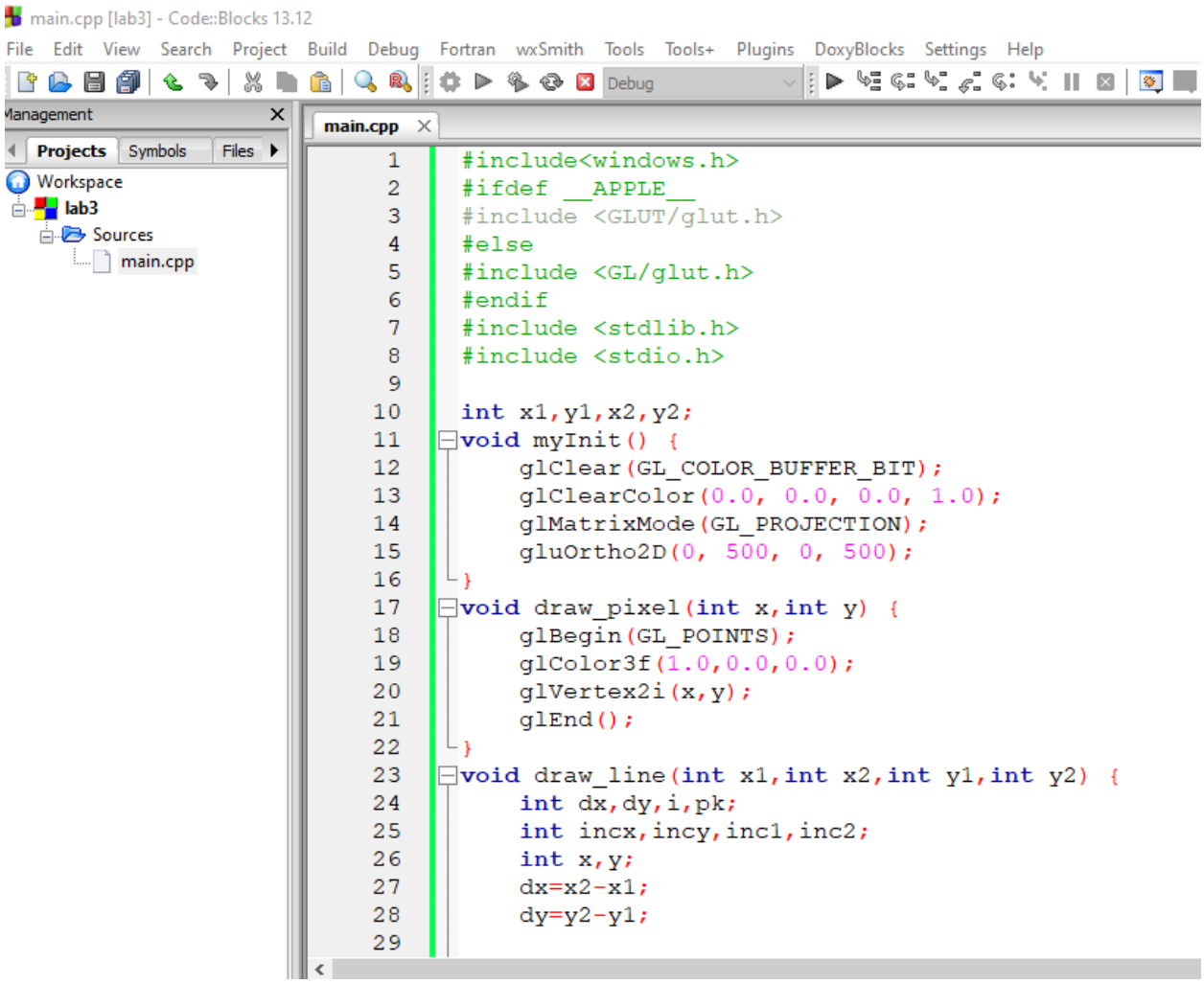
main.cpp [lab3] - Code::Blocks 13.12
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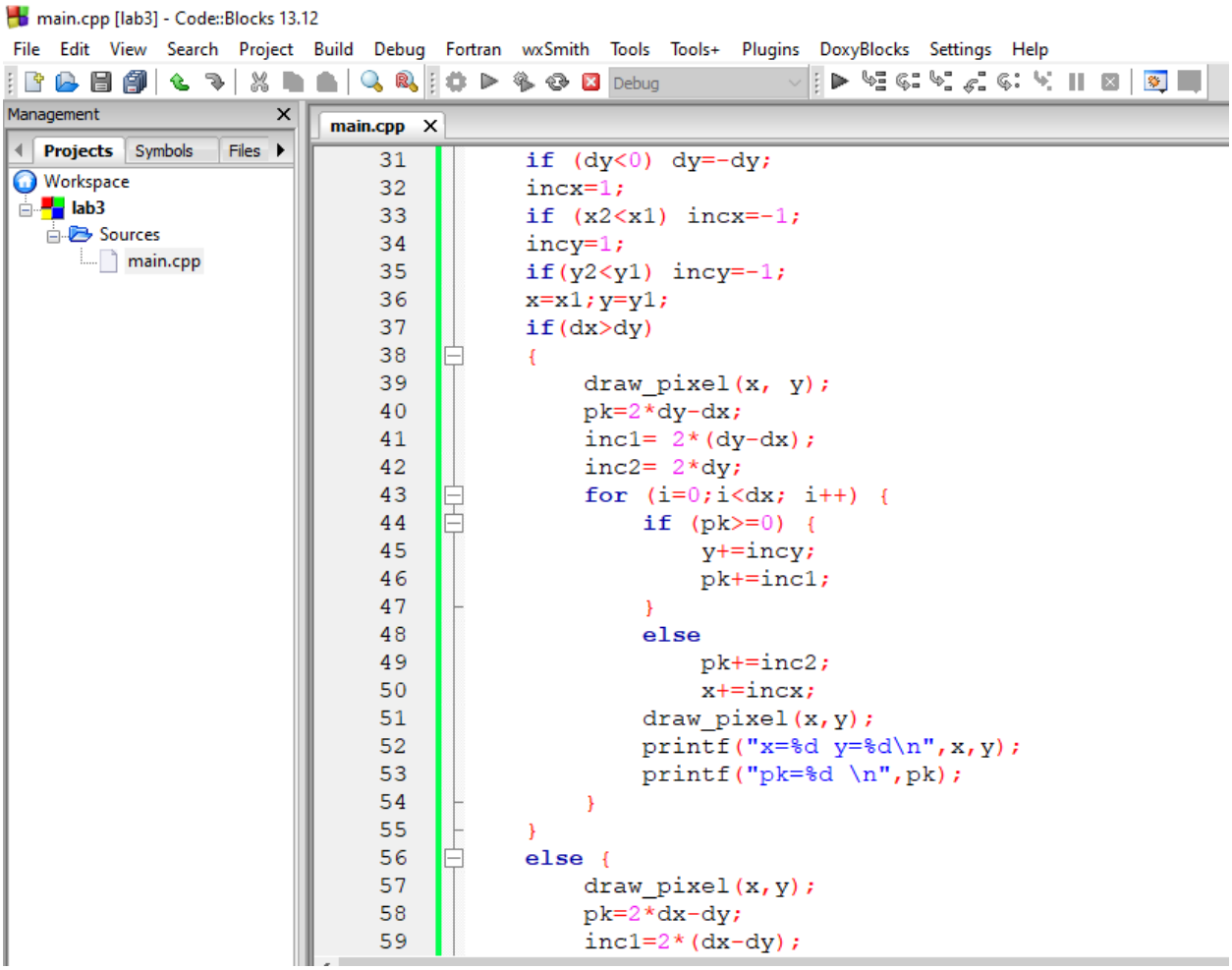
main.cpp
main.cpp
#include<windows.h>
#ifdef __APPLE__
#include <GLUT/glut.h>
#else
#include <GL/glut.h>
#endif
#include <stdlib.h>
#include <stdio.h>
int x1,y1,x2,y2;
void myInit() {
