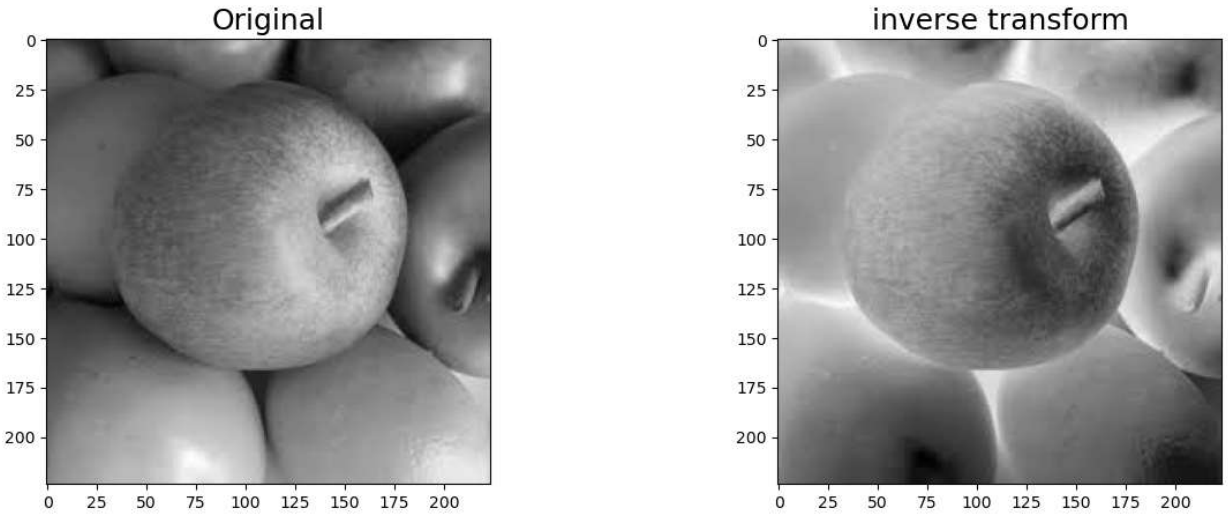
In [1]:
```
'''Linear Transformation'''
import cv2
import matplotlib.pyplot as plt
import numpy as np
im = cv2.imread('apple.jpg',0)
imginv = 255 - im

fig = plt.figure(figsize = (15,5))
ax = fig.add_subplot(121)
plt.title('Original',fontsize = 18)
plt.imshow(im,cmap = 'gray')
ax = fig.add_subplot(122)
plt.imshow(imginv,cmap = 'gray')
ax.set_title('inverse transform',fontsize=18)
```

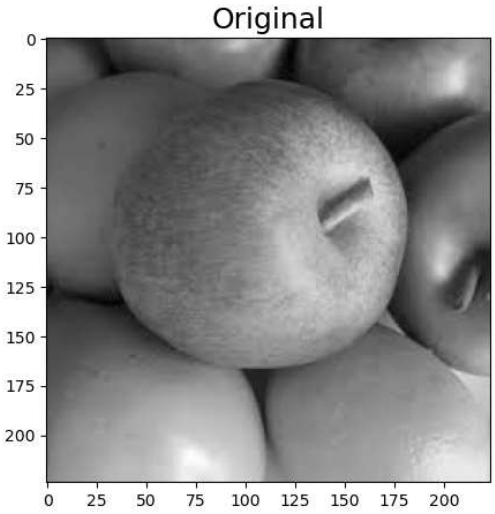
Out[1]:
```
Text(0.5, 1.0, 'inverse transform')
```

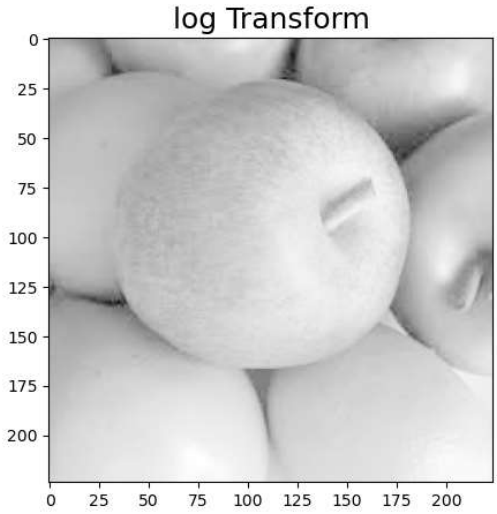


In [2]:
```
'''Log Transformation'''
import cv2
import matplotlib.pyplot as plt
import numpy as np

im = cv2.imread('apple.jpg',0)
log = 0.6 * (np.log(1 + np.float32(im)))
fig = plt.figure(figsize=(15,5))
ax = fig.add_subplot(121)
plt.title('Original',fontsize=18)
plt.imshow(im,cmap='gray')
ax = fig.add_subplot(122)
plt.imshow(log,cmap='gray')
ax.set_title('log Transform',fontsize=18)
```

Out[2]:
```
Text(0.5, 1.0, 'log Transform')
```

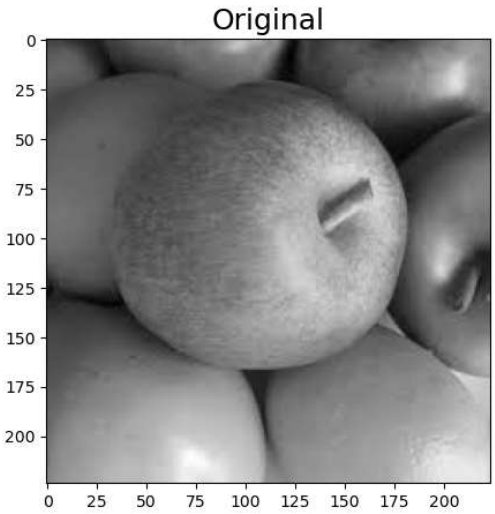


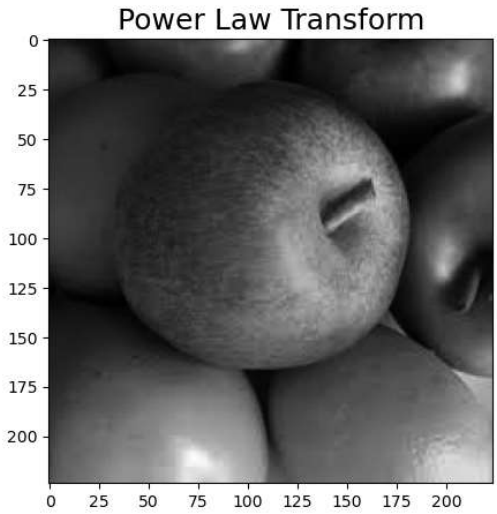


In [3]:
```
'''Gamma Transformation'''
import cv2
import matplotlib.pyplot as plt
import numpy as np

im = cv2.imread('apple.jpg',0)
im1 = im/255.0
im_power_law_transformation = cv2.pow(im1,1.8)
fig = plt.figure(figsize=(15,5))
ax = fig.add_subplot(121)
plt.title('Original',fontsize=18)
plt.imshow(im,cmap='gray')
ax = fig.add_subplot(122)
plt.imshow(im_power_law_transformation,cmap='gray')
ax.set_title('Power Law Transform',fontsize=18)
```

Out[3]:
```
Text(0.5, 1.0, 'Power Law Transform')
```





In [ ]: