```matlab
1  % Read the input image
2  image = imread('rgb.jpeg');  % Replace with your image file
3
4  % Convert the image to grayscale if it is RGB
5  if size(image, 3) == 3
6      image = rgb2gray(image);
7  end
8
9  % Convert the image to binary (optional, depending on the input)
10 image = imbinarize(image);  % Make sure the image is binary (0 and 1)
11
12 % Display the original image
13 figure;
14 subplot(1, 2, 1);
15 imshow(image, []);
16 title('Original Image');
17
18 % Step 1: Compute the Radon Transform
19 theta = 0:1:180;  % Define angles from 0 to 180 degrees with step size of 1 degree
20 [R, xp] = radon(image, theta);  % R is the Radon transform, xp is the correspond↵
   ing coordinates
21
22 % Step 2: Display the Radon Transform
23 subplot(1, 2, 2);
24 imagesc(theta, xp, R);  % Plot the Radon transform
25 colormap('gray');
26 colorbar;
27 title('Radon Transform');
28 xlabel('Theta (degrees)');
29 ylabel('X'' (Radon Transform Position)');
30
```