```matlab
clear all;
clc;
close all;

clc;
imgOrg = imresize(imread('vegan.jpg'),0.5);
template = imresize(imread('soy-dessert.jpg'), 0.5);
imgOrg = imgOrg - mean(imgOrg(:));
template = template - mean(template(:));
windowSize = size(template);

fftImg = fftshift(fft2(double(imgOrg)));

template = padarray(template, ceil((size(fftImg)-size(template))/2));
template = imresize(template, size(fftImg));
fftTemp = fftshift(fft2(rot90(double(template),2)));

C = ifft2(fftImg .* fftTemp);
%res = conv2(fftImg, fftTemp);
%find(max(res))

figure;
imshow(log(1+fftTemp),[]);

figure;
imshow(log(1+fftImg),[]);

imshow(abs(log(C + 1)),[]);
maxVal = max(C(:))
loc = find(C == maxVal)
[x,y] = ind2sub([size(imgOrg,1) size(imgOrg,2)], loc)
x = x - ceil((size(fftImg)-size(template))/2);
y = y - ceil((size(fftImg)-size(template))/2);
drawnow;
hold on;
figure;
imshow(imgOrg);
rectangle('Position', [y - windowSize(2)/2, x - windowSize(1)/2, windowSize(2),
```

        Warning: Displaying real part of complex input.
        Warning: Displaying real part of complex input.

        maxVal =

            4.0692e+07

        loc =

                130624

```
x =

   428


y =

   270


Error using rectangle
Value must be a 4 element vector

Error in templateConvolution (line 38)
    rectangle('Position', [y - windowSize(2)/2, x - windowSize(1)/2, window
```

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