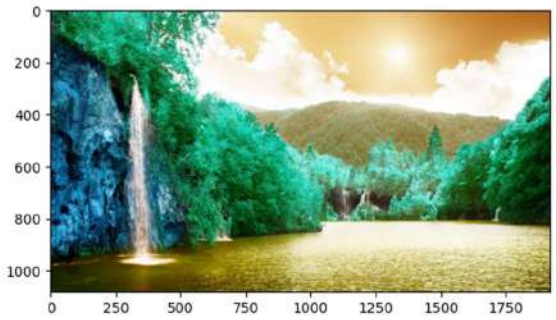
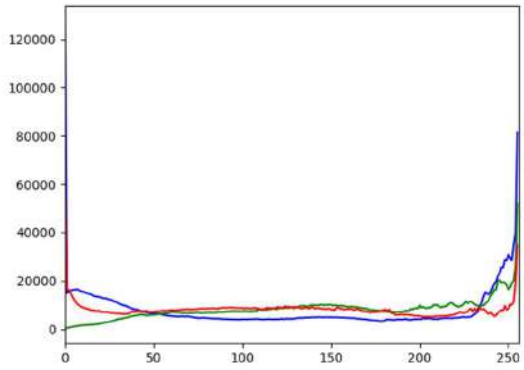
Negative image

Program:

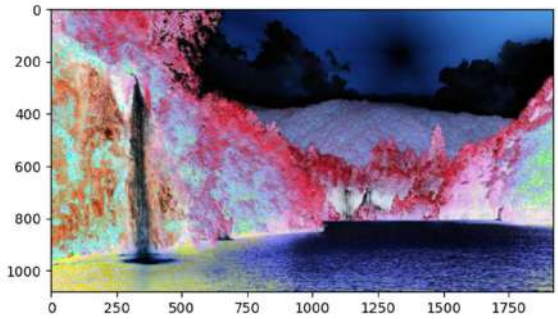
```
import cv2
import matplotlib.pyplot as plt

# Read an image
img_bgr = cv2.imread('F:/nature img.jpg', 1)
plt.imshow(img_bgr)
plt.show()

# Histogram plotting of original image
color = ('b', 'g', 'r')
for i, col in enumerate(color):

        histr = cv2.calcHist([img_bgr],[i], None,[256],[0, 256])
        plt.plot(histr, color = col)
        # Limit X - axis to 256
        plt.xlim([0, 256])
plt.show()

# Negate the original image
img_neg = 1 - img_bgr
plt.imshow(img_neg)
plt.show()

# Histogram plotting of
# negative transformed image
color = ('b', 'g', 'r')
for i, col in enumerate(color):

        histr = cv2.calcHist([img_neg],[i], None,[256],[0, 256])
        plt.plot(histr, color = col)
        plt.xlim([0, 256])

plt.show()
```

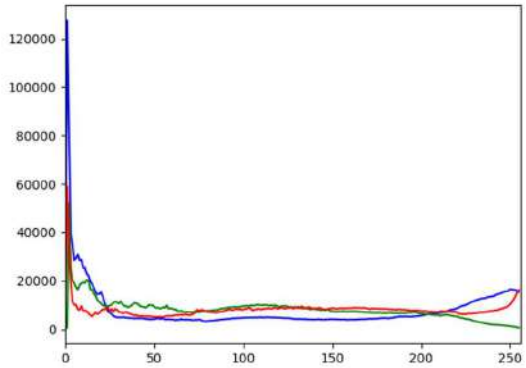
Original image and Histogram:



