In [30]:
```
import numpy as np
```

In [31]:
```
one_arr=np.ones((5,5))
one_arr
```

Out[31]:
```
array([[1., 1., 1., 1., 1.],
       [1., 1., 1., 1., 1.],
       [1., 1., 1., 1., 1.],
       [1., 1., 1., 1., 1.],
       [1., 1., 1., 1., 1.]])
```

In [32]:
```
one_arr=np.ones((5,5),dtype=int)
one_arr
```

Out[32]:
```
array([[1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1],
       [1, 1, 1, 1, 1]])
```

In [33]:
```
zeros_arr=np.zeros((3,3),dtype=int)
zeros_arr
```

Out[33]:
```
array([[0, 0, 0],
       [0, 0, 0],
       [0, 0, 0]])
```

In [34]:
```
one_arr*255
```

Out[34]:
```
array([[255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255],
       [255, 255, 255, 255, 255]])
```

In [35]:
```
import matplotlib.pyplot as plt
```

In [36]:
```
%matplotlib inline
```

In [37]:
```
from PIL import Image   #python image library
```

In [38]:
```
image= Image.open(r'C:\Users\dsaby\Downloads\lion2.jpg')
```

In [39]:
```
image
```

Out[39]:

In [40]:
```
type(image)
```

Out[40]:
```
PIL.JpegImagePlugin.JpegImageFile
```

In [41]:
```
image_arr= np.asarray(image)
image_arr
```

Out[41]:
```
array([[[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       [[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       [[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       ...,

       [[ 35,  35,  35],
        [ 32,  32,  32],
        [ 28,  28,  28],
        ...,
        [ 40,  40,  40],
        [ 50,  50,  50],
        [ 73,  73,  73]],

       [[ 43,  43,  43],
        [ 46,  46,  46],
        [ 44,  44,  44],
        ...,
        [ 56,  56,  56],
        [ 61,  61,  61],
        [ 77,  77,  77]],

       [[ 51,  51,  51],
        [ 52,  52,  52],
        [ 52,  52,  52],
        ...,
        [101, 101, 101],
        [ 78,  78,  78],
        [ 74,  74,  74]]], dtype=uint8)
```

In [42]:
```
image_arr.shape
```

Out[42]:
```
(1129, 1695, 3)
```

In [43]:
```
plt.imshow(image)
plt.show()
```

In [44]:
```
image_arr.shape
```

Out[44]:
```
(1129, 1695, 3)
```

In [48]:
```
image_red=image_arr.copy()
image_red
```

Out[48]:
```
array([[[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       [[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       [[202, 202, 202],
        [202, 202, 202],
        [203, 203, 203],
        ...,
        [207, 207, 207],
        [207, 207, 207],
        [207, 207, 207]],

       ...,

       [[ 35,  35,  35],
        [ 32,  32,  32],
        [ 28,  28,  28],
        ...,
        [ 40,  40,  40],
        [ 50,  50,  50],
        [ 73,  73,  73]],

       [[ 43,  43,  43],
        [ 46,  46,  46],
        [ 44,  44,  44],
        ...,
        [ 56,  56,  56],
        [ 61,  61,  61],
        [ 77,  77,  77]],

       [[ 51,  51,  51],
        [ 52,  52,  52],
        [ 52,  52,  52],
        ...,
        [101, 101, 101],
        [ 78,  78,  78],
        [ 74,  74,  74]]], dtype=uint8)
```

