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clc;
clear;

% Step 1: Load Pretrained AlexNet
% AlexNet is a CNN trained on 1000 object categories
disp('Loading AlexNet...');
net = alexnet;

% Step 2: Define the Path to the Images
% Set the image paths here
imgPath1 = 'C:\Users\student\Desktop\PROJECT\car.jpg';  % First image path
img1 = imread(imgPath1);  % Read the first image
imgPath2 = 'C:\Users\student\Desktop\PROJECT\chair.jpg';  % Second image path
img2 = imread(imgPath2);  % Read the second image

% Step 3: Resize the Images to Match the Input Size of AlexNet [227x227x3]
inputSize = net.Layers(1).InputSize;  % Get input size expected by AlexNet
imgResized1 = imresize(img1, [inputSize(1), inputSize(2)]);  % Resize the first image
imgResized2 = imresize(img2, [inputSize(1), inputSize(2)]);  % Resize the second image

% Step 4: Classify the Images Using AlexNet
label1 = classify(net, imgResized1);  % Classify the first image
detectedObject1 = char(label1);  % Convert label to string format for first image
label2 = classify(net, imgResized2);  % Classify the second image
detectedObject2 = char(label2);  % Convert label to string format for second image

% Step 5: Display the Images with Detected Object Names
figure;  % Create a new figure window

% Subplot for first image
subplot(2,2,1);
imshow(img1);  % Display the first image
title(['Detected Object: ', detectedObject1], 'FontSize', 14, 'Color', 'b');  % Title on first image
text(10, 20, ['This is a ', detectedObject1], ...  % Add text at top-left corner
    'FontSize', 14, 'Color', 'yellow', 'BackgroundColor', 'black');  % Text styling

% Subplot for second image
subplot(2,2,2);
imshow(img2);  % Display the second image
title(['Detected Object: ', detectedObject2], 'FontSize', 14, 'Color', 'b');  % Title on second image
text(10, 20, ['This is a ', detectedObject2], ...  % Add text at top-left corner
    'FontSize', 14, 'Color', 'yellow', 'BackgroundColor', 'black');  % Text styling
```

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Loading AlexNet...
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