Name : Nitin Gupta   Scholar Number : 20U02019

Branch : CSE

Assignment - 3

Problem : Perform Logical Operation On Two Images.

Code

```matlab
% Name Nitin Gupta ; Scholar Number : 20U02019 ; Branch : CSE

% Read The Image
img_1=imread('circles.png');
img_2=imread('circbw.tif');

%SubPlot Object Initialise

subplot(3,3,3);

% resize images

img_1=imresize(img_1,[200 200]);
img_2=imresize(img_2,[200 200]);


% and operation

img_and=img_1&img_2;

% or operation

img_or=img_1|img_2;

% compliment

img_1_com=not(img_1);

img_2_com=not(img_2);

% XOR Of Image

img_xor=xor(img_1,img_2);
```

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```matlab
% NOR Of Image

img_nor=not(img_or);

% Nand of Image

img_nand=not(img_and);

subplot(3,3,1);
imshow(img_1);
title('Original Image 1')

subplot(3,3,2);
imshow(img_2);
title('Original Image 2')

subplot(3,3,3);
imshow(img_and);
title('And Image')

subplot(3,3,4);
imshow(img_or);
title('OR Image')

subplot(3,3,5);
imshow(img_1_com);
title('Not Of First Image');

subplot(3,3,6);
imshow(img_2_com);
title('Not Of Second Image');

subplot(3,3,7);
imshow(img_xor);
title('Xor of Image');

subplot(3,3,8);
imshow(img_nor);
title('Nor Of Images');

subplot(3,3,9);
imshow(img_nand);
title('NAND of Image');
```

Code

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Branch : CSE

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```matlab
1        % Name Nitin Gupta ; Scholar Number : 20U02019 ; Branch : CSE
2
3        % Read The Image
4   -    img_1=imread('circles.png');
5   -    img_2=imread('circbw.tif');
6
7        %SubPlot Object Initialise
8
9   -    subplot(3,3,3);
10
11       % resize images
12
13  -    img_1=imresize(img_1,[200 200]);
14  -    img_2=imresize(img_2,[200 200]);
15
16
17       % and operation
18
19  -    img_and=img_1&img_2;
20
21       % or operation
22
23  -    img_or=img_1|img_2;
24
25       % compliment
26
27  -    img_1_com=not(img_1);
28
29  -    img_2_com=not(img_2);
30
31       % XOR Of Image
32
33  -    img_xor=xor(img_1,img_2);
34
35       % NOR Of Image
36
37  -    img_nor=not(img_or);
38
39       % Nand of Image
40
41  -    img_nand=not(img_and);
42
43  -    subplot(3,3,1);
44  -    imshow(img_1);
```

```matlab
img_nand=not(img_and);

subplot(3,3,1);
imshow(img_1);
title('Original Image 1')

subplot(3,3,2);
imshow(img_2);
title('Original Image 2')

subplot(3,3,3);
imshow(img_and);
title('And Image')

subplot(3,3,4);
imshow(img_or);
title('OR Image')

subplot(3,3,5);
imshow(img_1_com);
title('Not Of First Image');

subplot(3,3,6);
imshow(img_2_com);
title('Not Of Second Image');

subplot(3,3,7);
imshow(img_xor);
title('Xor of Image');

subplot(3,3,8);
imshow(img_nor);
title('Nor Of Images');

subplot(3,3,9);
imshow(img_nand);
title('NAND of Image');
```