MATLAB Image filtering

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Course Code: Image Processing and Analysis

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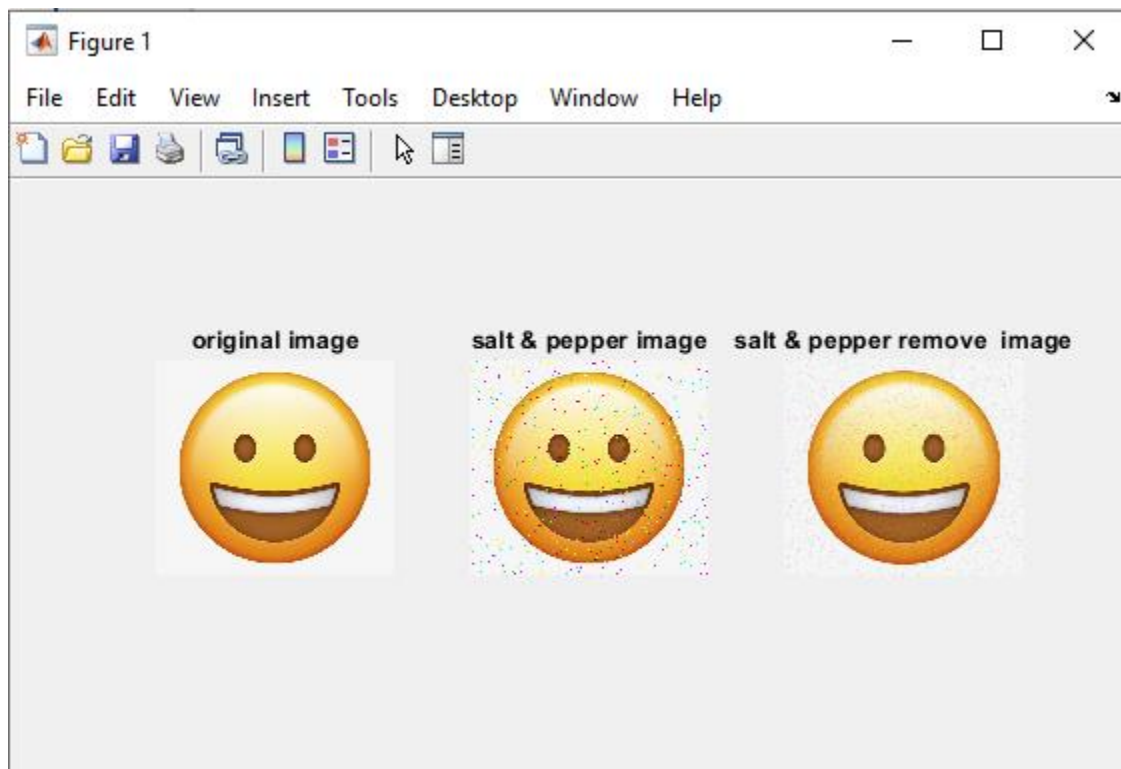
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Task

Task 1: Corrupt Image with Salt and pepper Noise
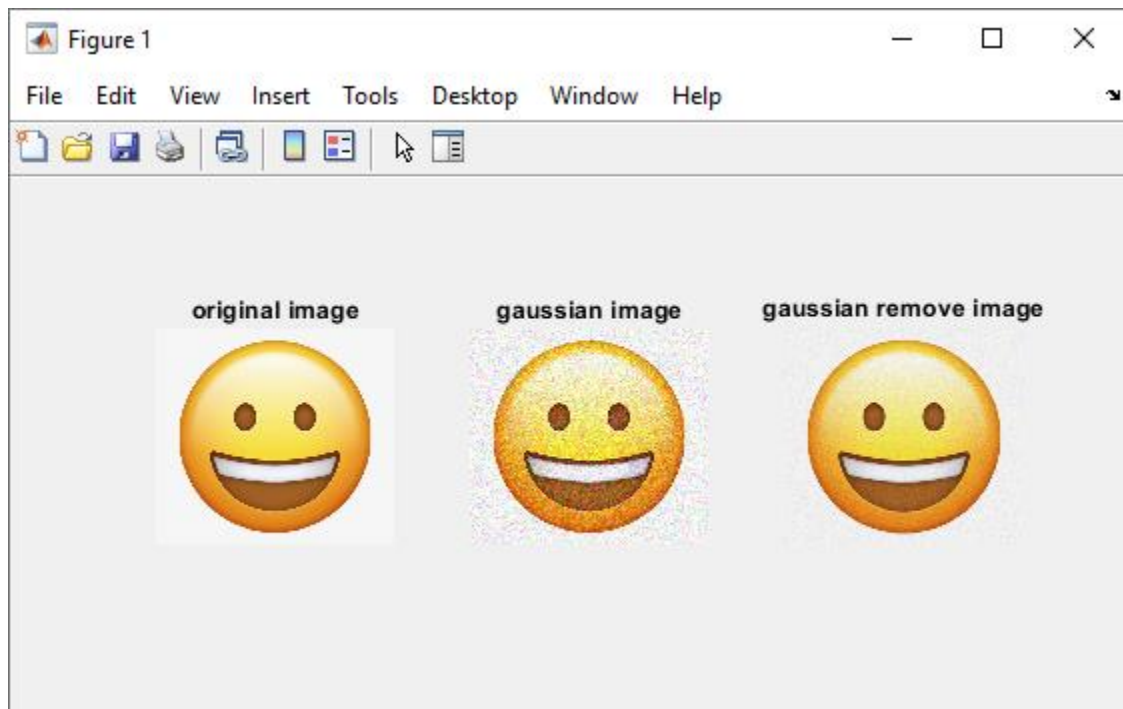## -> Implement Spatial Noise Filter on it

```matlab
f=imread('emoji.png');
subplot(1,3,1);
imshow(f);
title('original image');

%Salt & Pepper
s=imnoise(f,'salt & pepper',0.02);
subplot(1,3,2);
imshow(s)
title('salt & pepper image');

w=fspecial("average");
g=imfilter(s,w,"replicate");
subplot(1,3,3);
imshow(g)
title('salt & pepper remove  image');
```


original image   salt & pepper image   salt & pepper remove image

Task 2: Corrupt Image with Gaussian Noise
-> Implement Spatial Noise Filter on it

```
lab12.m  ✕  untitled2 *  ✕  +
1          f=imread('emoji.png');
2          subplot(1,3,1);
3          imshow(f);
4          title('original image');
5
6          n=imnoise(f,'gaussian');
7          subplot(1,3,2);
8          imshow(n)
9          title('gaussian image');
10
11         w=fspecial("average");
12         z=imfilter(n,w,"replicate");
13         subplot(1,3,3);
14         imshow(z)
15         title('gaussian remove image');
16
```

Conclusion:

original image   gaussian image   gaussian remove image   salt & pepper image   salt & pepper remove image