Compress racoon grey scale image into 5 clusters.

In [1]:

```python
#import packages
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.cluster import KMeans
import scipy.misc
```

In [2]:

```python
# View the gray scale image

face = scipy.misc.face(gray=True)
#plt.figure(figsize=(200, 3.6))
plt.imshow(face, cmap=plt.cm.gray)
plt.show()
```


In [*]:

```python
# Compression of image into 5 clusters by KMean

rows = face.shape[0]
cols = face.shape[1]
image = face.reshape(rows*cols,1)
kmeans = KMeans(n_clusters = 5)
kmeans.fit(image)
clusters = np.asarray(kmeans.cluster_centers_)
labels = np.asarray(kmeans.labels_)
labels = labels.reshape(rows,cols);
```

In [*]:

```python
# compressed image
plt.imsave('compressed_image.png',labels);
c_image = plt.imread('compressed_image.png')
plt.figure(figsize=(10, 3.6))
plt.imshow(c_image)
plt.show()
```

In [ ]: