```
#add, sub, multiply, divide, and, or, not
#2018UIT2586
#SHIVANI GUPTA
#PRACTICAL 5

import numpy as np
import cv2
import matplotlib.pyplot as plt
from google.colab.patches import cv2_imshow

from google.colab import drive
drive.mount('/content/drive')

img = cv2.imread('/content/drive/MyDrive/Tufnell Photography/Final Upload images/DSC_3982.JPG')
print("IMAGE 1\n \n")
cv2_imshow(img)

img_next = cv2.imread('/content/drive/MyDrive/Tufnell Photography/Start upload/Red Ferrari/DSC_405
print("IMAGE 2\n \n")
cv2_imshow(img_next)

#addition
img_add=cv2.add(img,img_next)
print("FINAL IMAGE AFTER ADDITION OPERATION ON TWO DIFFERNENT IMAGES\n \n")
cv2_imshow(img_add)

#subtraction
img_sub=cv2.subtract(img,img_next)
print("FINAL IMAGE AFTER SUBTRACTION OPERATION ON TWO DIFFERNENT IMAGES \n \n")
cv2_imshow(img_sub)

#division
img_div = cv2.divide(img, img_next)
print("FINAL IMAGE AFTER DIVISION OPERATION ON TWO DIFFERNENT IMAGES \n \n")
cv2_imshow(img_div)

#multiplication
img_mul = cv2.multiply(img, img_next)
print("FINAL IMAGE AFTER MULTIPLICATION OPERATION ON TWO DIFFERNENT IMAGES \n \n")
cv2_imshow(img_mul)

#inreasing and decreasing intensities of images using the operations
img_100 = np.ones(img.shape, dtype = "uint8") * 100
# Adding two images
img2=cv2.add(img,img_100)
print("FINAL IMAGE AFTER ADDITION OPERATION ON SAME IMAGE - INTENSITY INCREASES \n \n")
cv2_imshow(img2)

#subtracting two images
img3=cv2.subtract(img,img_100)
print("FINAL IMAGE AFTER SUBTRACTION OPERATION ON SAME IMAGE - INTENSITY DECREASES \n \n")
cv2_imshow(img3)

#dividing two images
img4 = cv2.divide(img, img_100)
print("FINAL IMAGE AFTER DIVISION OPERATION ON SAME IMAGE\n \n")
cv2_imshow(img4)

#multiplying two images
img5 = cv2.multiply(img, img_100)
print("FINAL IMAGE AFTER MULTIPLICATION OPERATION ON SAME IMAGE\n \n")
cv2_imshow(img5)

#and & or operations
#gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
#plt.imshow(gray)

#gray2 = cv2.cvtColor(img_next, cv2.COLOR_BGR2GRAY)
#plt.imshow(gray2)
```

```
#img = cv2.imread('/content/drive/MyDrive/Tufnell Photography/Final Upload images/DSC_3982.JPG', 0
#cv2_imshow(img)

#img_next = cv2.imread('/content/drive/MyDrive/Tufnell Photography/Start upload/Red Ferrari/DSC_40
#cv2_imshow(img_next)

bitwiseNot = cv2.bitwise_not(img)
print("FINAL IMAGE AFTER BITWISE NOT OPERATION \n \n")
cv2_imshow(bitwiseNot)

bitwiseAnd = cv2.bitwise_and(img, img_next)
print("FINAL IMAGE AFTER BITWISE AND OPERATION ON TWO DIFFERNENT IMAGES\n \n")
cv2_imshow(bitwiseAnd)

bitwiseOr = cv2.bitwise_or(img, img_next)
print("FINAL IMAGE AFTER BITWISE OR OPERATION ON TWO DIFFERNENT IMAGES\n \n")
cv2_imshow(bitwiseOr)
```

