**#24 Bit to 8 Bit**

import cv2

#Input image

input = cv2.imread('C:/Users/student/Downloads/image.jfif')

#Get input size

height, width = input.shape[:2]

w, h = (256, 256)

temp = cv2.resize(input, (w, h), cv2.INTER\_LINEAR)

output = cv2.resize(temp, (width, height), cv2.INTER\_NEAREST)

cv2.imshow("8bit.jpg",output)

cv2.imshow("24bit.jpg",input)

**#24 Bit to 4 Bit**

import cv2

#Input image

input = cv2.imread('C:/Users/student/Downloads/image.jfif')

#Get input size

height, width = input.shape[:2]

a, b = (16, 16)

temp1 = cv2.resize(input, (a, b), cv2.INTER\_LINEAR)

output1 = cv2.resize(temp1, (width, height), cv2.INTER\_NEAREST)

cv2.imshow("4bit.jpg",output1)

cv2.imshow("24bit.jpg",input)

**#24 Bit to 1 Bit**

import cv2

input = cv2.imread('C:/Users/student/Downloads/image.jfif')

#Get input size

height, width = input.shape[:2]

c, d = (2, 2)

temp2 = cv2.resize(input, (c, d), cv2.INTER\_LINEAR)

output2 = cv2.resize(temp2, (width, height), cv2.INTER\_NEAREST)

cv2.imshow("1bit.jpg",output2)

cv2.imshow("24bit.jpg",input)

**OUTPUT**

|  |  |
| --- | --- |
| ORIGINAL IMAGE(24 BIT) | 8 BIT |
| 4 BIT | 1 BIT |