```matlab
clc;
close all;
clear all;

I=imread('pout.tif');
imshow(I);
title('Original Image');

for J=0.01:0.01:0.02
    figure;
    I0=imnoise(I,'gaussian',0,J);
    imshow(I0);
    title(strcat('Noisy Image (Gaussian,d=',num2str(J),')'));

    figure;
    Mean_Filter(I0,3,1,2,1);
    Mean_Filter(I0,5,1,2,2);

    figure;
    Gaussian_Filter(I0,3,0.3,1,2,1);
    Gaussian_Filter(I0,5,0.6,1,2,2);

    figure;
    I1=imnoise(I,'salt & pepper',J);
    imshow(I1);
    title(strcat('Noisy Image (salt & pepper,d=',num2str(J),')'));

    figure;
    Mean_Filter(I1,3,1,2,1);
    Mean_Filter(I1,5,1,2,2);

    figure;
    Gaussian_Filter(I1,3,0.3,1,2,1);
    Gaussian_Filter(I1,5,0.6,1,2,2);

    figure;
    Median_Filter(I1,3,1,2,1);
    Median_Filter(I1,5,1,2,2);
end


function Mean_Filter(NI,SoW,X,Y,Z)
W=ones(SoW)/(SoW*SoW);
L=imfilter(NI,W);
subplot(X,Y,Z);
imshow(L);
title(strcat('Mean Filter (',int2str(SoW),'*',int2str(SoW),')'));
end


function Gaussian_Filter(NI,hsize,sigma,X,Y,Z)
H=fspecial('gaussian',hsize,sigma);
L=imfilter(NI,H,'replicate');
```

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```matlab
subplot(X,Y,Z);
imshow(L);
title(strcat('Gaussian Filter (',num2str(hsize),',',num2str(sigma),')'));
end


function Median_Filter(NI,SoW,X,Y,Z)
L=medfilt2(NI,[SoW SoW]);
subplot(X,Y,Z);
imshow(L);
title(strcat('Median Filter (',int2str(SoW),'*',int2str(SoW),')'));
end
```

```matlab
clc;
close all;
clear all;

I=imread('circuit.tif');
subplot(2,3,1);
imshow(I);
title('Original Image');

BW1=edge(I,'sobel');
subplot(2,3,2);
imshow(BW1);
title('Sobel Method');

BW2=edge(I,'prewitt');
subplot(2,3,3);
imshow(BW2);
title('Prewitt Method');

BW3=edge(I,'roberts');
subplot(2,3,4);
imshow(BW3);
title('Roberts Method');

BW4=edge(I,'canny');
subplot(2,3,5);
imshow(BW4);
title('Canny Method');
```

```matlab
clc;
close all;
clear all;

I=imread('circuit.tif');
subplot(2,3,1);
imshow(I);
title('Original Image');

BW1=edge(I,'sobel');
subplot(2,3,2);
imshow(BW1);
title('Sobel Method');
```

```matlab
BW2=edge(I,'prewitt');
subplot(2,3,3);
imshow(BW2);
title('Prewitt Method');

BW3=edge(I,'roberts');
subplot(2,3,4);
imshow(BW3);
title('Roberts Method');

BW4=edge(I,'canny');
subplot(2,3,5);
imshow(BW4);
title('Canny Method');

BW5=edge(I,'log');
subplot(2,3,6);
imshow(BW5);
title('Laplacian of Gaussian');
```

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```matlab
clc;
close all;
clear all;

I=imread('circuit.tif');
subplot(2,4,1);
imshow(I);
title('Original Image');

J=imnoise(I,'salt & pepper',0.04);
subplot(2,4,2);
imshow(J);
title('Salt and Pepper Noise');

BW1=edge(J,'sobel');
subplot(2,4,3);
imshow(BW1);
title('Sobel Method');

BW2=edge(J,'prewitt');
subplot(2,4,4);
imshow(BW2);
title('Prewitt Method');

BW3=edge(J,'roberts');
subplot(2,4,5);
imshow(BW3);
title('Roberts Method');

BW4=edge(J,'canny');
subplot(2,4,6);
imshow(BW4);
title('Canny Method');

BW5=edge(J,'log');
subplot(2,4,7);
```

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```matlab
imshow(BW5);
title('Laplacian of Gaussian');
```

```matlab
clc;
close all;
clear all;

I=imread('circuit.tif');
subplot(2,4,1);
imshow(I);
title('Original Image');

J=imnoise(I,'gaussian',0,0.01);
subplot(2,4,2);
imshow(J);
title('Gaussian Noise');

BW1=edge(J,'sobel');
subplot(2,4,3);
imshow(BW1);
title('Sobel Method');

BW2=edge(J,'prewitt');
subplot(2,4,4);
imshow(BW2);
title('Prewitt Method');

BW3=edge(J,'roberts');
subplot(2,4,5);
imshow(BW3);
title('Roberts Method');

BW4=edge(J,'canny');
subplot(2,4,6);
imshow(BW4);
title('Canny Method');

BW5=edge(J,'log');
subplot(2,4,7);
imshow(BW5);
title('Laplacian of Gaussian');
```