**CODE:**

% Read images

image1\_15 = imread('viprectification\_deskLeft.png');

image2\_15 = imread('viprectification\_deskRight.png');

% Convert images to grayscale

imagetogray1\_15 = rgb2gray(image1\_15);

imagetogray2\_15 = rgb2gray(image2\_15);

% Display original and grayscale images

figure;

subplot(2, 2, 1);

imshow(image1\_15);

title('Original Image 1');

subplot(2, 2, 2);

imshow(image2\_15);

title('Original Image 2');

subplot(2, 2, 3);

imshow(imagetogray1\_15);

title('Grayscale Image 1');

subplot(2, 2, 4);

imshow(imagetogray2\_15);

title('Grayscale Image 2');

% Detect Harris corners

corner1detection\_15 = detectHarrisFeatures(imagetogray1\_15);

corner2detection\_15 = detectHarrisFeatures(imagetogray2\_15);

% Extract features from detected corners

[factor1\_15, correctpoint1\_15] = extractFeatures(imagetogray1\_15, corner1detection\_15);

[factor2\_15, correctpoint2\_15] = extractFeatures(imagetogray2\_15, corner2detection\_15);

% Match features

indexPairs\_15 = matchFeatures(factor1\_15, factor2\_15);

% Get matched corner points

corner1match\_15 = correctpoint1\_15(indexPairs\_15(:, 1), :);

corner2match\_15 = correctpoint2\_15(indexPairs\_15(:, 2), :);

% Display matched features on color images

figure;

showMatchedFeatures(image1\_15, image2\_15, corner1match\_15, corner2match\_15);

title('Matched Features on Color Images');

% Display side-by-side comparison of matched features on grayscale images

figure;

showMatchedFeatures(imagetogray1\_15, imagetogray2\_15, corner1match\_15, corner2match\_15, 'montage');

title('Side by Side Comparison of Matched Features on Grayscale Images');

**OUTPUT:**

A screenshot of a computer

Description automatically generated

A computer on a desk

Description automatically generated

A screenshot of a computer

Description automatically generated