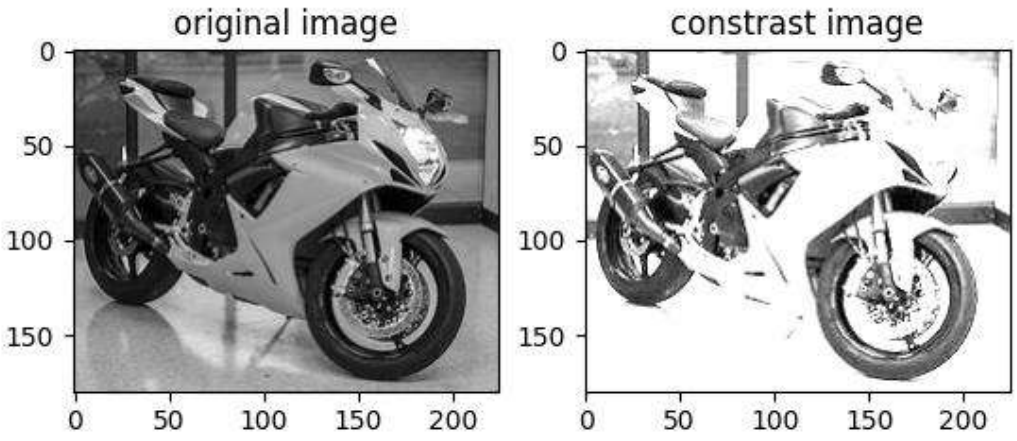

Negative Image and Histogram:



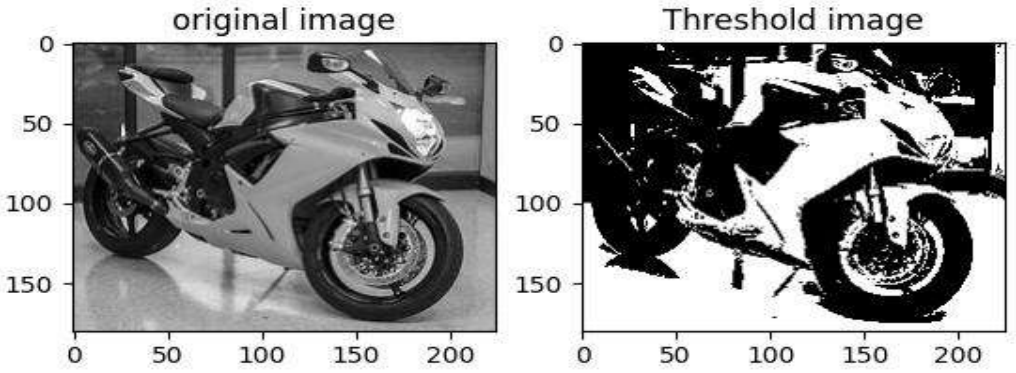
## PROGRAM 1:

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

abc=cv2.imread("bike.jpeg",0)
xyz=np.zeros(abc.size,abc.dtype)
constrast=3.0
xyz=np.clip(constrast*abc,0,255)

plt.subplot(1,2,1)
plt.title("original image")
plt.imshow(abc,cmap='gray')
plt.subplot(1,2,2)
plt.title("constrast image")
plt.imshow(xyz,cmap='gray')
plt.show()
```



## PROGRAM 2:

```
#thresholds
import cv2
import numpy as np
import matplotlib .pylab as plt

abc=cv2.imread("bike.jpeg",0)
xyz=np.zeros(abc.shape,abc.dtype)
print(abc.shape)

 xyz=np.zeros(abc.shape,abc.dtype)
x,xyz=cv2.threshold(abc,127,255,0)

plt.subplot(1,2,1)
plt.title('original image')
plt.imshow(abc,cmap='gray')
plt.subplot(1,2,2)
plt.title('Threshold image')
plt.imshow(xyz,cmap='gray')
plt.show()
```



## PROGRAM 3:

```
# log transform
import cv2
import numpy as np
import matplotlib .pylab as plt
abc=cv2.imread("bike.jpeg",0)
plt.subplot(1,2,1)
plt.title('original image')
plt.imshow(abc,cmap='gray')
c=255/np.log(1+np.max(abc))
xyz=np.zeros(abc.shape,abc.dtype)
for i in range(abc.shape[0]):
    for y in range(abc.shape[1]):
        xyz[i,y]=c*np.log(1+abc[i,y])
plt.subplot(1,2,2)
plt.title('log image')
plt.imshow(xyz,cmap='gray')
plt.show()
```