

```
%noise smoothening or reduction
J = imread('cameraman.tif','tif');
imshow(J)
```



```
I = imnoise(J,'salt & pepper',0.1);
imshow(I)
```



```
a = fspecial('average');
filt = filter2(a,I);
med = medfilt2(I);
subplot(2,2,1), imshow(I),title('noise image')
subplot(2,2,2), imshow(J), title('noiseless image')
subplot(2,2,3),imshow(uint8(filt)), title('normally filtered image')
subplot(2,2,4), imshow(med), title('median filtering')
```

**noise image**



**noiseless image**



**normally filtered image**



**median filtering**

