

```

%Contoh File Filtering di Domain Freq
entry=imread('entry2.JPG');
hz=fspecial('sobel');
PQ=paddedsized(size(entry));
HZ=fft2(double(hz), PQ(1), PQ(2));
F=fft2(double(entry),PQ(1),PQ(2));
FDF=HZ.*F;
fdf=ifft2(FDF);
fdf=fdf(1:size(entry,1),1:size(entry,2));
figure,imshow(fdf,[]);
figure,imshow(abs(fdf) > 0.2*abs(max(fdf(:))));

```

1.4 Basic Steps in DFT Filtering

The following summarize the basic steps in DFT Filtering (taken directly from page 121 of Digital Image Processing Using MATLAB):

1. Obtain the padding parameters using function paddedsized:


```
PQ=paddedsized(size(f));
```
2. Obtain the Fourier transform with padding:


```
F=fft2(f, PQ(1), PQ(2));
```
3. Generate a filter function, H, of size PQ(1) x PQ(2)....
4. Multiply the transform by the filter:


```
G=H.*F;
```
5. Obtain the real part of the inverse FFT of G:


```
g=real(ifft2(G));
```
6. Crop the top, left rectangle to the original size:


```
g=g(1:size(f, 1), 1:size(f, 2));
```