Task 1

I have tried to change some numbers in the matrix to change the 8 to 5

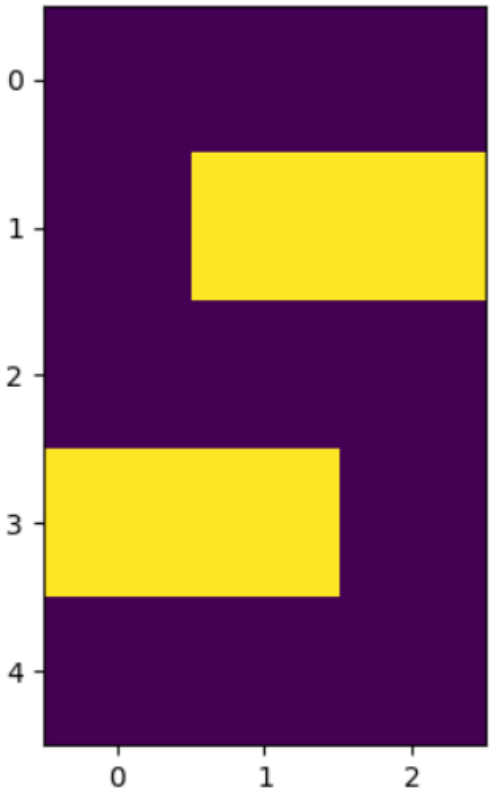
Then I noticed that if we changed the positions [3,0] and [1,2] to the yellow color it will form the shape of number 5

```
zero = iio.imread(uri="eight.tif")
zero[3,0]= 1
zero[1,2]= 1



"""
The follwing line of code creates a new figure for imshow to use in displaying our output. Without it, plt.imshow() would overwrite our previous image in
"""
fig, ax = plt.subplots()
plt.imshow(zero)
print(zero)
```

```
[[0. 0. 0.]
 [0. 1. 1.]
 [0. 0. 0.]
 [1. 1. 0.]
 [0. 0. 0.]]
```



Task 2

Here I used the matplot library to read and display the image, numpy for manipulate the image.

I created a copy of the image we want to manipulate so that it remains without any changes because I had some problems when I didn't create a copy of the original image.

I used "2" in the color channel which is Blue

I searched on google and I found out that number "3" represents "Alpha", the transparency color.

I could've used "3" in the color channel as transparency color, but in the output example in the word file it was like this, and the instructor told me that this is correct

Finally, matplot will show the edited image, and the last line will save the image to the desired path.

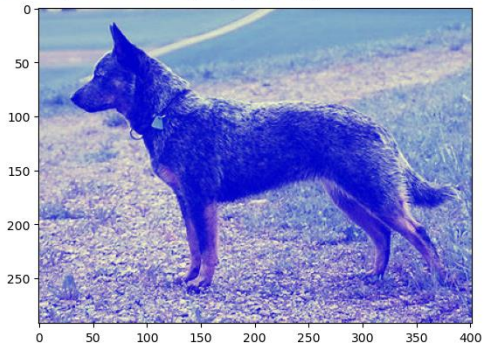
```python
import matplotlib.pyplot as plt
import matplotlib.image as img
import imageio.v3 as iio
import numpy as np


image_path = input("Enter the path of the image: ")
image = img.imread(image_path)
new_image = np.copy(image)
alpha_value = int(input("Enter the transparency level (0 to 255): "))
path= input("enter the path for the new image")

for i in range(new_image.shape[0]):
    for j in range(new_image.shape[1]):
        new_image[i, j, 2] = alpha_value

plt.imshow(new_image)
iio.imwrite(path,new_image)
```

```
Enter the path of the image:  Picture1.jpg
Enter the transparency level (0 to 255):  200
enter the path for the new image output_image2.jpg
```




```python
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image_path = input("Enter the path of the image: ")
image = img.imread(image_path)
new_image = np.copy(image)
alpha_value = int(input("Enter the transparency level (0 to 255): "))
path= input("enter the path for the new image")

for i in range(new_image.shape[0]):
    for j in range(new_image.shape[1]):
        new_image[i, j, 2] = alpha_value

plt.imshow(new_image)
iio.imwrite(path,new_image)
```

```
Enter the path of the image:  Picture1.jpg
Enter the transparency level (0 to 255):  128
enter the path for the new image output_image1.jpg
```