In [49]:
```
image_arr==image_red
```

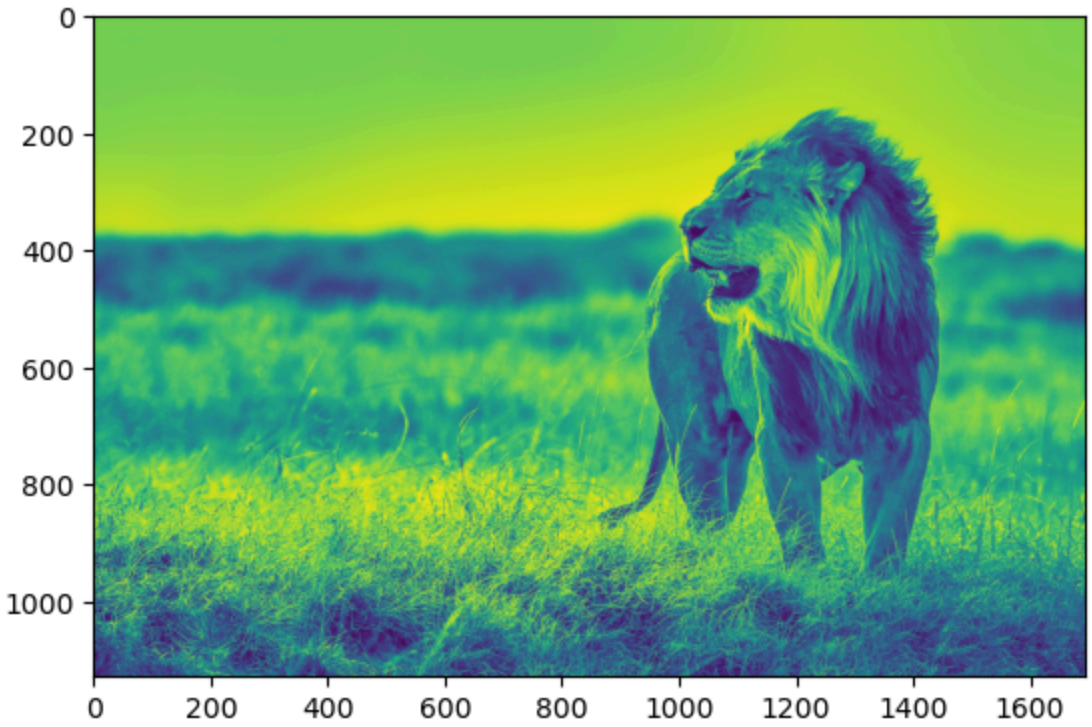
Out[49]:
```
array([[[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]],

       [[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]],

       [[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]],

       ...,

       [[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]],

       [[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]],

       [[ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True],
        ...,
        [ True,  True,  True],
        [ True,  True,  True],
        [ True,  True,  True]]])
```

In [50]:
```
plt.imshow(image_red)
plt.show()
```

In [51]:
```
image_red.shape
```

Out[51]:
```
(1129, 1695, 3)
```

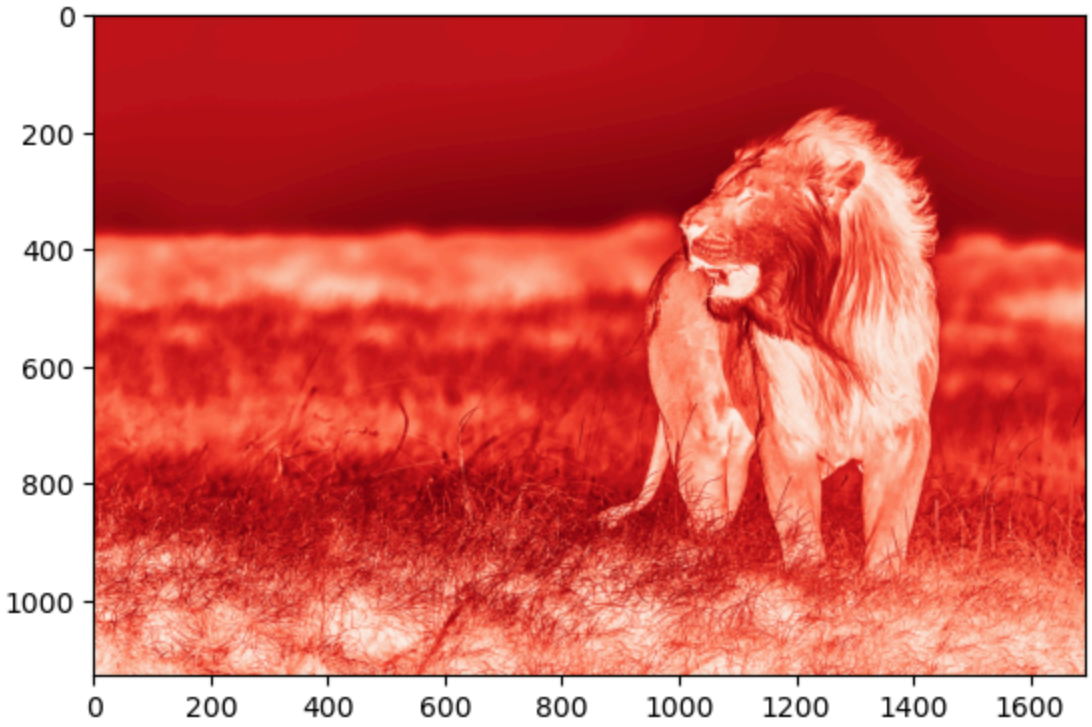
In [53]:
```
plt.imshow(image_red[:,:,0])
plt.show()
```



