```matlab
% Question 5:- Step 1: Load the Image
imagePath = 'tree.png';
img = imread(imagePath);

% Step 2: Convert to Grayscale if the image is RGB
if size(img, 3) == 3
    grayImg = rgb2gray(img);
else
    grayImg = img; % If already grayscale
end

% Step 3: Determine Scale Factor
% Original grayscale levels: 256 (0-255)
% Desired grayscale levels: 32 (0-31)
% Scale factor: 256 / 32 = 8
scaleFactor = 8;

% Step 4: Resizing the Image
% Resizing to create 32 levels
% First, resizing to a smaller size and then back to original size
smallImg = imresize(grayImg, 1/scaleFactor, 'nearest');
quantizedImg = imresize(smallImg, scaleFactor, 'nearest');

% Step 5: Displaying Results
figure;

subplot(1, 2, 1);
imshow(grayImg);
title('Original Grayscale Image');

subplot(1, 2, 2);
imshow(quantizedImg);
title('Quantized Image (32 Levels)');
```
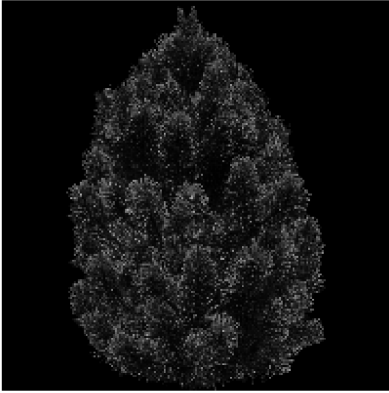
Original Grayscale Image   **Quantized Image (32 Levels)**