Assignment name : flood\_fill

Expected files : \*.c, \*.h

Allowed functions: -

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Write a function that takes a char \*\* as a 2-dimensional array of char, a

t\_point as the dimensions of this array and a t\_point as the starting point.

Starting from the given 'begin' t\_point, this function fills an entire zone

by replacing characters inside with the character 'F'. A zone is an group of

the same character delimitated horizontally and vertically by other characters

or the array boundry.

The flood\_fill function won't fill diagonally.

The flood\_fill function will be prototyped like this:

void flood\_fill(char \*\*tab, t\_point size, t\_point begin);

The t\_point structure is prototyped like this:

typedef struct s\_point

{

int x;

int y;

} t\_point;

Example:

$> cat test\_main.c

#include "test\_functions.h"

#include "flood\_fill.h"

int main(void)

{

char \*\*area;

t\_point size = {8, 5};

t\_point begin = {2, 2};

char \*zone[] = {

"1 1 1 1 1 1 1 1",

"1 0 0 0 1 0 0 1",

"1 0 0 1 0 0 0 1",

"1 0 1 1 0 0 0 1",

"1 1 1 0 0 0 0 1",

}

area = make\_area(zone);

print\_tab(area);

flood\_fill(area, size, begin);

putc('\n');

print\_tab(area);

return (0);

}

$> gcc flood\_fill.c test\_main.c test\_functions.c -o flood\_fill; ./flood\_fill

1 1 1 1 1 1 1 1

1 0 0 0 1 0 0 1

1 0 0 1 0 0 0 1

1 0 1 0 0 0 0 1

1 1 0 0 0 0 0 0

1 1 1 1 1 1 1 1

1 F F F 1 0 0 1

1 F F 1 0 0 0 1

1 F 1 0 0 0 0 1

1 1 0 0 0 0 0 0

$>