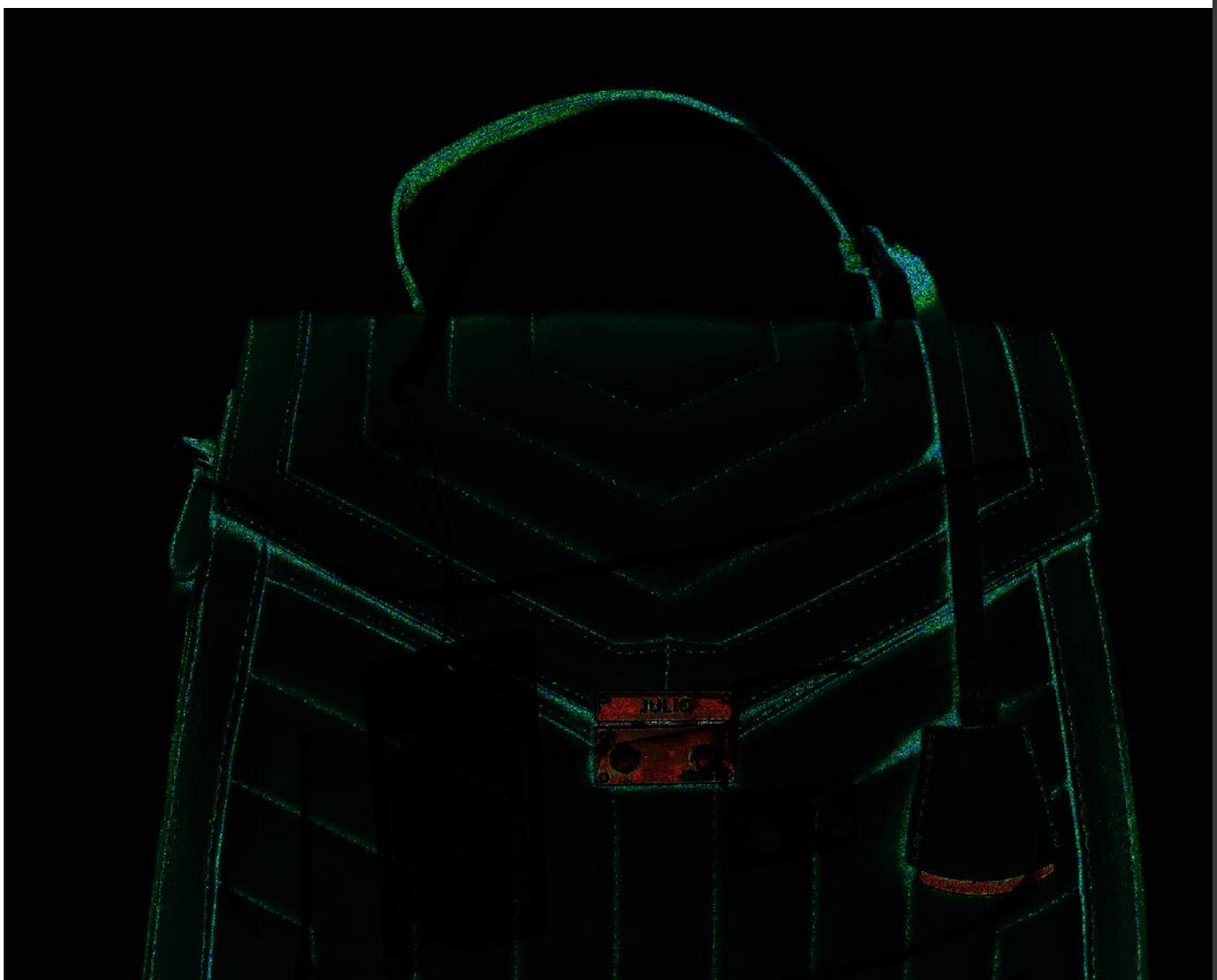
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/conte
IMAGE 1