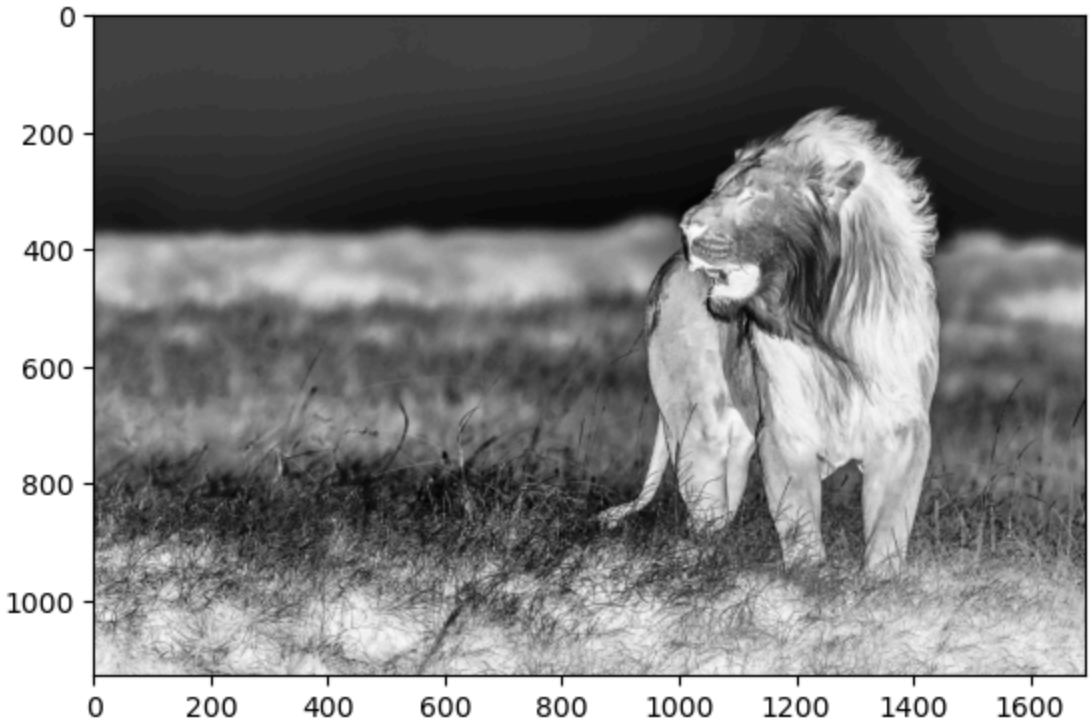
In [54]:
```
image_red[:,:,0]
```

Out[54]:
```
array([[202, 202, 203, ..., 207, 207, 207],
       [202, 202, 203, ..., 207, 207, 207],
       [202, 202, 203, ..., 207, 207, 207],
       ...,
       [ 35,  32,  28, ...,  40,  50,  73],
       [ 43,  46,  44, ...,  56,  61,  77],
       [ 51,  52,  52, ..., 101,  78,  74]], dtype=uint8)
```

In [62]:
```
plt.imshow(image_red[:,:,0],cmap='Reds')
plt.show()
```



In [64]:
```
plt.imshow(image_red[:,:,1],cmap='Greys')
plt.show()
```



In [65]:
```
image_red[:,:,0]=0
```

In [66]:
```
plt.imshow(image_red)
```

Out[66]:
```
<matplotlib.image.AxesImage at 0x1b0fd3987d0>
```

In [67]:
```
plt.show()
```

In [68]:
```
image_red[:,:,1]=0
```

In [69]:
```
image_red[:,:,1]
```

Out[69]:
```
array([[0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       ...,
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0],
       [0, 0, 0, ..., 0, 0, 0]], dtype=uint8)
```

In [70]:
```
plt.imshow(image_red)
```

Out[70]:
```
<matplotlib.image.AxesImage at 0x1b0fd3ebc50>
```

In [71]:
```
plt.show()
```

In [ ]:

In [ ]: