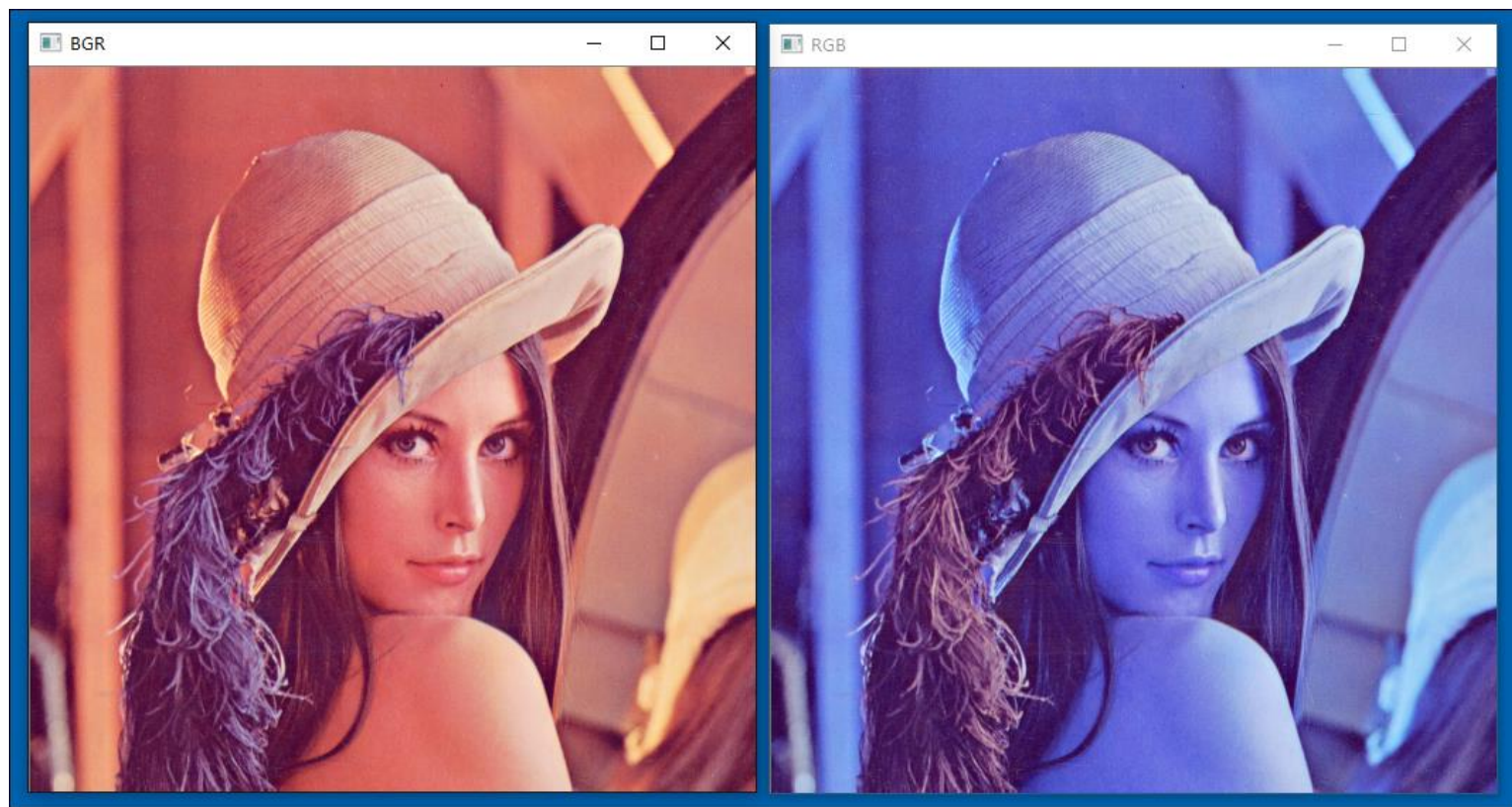
# 图像类型转换

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```
import cv2
a=cv2.imread("image\\lenacolor.png")
b=cv2.cvtColor(a, cv2.COLOR_BGR2GRAY)
cv2.imshow("lenaColor",a)
cv2.imshow("lenaGray",b)
cv2.waitKey()
cv2.destroyAllWindows()
```



## BGR变RGB



B G R

R G B



# 图像类型转换

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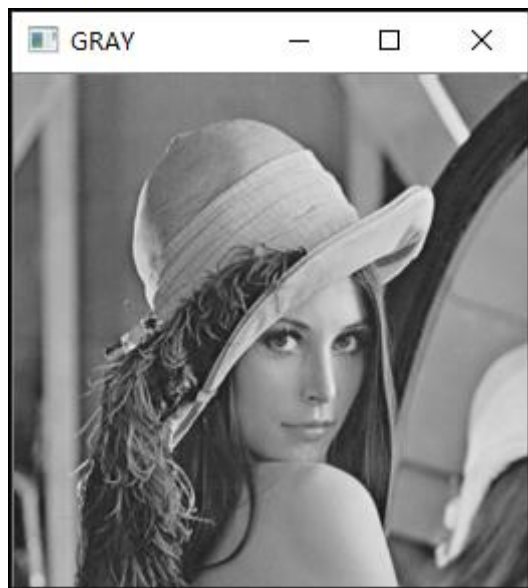
```
import cv2
a=cv2.imread("image\\lenacolor.png")
b=cv2.cvtColor(a, cv2.COLOR_BGR2RGB)
cv2.imshow("lenaColor",a)
cv2.imshow("lenaGray",b)
cv2.waitKey()
cv2.destroyAllWindows()
```

# 图像类型转换

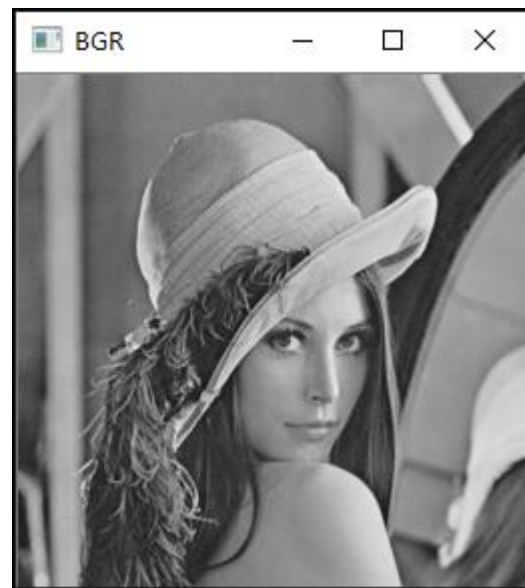
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```
import cv2
a=cv2.imread("image\\lena256.bmp",cv2.IMREAD_UNCHANGED)
b=cv2.cvtColor(a,cv2.COLOR_GRAY2BGR)
cv2.imshow("GRAY",a)
cv2.imshow("BGR",b)
cv2.waitKey()
cv2.destroyAllWindows()
```