glClear(GL_COLOR_BUFFER_BIT);
glClearColor(0.0, 0.0, 0.0, 1.0);
glMatrixMode(GL_PROJECTION);
gluOrtho2D(0, 500, 0, 500);
}
void draw_pixel(int x,int y) {
glBegin(GL_POINTS);
glColor3f(1.0,0.0,0.0);
glVertex2i(x,y);
glEnd();
}
void draw_line(int x1,int x2,int y1,int y2) {
int dx,dy,i,pk;
int incx,incy,inc1,inc2;
int x,y;
dx=x2-x1;
dy=y2-y1;


main.cpp [lab3] - Code::Blocks 13.12
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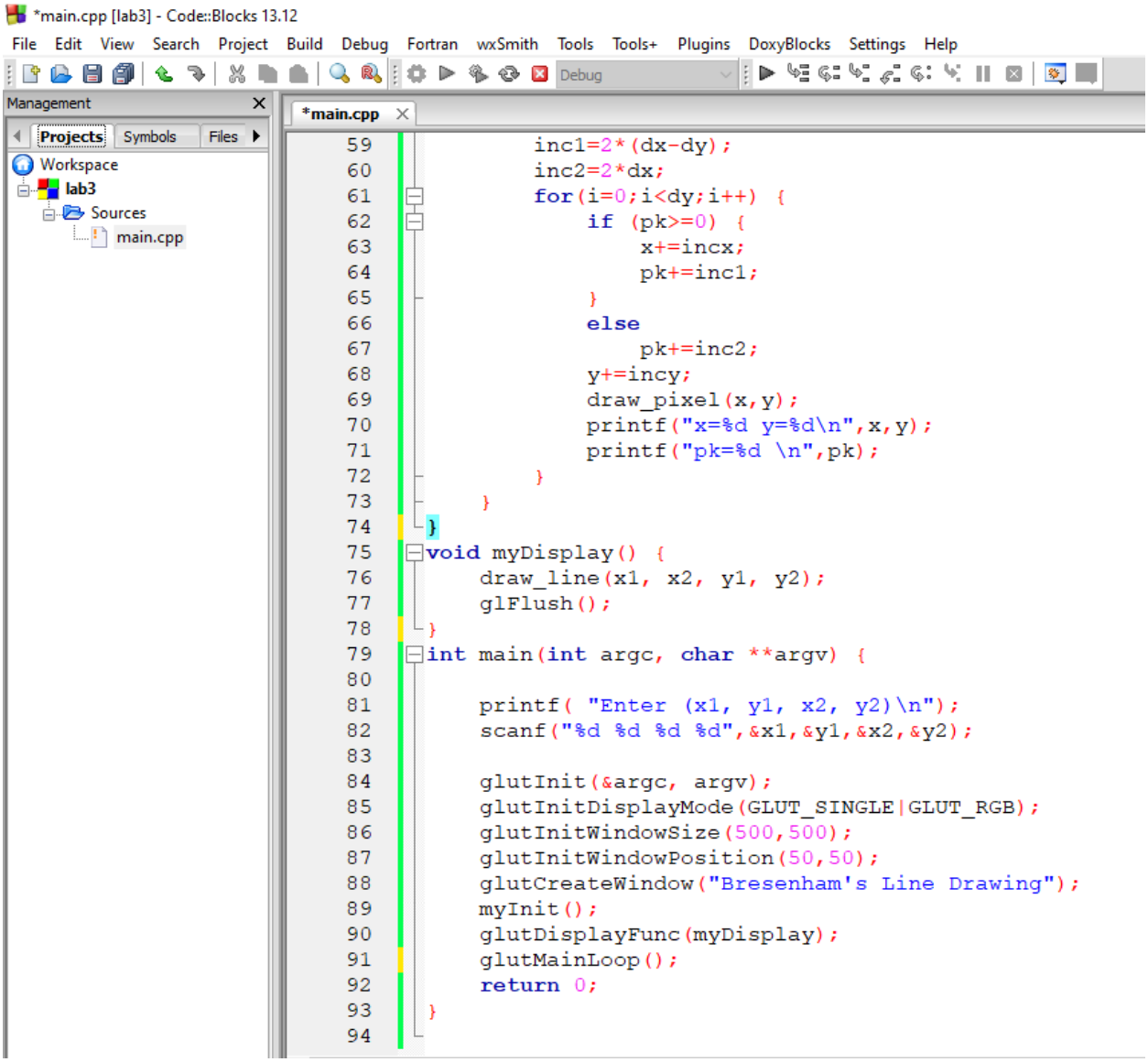
main.cpp
main.cpp
31 if (dy<0) dy=-dy;
32 incx=1;
33 if (x2<x1) incx=-1;
34 incy=1;
35 if(y2<y1) incy=-1;
36 x=x1;y=y1;
37 if(dx>dy)
38 {
39 draw_pixel(x, y);
40 pk=2*dy-dx;
41 inc1= 2*(dy-dx);
42 inc2= 2*dy;
43 for (i=0;i<dx; i++) {
44 if (pk>=0) {
45 y+=incy;
