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Experiment -Implement the following polygon filling methods: i) Flood fill / Seed fill ii)Boundary fill using mouse click, keyboard interface and menu driven programming-

#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("Many Amaze Very GL WOW"); glutDisplayFunc(world); //glutMouseFunc(mouse);

init();

glutMainLoop(); return 0;

}