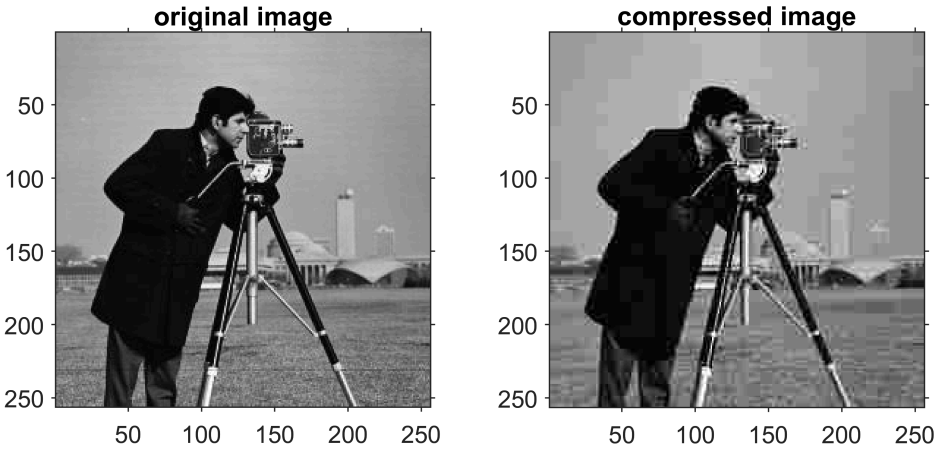
```
%jpeg image compression
img = imread('C:\Users\ASWATH\Desktop\image processing course\Cameraman256.bmp');
%writing the image as jpg format and using compression with quality 10
imwrite(img, 'processed_image.jpg', 'jpg', 'quality', 10);
pro_img = imread('processed_image.jpg');
%comparison of the images
subplot(1,2,1), imshow(img), title('original image'), axis on;
subplot(1,2,2), imshow(pro_img), title('compressed image'), axis on;
```



calculating signal to noise ratio between the images

```
% since the images are in unit8 format we have to convert it to double
info1 = imfinfo('C:\Users\ASWATH\Desktop\image processing course\Cameraman256.bmp')
```

```
info1 = struct with fields:
              Filename: 'C:\Users\ASWATH\Desktop\image processing course\Cameraman256.bmp'
           FileModDate: '22-Apr-2020 12:12:41'
              FileSize: 66614
                Format: 'bmp'
         FormatVersion: 'Version 3 (Microsoft Windows 3.x)'
                 Width: 256
                Height: 256
              BitDepth: 8
             ColorType: 'indexed'
       FormatSignature: 'BM'
    NumColormapEntries: 256
              Colormap: [256×3 double]
               RedMask: []
```

```
             GreenMask: []
              BlueMask: []
       ImageDataOffset: 1078
      BitmapHeaderSize: 40
             NumPlanes: 1
       CompressionType: 'none'
            BitmapSize: 65536
        HorzResolution: 0
        VertResolution: 0
         NumColorsUsed: 256
    NumImportantColors: 0
```

```
info2 = imfinfo('processed_image.jpg')
```

```
info2 = struct with fields:
           Filename: 'A:\matlab\bin\win64\processed_image.jpg'
        FileModDate: '22-Apr-2020 12:42:06'
           FileSize: 2782
             Format: 'jpg'
      FormatVersion: ''
              Width: 256
             Height: 256
           BitDepth: 8
          ColorType: 'grayscale'
    FormatSignature: ''
    NumberOfSamples: 1
       CodingMethod: 'Huffman'
      CodingProcess: 'Sequential'
            Comment: {}
```

```
img_d = im2double(img);
pro_img_d = im2double(pro_img);

mse = sum(sum((pro_img_d - img_d).^ 2)) / (size(img_d, 1) * size(img_d, 2));
display(mse)
```

```
mse = 0.0023
```

```
psnr_ratio = 10 * log10(1^2 / mse );
display(psnr_ratio)
```

```
psnr_ratio = 26.4381
```