|  |
| --- |
| #include <iostream> |
|  | #include <math.h> |
|  | #include <time.h> |
|  | #include <GL/glut.h> |
|  |  |
|  | using namespace std; |
|  |  |
|  | void delay(float ms){ |
|  | clock\_t goal = ms + clock(); |
|  | while(goal>clock()); |
|  | } |
|  |  |
|  | void init(){ |
|  | glClearColor(1.0,1.0,1.0,0.0); |
|  | glMatrixMode(GL\_PROJECTION); |
|  | gluOrtho2D(0,640,0,480); |
|  | } |
|  |  |
|  | void bound\_it(int x, int y, float\* fillColor, float\* bc){ |
|  | float color[3]; |
|  | glReadPixels(x,y,1.0,1.0,GL\_RGB,GL\_FLOAT,color); |
|  | if((color[0]!=bc[0] || color[1]!=bc[1] || color[2]!=bc[2])&&( |
|  | color[0]!=fillColor[0] || color[1]!=fillColor[1] || color[2]!=fillColor[2])){ |
|  | glColor3f(fillColor[0],fillColor[1],fillColor[2]); |
|  | glBegin(GL\_POINTS); |
|  | glVertex2i(x,y); |
|  | glEnd(); |
|  | glFlush(); |
|  | bound\_it(x+1,y,fillColor,bc); |
|  | bound\_it(x-2,y,fillColor,bc); |
|  | bound\_it(x,y+2,fillColor,bc); |
|  | bound\_it(x,y-2,fillColor,bc); |
|  | } |
|  | } |
|  |  |
|  | void mouse(int btn, int state, int x, int y){ |
|  | y = 480-y; |
|  | if(btn==GLUT\_LEFT\_BUTTON) |
|  | { |
|  | if(state==GLUT\_DOWN) |
|  | { |
|  | float bCol[] = {1,0,0}; |
|  | float color[] = {0,0,1}; |
|  | //glReadPixels(x,y,1.0,1.0,GL\_RGB,GL\_FLOAT,intCol); |
|  | bound\_it(x,y,color,bCol); |
|  | } |
|  | } |
|  | } |
|  |  |
|  | void world(){ |
|  | glLineWidth(3); |
|  | glPointSize(2); |
|  | glClear(GL\_COLOR\_BUFFER\_BIT); |
|  | glColor3f(1,0,0); |
|  | glBegin(GL\_LINE\_LOOP); |
|  | glVertex2i(150,100); |
|  | glVertex2i(300,300); |
|  | glVertex2i(450,100); |
|  | glEnd(); |
|  | glFlush(); |
|  | } |
|  |  |
|  | int main(int argc, char\*\* argv){ |
|  | glutInit(&argc, argv); |
|  | glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB); |
|  | glutInitWindowSize(640,480); |
|  | glutInitWindowPosition(200,200); |
|  | glutCreateWindow("Boundry Fill Algorithm"); |
|  | glutDisplayFunc(world); |
|  | glutMouseFunc(mouse); |
|  | init(); |
|  | glutMainLoop(); |
|  | return 0; |
|  | } |