GYAY变BGR



GRAY



BGR

# 图像类型转换

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```
import cv2  
a=cv2.imread("image\\lena256.bmp",cv2.IMREAD_UNCHANGED)  
b=cv2.cvtColor(a,cv2.COLOR_GRAY2BGR)  
print(a.shape)  
print(b.shape)
```

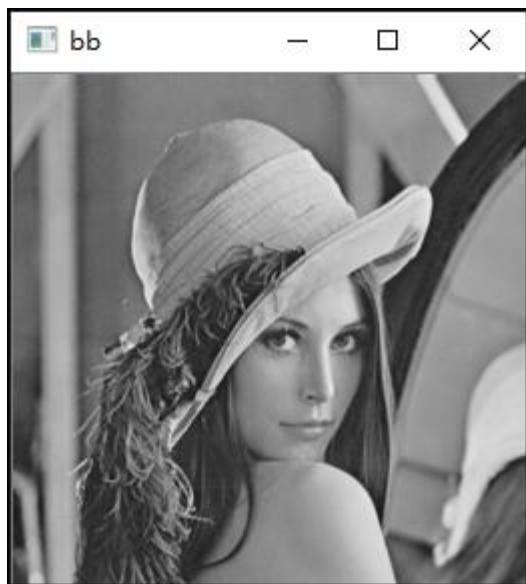
```
(256, 256)  
(256, 256, 3)
```

# 图像类型转换

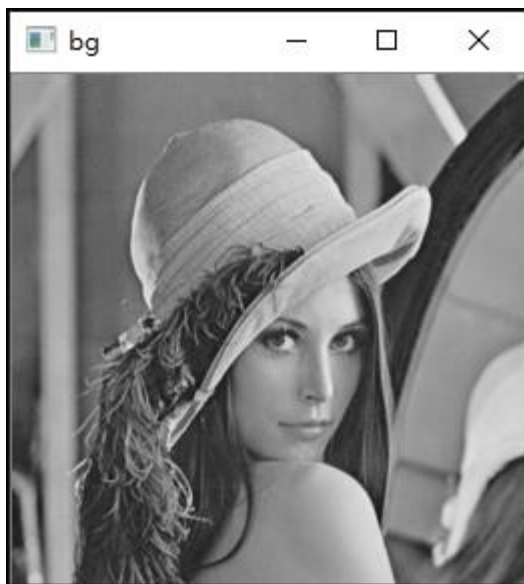
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```
import cv2
a=cv2.imread("image\\lena256.bmp",cv2.IMREAD_UNCHANGED)
b=cv2.cvtColor(a,cv2.COLOR_GRAY2BGR)
bb,bg,br=cv2.split(b)
cv2.imshow("bb",bb)
cv2.imshow("bg",bg)
cv2.imshow("br",br)
cv2.waitKey()
cv2.destroyAllWindows()
```

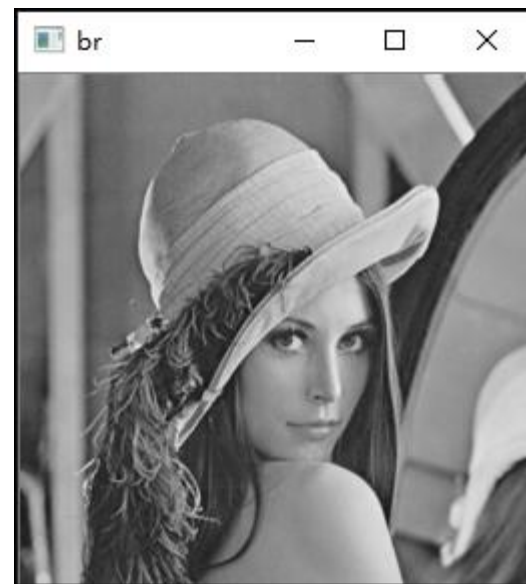
GYAY变BGR



B 通道



G 通道



R 通道



# OpenCV+Python图像处理

—— 图像处理利器 ——

