Read Data

```
camera = imread('lab2/images_lab2/cameraman.png');
```

Q1 - Different Kernels

We will apply three different kernels in the spatial domain with one sharpening, one smoothing and apply them in different sizes.

Firstly we begin with showing the original image that we will use.

```
figure;
imshow(camera);
```

Now, let's introduce a mean filter of size 3×3 and apply the convolution using **imfilter**. The mean filtered image is shown below.

```
h1 = fspecial('average', 3);
meancamera3 = imfilter(camera, h1);

figure;
imshow(meancamera3);
```

And using mean filter of sie 7×7 we get

```
h2 = fspecial('average', 7);
meancamera7 = imfilter(camera, h2);

figure;
imshow(meancamera7);
```

And lastly, a 31×31 mean filter.

```
h3 = fspecial('average', 31);
meancamera31 = imfilter(camera, h3);

figure;
imshow(meancamera31);
```

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