1.Brightness & Contrast

```
#Brightness & Contrast
#Import the necessary libraries
import cv2
import matplotlib.pyplot as plt
import numpy as np

# Load the image
image = cv2.imread('home.jpg')

#Plot the original image
plt.subplot(1, 2, 1)
plt.title("Original")
plt.imshow(image)
```

```
# Adjust the brightness and contrast
# Adjusts the brightness by adding 10 to each pixel value
brightness = 10
# Adjusts the contrast by scaling the pixel values by 2.3
contrast = 2.3
image2 = cv2.addWeighted(image, contrast, np.zeros(image.shape, image.dtype), 0, brightness)

#Save the image
cv2.imwrite('modified_image.jpg', image2)
#Plot the contrast image
plt.subplot(1, 2, 2)
plt.title("Brightness & contrast")
plt.imshow(image2)
plt.show()
```

2.Enhancing color in images

```
[ ]  # Enhancing color in images
     #Import the necessary libraries
     import cv2
     import matplotlib.pyplot as plt
     import numpy as np

     # Load the image
     image = cv2.imread('home.jpg')

     #Plot the original image
     plt.subplot(1, 2, 1)
     plt.title("Original")
     plt.imshow(image)

     # Convert the image from BGR to HSV color space
     image = cv2.cvtColor(image, cv2.COLOR_RGB2HSV)
```

```
# Adjust the hue, saturation, and value of the image
# Adjusts the hue by multiplying it by 0.7
image[:, :, 0] = image[:, :, 0] * 0.7
# Adjusts the saturation by multiplying it by 1.5
image[:, :, 1] = image[:, :, 1] * 0.5
# Adjusts the value by multiplying it by 0.5
image[:, :, 2] = image[:, :, 2] * 0.15

# Convert the image back to BGR color space
image2 = cv2.cvtColor(image, cv2.COLOR_HSV2BGR)

#Save the image
cv2.imwrite('enhanced coloured.jpg', image2)

#Plot the enhanced image
plt.subplot(1, 2, 2)
plt.title("enhanced coloured")
plt.imshow(image2)
plt.show()
```

3.Inverse Transform

```
#We can also inverse the color by simply subtracting each value from 255#
```

```python
#Inverse Transform
#We can also inverse the color by simply subtracting each value from 255#
#Import the necessary libraries
import cv2
import matplotlib.pyplot as plt
import numpy as np

# Load the image
image = cv2.imread('home.jpg')

#Plot the original image
plt.subplot(1, 2, 1)
plt.title("Original")
plt.imshow(image)

# Inverse by subtracting from 255
inverse_image = 255 - image

#Save the image
cv2.imwrite('inverse_image.jpg', inverse_image)
#Plot the Inverse image
plt.subplot(1, 2, 2)
plt.title("Inverse color")
plt.imshow(inverse_image)
plt.show()
```