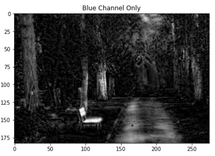
In [1]:
```
#import lib

import cv2
import numpy as np
from matplotlib import pyplot as plt

# Define our imshow function
def imshow(title = "Image", image = None, size = 10):
    w, h = image.shape[0], image.shape[1]
    aspect_ratio = w/h
    plt.figure(figsize=(size * aspect_ratio,size))
    plt.imshow(cv2.cvtColor(image, cv2.COLOR_BGR2RGB))
    plt.title(title)
    plt.show()
```

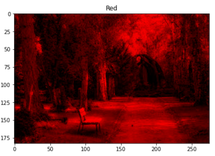
In [2]:
```
# Load our input image
image = cv2.imread('download.jpg')

# Use cv2.split to get each color space separately
B, G, R = cv2.split(image)
print(B.shape)
print(G.shape)
print(R.shape)
```

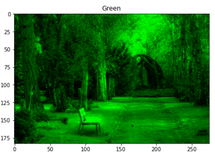
```
(183, 275)
(183, 275)
(183, 275)
```

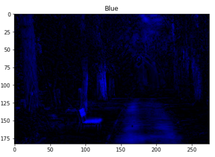
In [3]:
```
imshow("Blue Channel Only", B)
```



In [4]:
```
zeros = np.zeros(image.shape[:2], dtype = "uint8")

imshow("Red", cv2.merge([zeros, zeros, R]))
imshow("Green", cv2.merge([zeros, G, zeros]))
imshow("Blue", cv2.merge([B, zeros, zeros]))
```

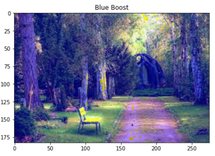




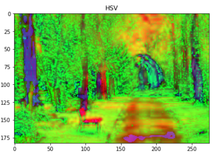


In [5]:
```
image = cv2.imread('download.jpg')

# OpenCV's 'split' function splites the image into each color index
B, G, R = cv2.split(image)

# Let's re-make the original image,
merged = cv2.merge([B, G, R])
imshow("Merged", merged)
```

In [6]:
```
merged = cv2.merge([B+100, G, R])
imshow("Blue Boost", merged)
```

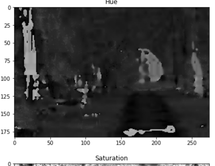


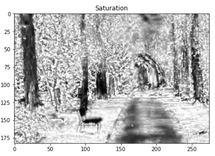
In [7]:
```
# Reload our image
image = cv2.imread('download.jpg')

# Convert to HSV
hsv_image = cv2.cvtColor(image, cv2.COLOR_BGR2HSV)
imshow('HSV', hsv_image)
```



In [8]:
```
plt.imshow(cv2.cvtColor(hsv_image, cv2.COLOR_HSV2RGB))
plt.show()
```

In [9]:
```
# Switching back to viewing the RGB representation
imshow("Hue", hsv_image[:, :, 0])
imshow("Saturation", hsv_image[:, :, 1])
imshow("Value", hsv_image[:, :, 2])
```





In [ ]: