#include <stdio.h>

#include <iostream>

#include <opencv2/highgui/highgui.hpp>

#include <opencv2/imgproc/imgproc.hpp>

#include <opencv2/core/core.hpp>

using namespace cv;

using namespace std;

Mat img = imread("paint.png",CV\_LOAD\_IMAGE\_GRAYSCALE);

Mat img1(img.rows, img.cols, CV\_8UC1,Scalar(0));

int c=1,t=0;

Mat translation(Mat img1,int t){

Mat img2(img.rows, img.cols, CV\_8UC1,Scalar(0));

for(int i=0; i<img.rows; i++){

for(int j=0; j<img.cols; j++){

img2.at<uchar>(i,j+t)= img1.at<uchar>(i,j);

}}return img2;

}

void dbs(int x, int y){

img1.at<uchar>(x,y) = 255/c;

for(int p=-1; p<=1; p++){

for(int q=-1; q<=1; q++){

if(p+x>=0 && q+y<img.cols && p+x<img.rows && y +q>=0){

if(img.at<uchar>(x+p,y+q)!=255 && img1.at<uchar>(x+p,y+q)==0){

dbs(x+p,y+q);}

}

}

}

}

int main(){

int i,j;

for(i=0; i<img.rows; i++){

for(j=0; j<img.cols; j++){

if(img.at<uchar>(i,j)!=255 && img1.at<uchar>(i,j)==0){

dbs(i,j);

c++;}

}

}

namedWindow("m1",WINDOW\_NORMAL);

createTrackbar("k","m1",&t,img.cols);

while(1){

imshow("m1", translation(img1,t));

waitKey(5);

}

imshow("m", img1);

}