**Practical No. 8**

**Aim:** Histogram Equalization of an image execution.

**Program Code:**

import cv2

from google.colab.patches import cv2\_imshow

from matplotlib import pyplot as plt

image = cv2.imread('image.jpg', 0)

if image is None:

    print("Error: Image not loaded. Please check the file path.")

else:

    equalized\_image = cv2.equalizeHist(image)

    print("Original Image:")

    cv2\_imshow(image)

    print("\nEqualized Image:")

    cv2\_imshow(equalized\_image)

    plt.figure(figsize=(10, 5))

    plt.subplot(1, 2, 1)

    plt.hist(image.ravel(), 256, [0, 256])

    plt.title('Histogram of Original Image')

    plt.xlabel('Pixel Value')

    plt.ylabel('Frequency')

    plt.subplot(1, 2, 2)

    plt.hist(equalized\_image.ravel(), 256, [0, 256])

    plt.title('Histogram of Equalized Image')

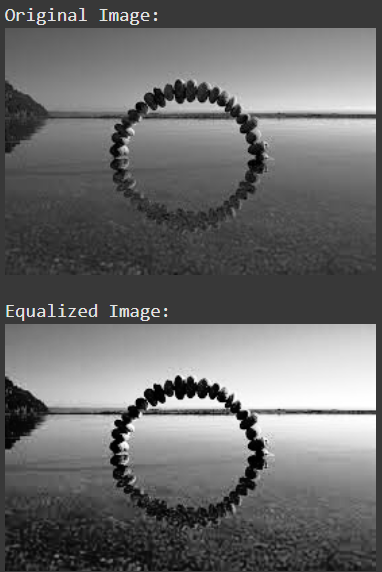
    plt.xlabel('Pixel Value')

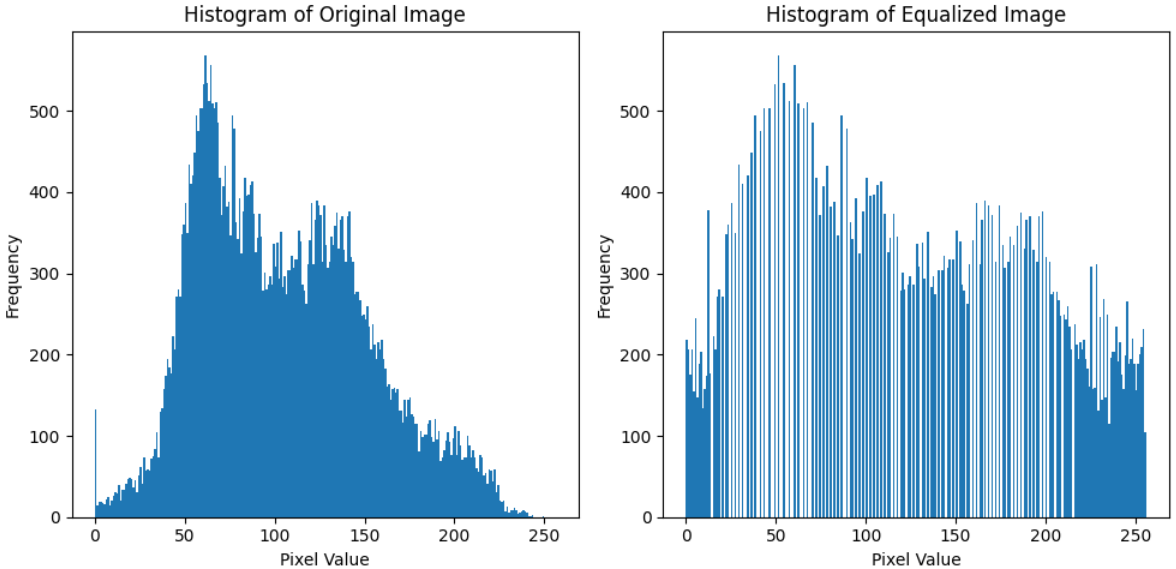
    plt.ylabel('Frequency')

    plt.tight\_layout()

    plt.show()

**Output:**



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