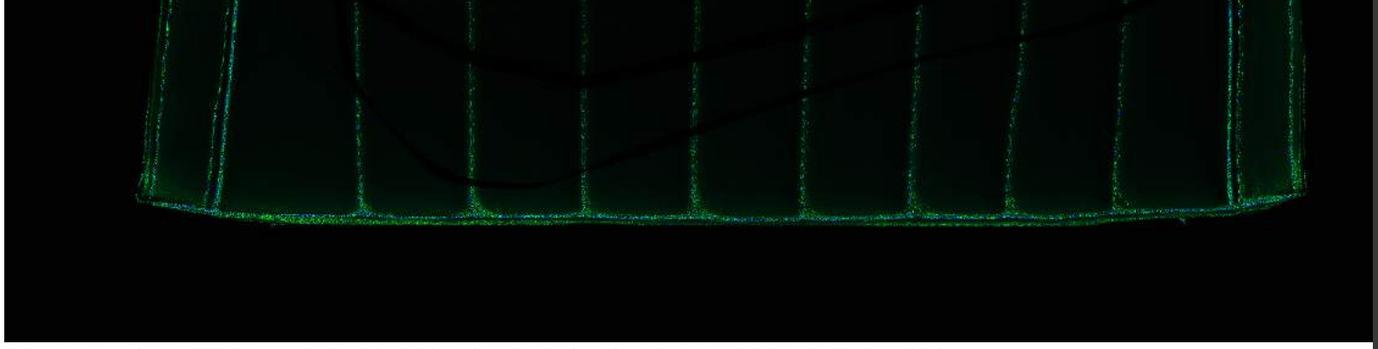
IMAGE 2

FINAL IMAGE AFTER ADDITION OPERATION ON TWO DIFFERNENT IMAGES

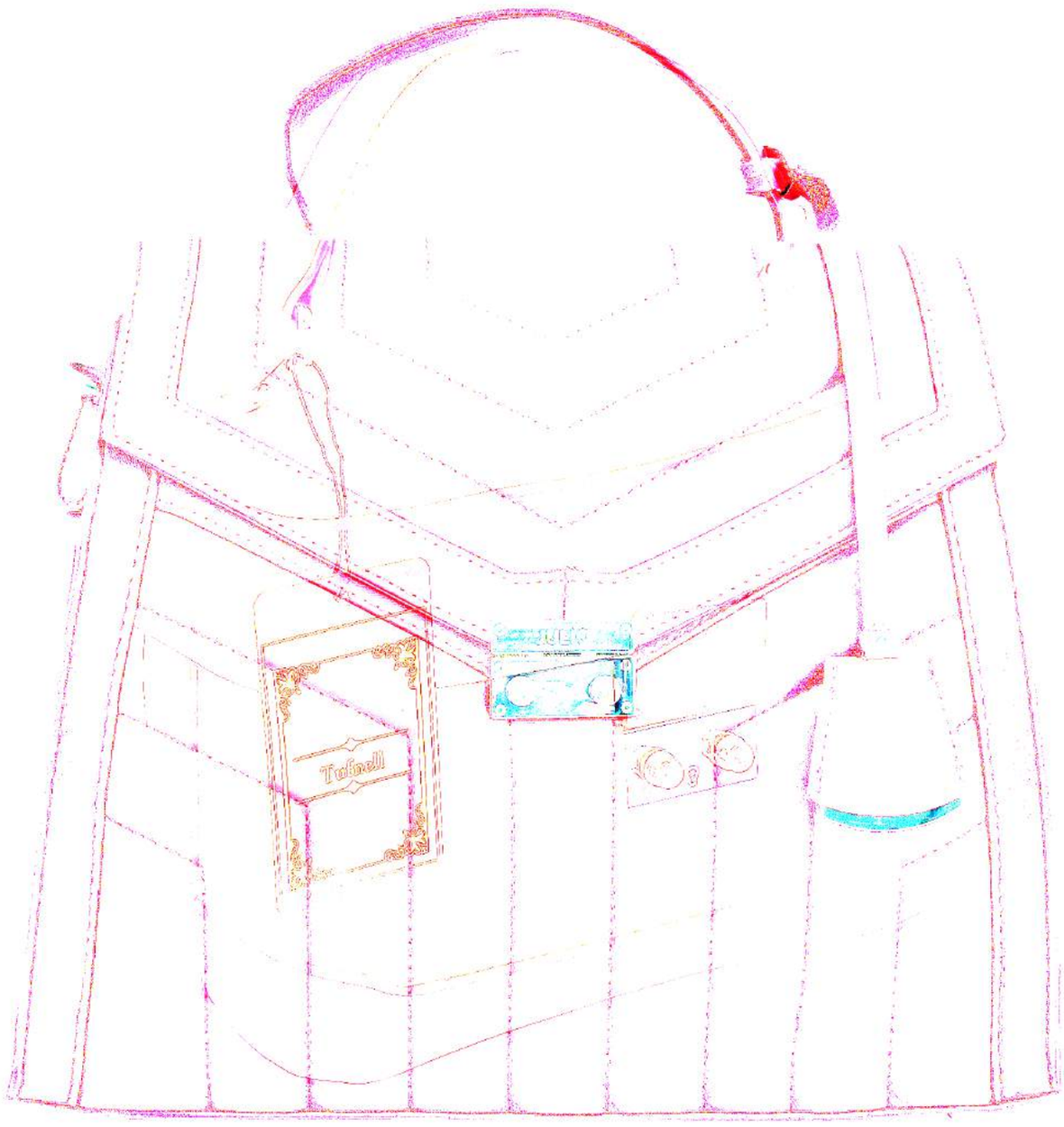
FINAL IMAGE AFTER SUBTRACTION OPERATION ON TWO DIFFERNENT IMAGES

FINAL IMAGE AFTER DIVISION OPERATION ON TWO DIFFERNENT IMAGES

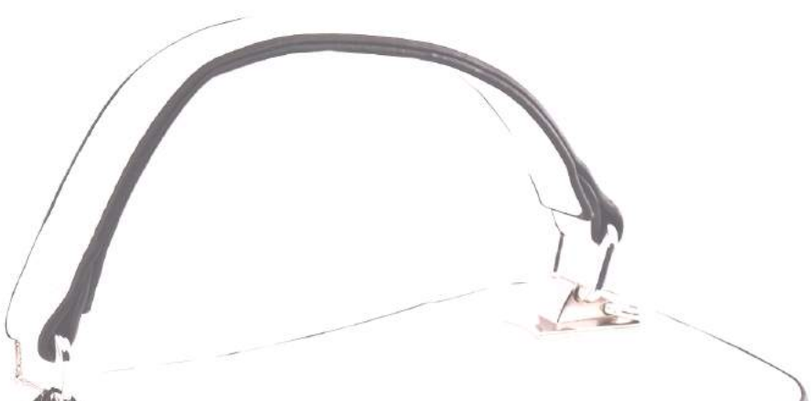


