Table of Contents

sudoku function

Input: image path Output: 9 sudoku images with mask on

```
function sudoku(imgpath)
```

read image and resize

```
if(nargin < 1)
    imgpath = strcat(cd,'/greathall.jpg');
end
if ischar(class(imgpath))

    target = imread(imgpath);
    mask = imread('thumask.png');
    s = size(target);
    target = target(:,s(2)/2-s(1)/2+1:s(2)/2+s(1)/2,:);
    s = size(target);
    mask = imresize(mask,s(1:2),'bicubic');
```

Warning: Integer operands are required for colon operator when used as index.

process target image with mask

```
for i = 1:s(1)
    for j = 1:s(2)
        if (i-346)*(i-346)+(j-345)*(j-345) >110700
            target(i,j,:) = [255,255,255];
        end
        if mask(i,j,1) < 200
            target(i,j,:) = [255,255,255];
        end

    end
end
```

divide target image into 9 images

```
gap = s (1)/3;

part = target(1:gap-1,1:gap-1,:);
imwrite(part,'1.jpg');
```

```matlab
    part = target(gap:2*gap-1,1:gap-1,:);
imwrite(part,'4.jpg');
    part = target(2*gap:s(1),1:gap-1,:);
imwrite(part,'7.jpg');
part = target(1:gap-1,gap:2*gap-1,:);
imwrite(part,'2.jpg');
    part = target(gap:2*gap-1,gap:2*gap-1,:);
imwrite(part,'5.jpg');
    part = target(2*gap:s(1),gap:2*gap-1,:);
imwrite(part,'8.jpg');
    part = target(1:gap-1,2*gap:s(2),:);
imwrite(part,'3.jpg');
    part = target(gap:2*gap-1,2*gap:s(2),:);
imwrite(part,'6.jpg');
    part = target(2*gap:s(1),2*gap:s(2),:);
imwrite(part,'9.jpg');

imshow(target);
```



```matlab
    end

    end
```

Published with MATLAB® R2019a