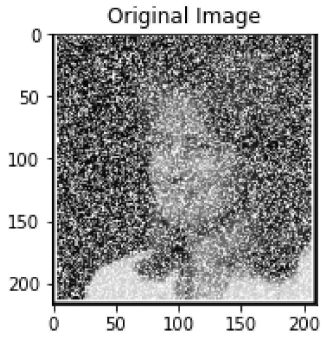
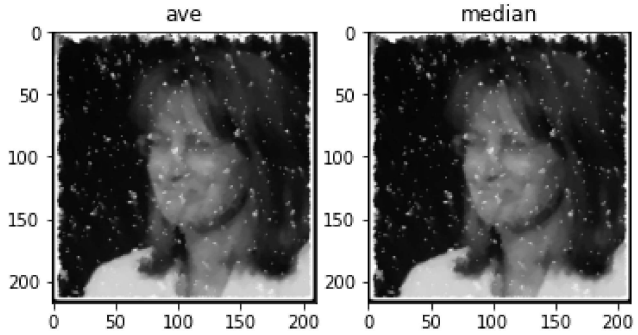
In [43]:
```
import numpy as np
import cv2 as cv
from matplotlib import pyplot as plt
im = cv.imread('10.jpg',0)
im2=im
print ("mohsen mousaei")
plt.subplot(121),plt.imshow(im,cmap = 'gray')
plt.title('Original Image')

plt.show()

m,n=im.shape

k=np.array([[1,1,1],[1,0,1],[1,1,1]])
edge=np.zeros((m,n))



print(m,n)

for i in range(m-2):

    for j in range(n-2):


        l=(im[i,j]*k[0,0])+(im[i+1,j]*k[1,0])+(im[i+2,j]*k[2,0])+(im[i,j+1]*k[0,1])+(im[i+1,j+1]*k[1

        t=np.array([im[i,j],im[i+1,j],im[i+2,j],im[i,j+1],im[i+2,j+1],im[i,j+2],im[i+1,j+2],im[i+2,j
        im [i+1,j+1]=l/8
        im2[i+1,j+1]=np.median(t)




plt.subplot(121),plt.imshow(im,cmap = 'gray')
plt.title('ave')

plt.subplot(122),plt.imshow(im2,cmap = 'gray')
plt.title('median')
```

```
mohsen mousaei
```




```
217 210
```

Out[43]:
```
Text(0.5, 1.0, 'median')
```



In [ ]:

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In [ ]: