#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;

int main(){

Mat img = imread("s.png",CV\_LOAD\_IMAGE\_COLOR);

imshow("s1",img);

Mat img1(img.rows, img.cols, CV\_8UC3, Scalar(0,0,0));

int i,j,a,b1,c,r =0, b =0, g=0, t =0;

namedWindow("s2",WINDOW\_NORMAL);

createTrackbar("R","s2",&r, 255);

createTrackbar("G","s2",&g, 255);

createTrackbar("B","s2",&b, 255);

createTrackbar("T","s2",&t, 255);

while(1){

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

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

a=img.at<Vec3b>(i,j)[0];

b1=img.at<Vec3b>(i,j)[1];

c=img.at<Vec3b>(i,j)[2];

if((a>=b-t && a<=b+t) && (b1>=g-t && b1<=g+t) && (c>=r-t && c<=r+t)){

img1.at<Vec3b>(i,j)[0] = a;

img1.at<Vec3b>(i,j)[1] = b1;

img1.at<Vec3b>(i,j)[2] = c;

}else{

img1.at<Vec3b>(i,j)[0] = 0;

img1.at<Vec3b>(i,j)[1] = 0;

img1.at<Vec3b>(i,j)[2] = 0;

}

}

}

imshow("s2",img1);

waitKey(5);

}

waitKey(0);

}