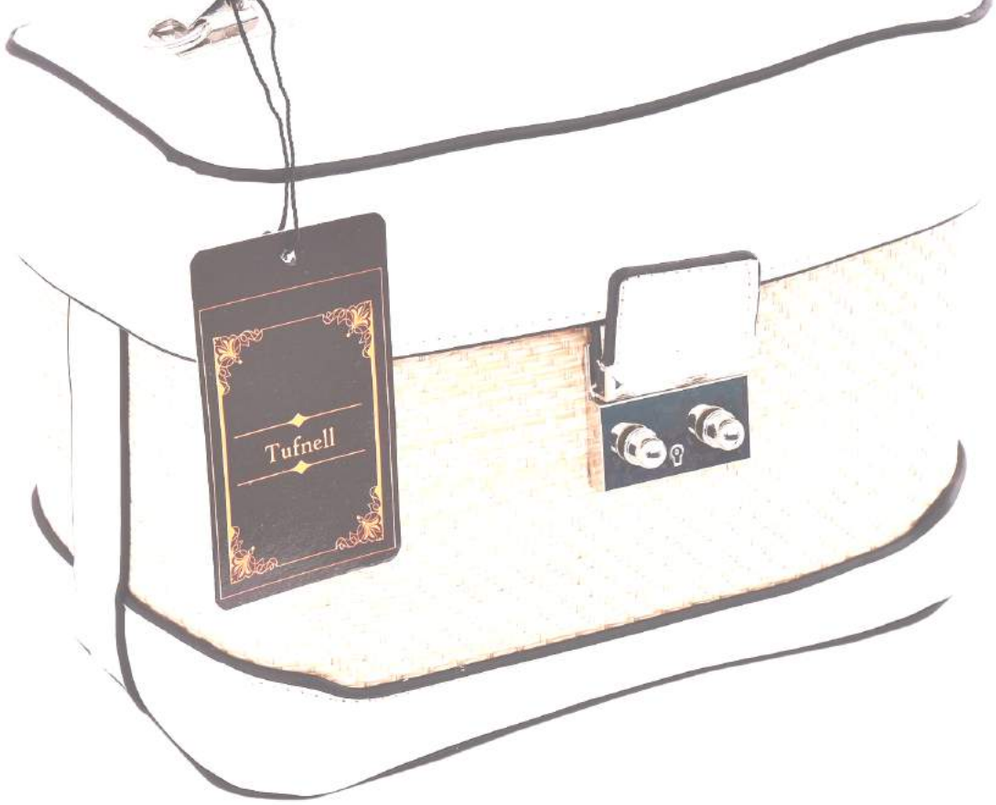


FINAL IMAGE AFTER MULTIPLICATION OPERATION ON TWO DIFFERNENT IMAGES



FINAL IMAGE AFTER ADDITION OPERATION ON SAME IMAGE - INTENSITY INCREASES

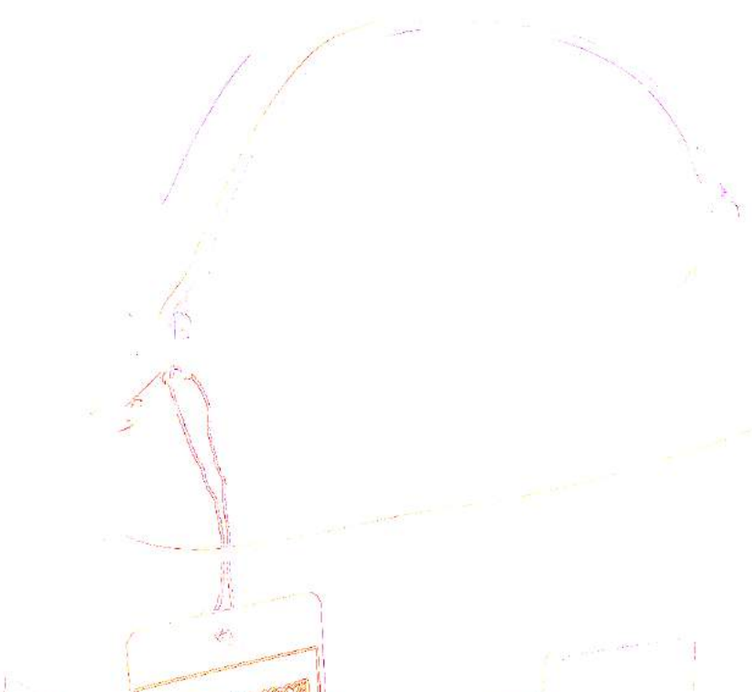


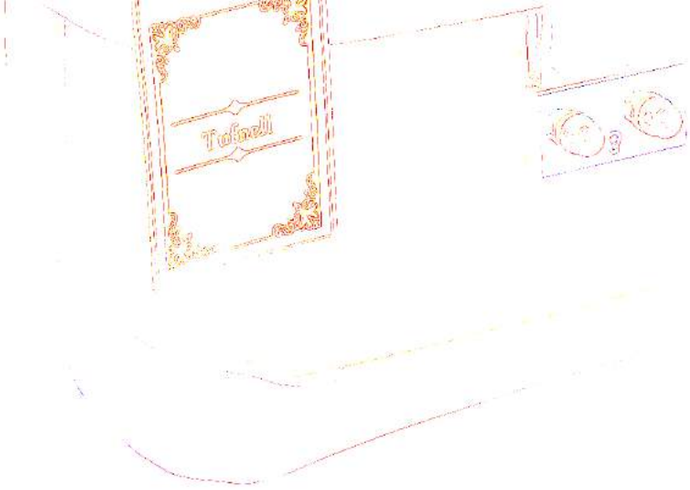


FINAL IMAGE AFTER SUBTRACTION OPERATION ON SAME IMAGE - INTENSITY DECREASES

FINAL IMAGE AFTER DIVISION OPERATION ON SAME IMAGE

FINAL IMAGE AFTER MULTIPLICATION OPERATION ON SAME IMAGE





FINAL IMAGE AFTER BITWISE NOT OPERATION

FINAL IMAGE AFTER BITWISE AND OPERATION ON TWO DIFFERNENT IMAGES

FINAL IMAGE AFTER BITWISE OR OPERATION ON TWO DIFFERNENT IMAGES