given image → a M×N matrix , SR, SC , and Color
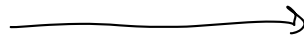$$\downarrow$$
image [SR, SC]
⟶ center of flood fill

<u>flood fill</u> : starting pixel + 4-direction connected pixel to change to

color

example   SR=1, SC=1 , Color=2

check up down left right   as long as it is [0, m]
$$\downarrow$$ [0, n]
SR-1, SC ↓
   SR+1, SC ↓
      SR, SC-1 ↓
         SR, SC+1 ↓

helper function swap colors (center):

if up, down, left, right == center :

swap colors.

Depth First Search - DFS

First   create $start\_pixel = image[sr][sc]$

$def\ dfs\ (image,\ sr,\ sc,\ new\ color,\ starting\_pixel)$

if not $0 < sr < len(img) - 1$ or not $0 < sc < len(img[0] - 1)$.

$img[sr][sc] = new\ color$

$dfs\ (sr+1,\ \ ,\ \ ,\ \ )$

$dfs\ (sr-1\ \ ,\ \ ,\ \ )$

$dfs\ (\ldots,\ sc+1\ \ ,\ \ )$

$dfs\ (\ldots,\ sc-1\ \ldots\ )$