Hint 1

projects on linear algebra

You can read an image, convert it to a matrix, and display it as follows

```python
from PIL import Image
import numpy as np
import matplotlib.pyplot as plt

# reading the image
img = Image.open('sample.jpg')4
imggray = img.convert('LA')
imgmat = np.array(list( imggray.getdata(band=0)),float)
imgmat.shape = (imggray.size[1] , imggray.size[0] )

# showing the image
plt.style.use('classic')
plt.imshow(imgmat, camp='gray')
plt.title(title)
plt.show()
```