In [1]:
```
from pylab import *

rcParams['image.cmap'] = 'gray'
```

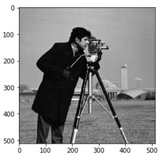
Ejercicio 1

In [2]:
```
from skimage.data import camera
```

In [3]:
```
image = camera()
```

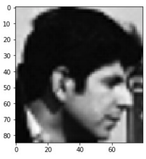
In [4]:
```
imshow(image)
```

Out[4]:
```
<matplotlib.image.AxesImage at 0x1d70bdbd160>
```



In [5]:
```
cara = image[75:160, 190:270]
imshow(cara)
```

Out[5]:
```
<matplotlib.image.AxesImage at 0x1d70ce46908>
```

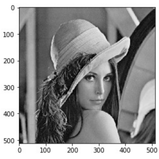


Ejercicio 2

In [6]:
```
lena = imread('lena_gray_512.tif')
```

In [7]:
```
imshow(lena)
```

Out[7]:
```
<matplotlib.image.AxesImage at 0x1d70cebaba8>
```



In [8]:
```
mask = zeros_like(lena)
```

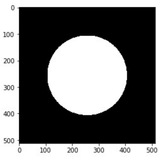
In [9]:
```
from skimage.draw import circle
```

In [10]:
```
cx = int(lena.shape[0]/2)
cy = int(lena.shape[1]/2)
rr, cc = circle(cx, cy, 150, shape=lena.shape)
```

In [11]:
```
mask[rr, cc] = 1
```

In [12]:
```
imshow(mask)
```

Out[12]:
```
<matplotlib.image.AxesImage at 0x1d70cf1b6a0>
```

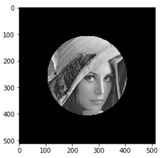


In [13]:
```
from scipy.ndimage import correlate
```

In [14]:
```
R = lena*mask
```

In [15]:
```
imshow(R)
```

Out[15]:
```
<matplotlib.image.AxesImage at 0x1d70d096fd0>
```



Ejercicio 3

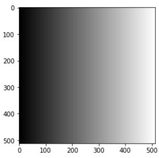
In [16]:
```
lena.shape
```

Out[16]:
```
(512, 512)
```

In [17]:
```
ll = linspace(0, 255, num=512)
```

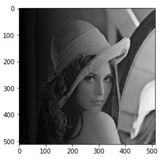
In [18]:
```
mask2 = zeros_like(lena)
mask2[0:512, ...] = ll
imshow(mask2)
```

Out[18]:
```
<matplotlib.image.AxesImage at 0x1d70d0f9c18>
```



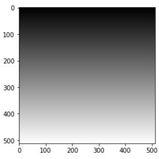
In [19]:
```
imshow(lena*(mask2/255))
```

Out[19]:
```
<matplotlib.image.AxesImage at 0x1d70d154cf8>
```



In [20]:
```
imshow(mask2.T)
```

Out[20]:
```
<matplotlib.image.AxesImage at 0x1d70d1b3fd0>
```



In [21]:
```
imshow(lena*(mask2.T/255))
```

Out[21]:
```
<matplotlib.image.AxesImage at 0x1d70d21a470>
```