```
% first step is Loading image and converting it to grayscale by checking if it's rgb
img = imread('input1.jpg');
if size(img, 3) == 3
    gray_img = rgb2gray(img);
else
    gray_img = img;
end

% Second step is Normalizing the grayscale img
normalized_img = double(gray_img) / 255;

% third step is to Use the imresize function to approximate quantization by
reducing pixel values
% Reduce the pixel values by scaling them to 32 levels and then rounding
levels = 32;
quantized_values = round(normalized_img * (levels - 1)) / (levels - 1);

% fourth step is Converting image back to uint8 (0-255 range)
quantized_img = uint8(quantized_values * 255);

% last we will display the original and quantized images and compare the
% result
figure;
imshow(gray_img);
title('Original Image');

% secondresult
figure; imshow(quantized_img); title('Quantized Image (32 Levels)');
```

Original Image

Quantized Image (32 Levels)