Contents

Part C

```
%Read the input image
inputimagetone=imread('F:\Coll works\HOMEWORKS\Spring 17\DSP 2\Project 2\lena_bw_tone.tif');
inputimagetone=im2double(inputimagetone); %convert image's data type to double to perform operations on it
inputimage=imread('F:\Coll works\HOMEWORKS\Spring 17\DSP 2\Project 2\lena_bw.tif');
inputimage=im2double(inputimage); %convert image's data type to double to perform operations on it
I=input('Enter I');
D=input('Enter D');
outputimagetone=resample(inputimagetone,I,D); %Resample in one dimension (rows)
outputimagetone=resample(outputimagetone',I,D); % Resample in next dimension (cols)
outputimage=resample(inputimage,I,D);  %Resample in one dimension (rows)
outputimage=resample(outputimage',I,D); % Resample in next dimension (cols)
figure();
imshow(inputimage);
title('Input image without Tone');
ylabel('rows');
xlabel('cols');
figure();
imshow(outputimage');
title('Resampled Output image without Tone');
ylabel('rows');
xlabel('cols');
figure();
imshow(inputimagetone);
title('Input image with Tone');
ylabel('rows');
xlabel('cols');
figure();
imshow(outputimagetone');
title('resampled output image with Tone');
ylabel('rows');
xlabel('cols');
```

Part C downsample

```
incoutputimagetone=downsample(inputimagetone,3,2); %Downsampling the image on both dimensions
incoutputimagetone=downsample(incoutputimagetone',3,2);
incoutputimage=downsample(inputimage,3,2);
incoutputimage=downsample(incoutputimage',3,2);
figure();
imshow(incoutputimage');
title('downsampled output image without Tone');
ylabel('rows');
xlabel('cols');
figure();
imshow(incoutputimagetone');
title('downsampled output image with Tone');
ylabel('rows');
xlabel('cols');
```

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