46 pk+=inc1;
47 }
48 else
49 pk+=inc2;
50 x+=incx;
51 draw_pixel(x,y);
52 printf("x=%d y=%d\n",x,y);
53 printf("pk=%d \n",pk);
54 }
55 }
56 else {
57 draw_pixel(x,y);
58 pk=2*dx-dy;
59 inc1=2*(dx-dy);


*main.cpp [lab3] - Code::Blocks 13.12
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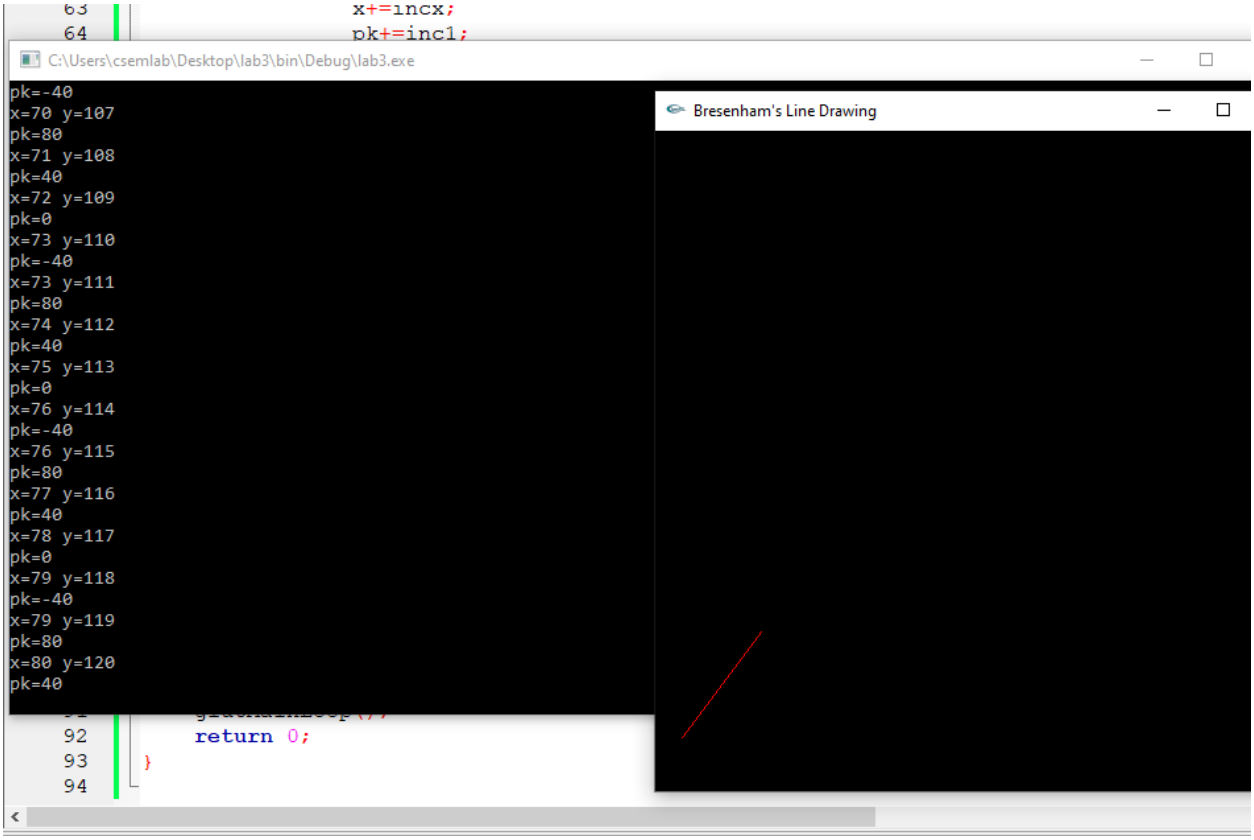
Sources
main.cpp
*main.cpp
59 inc1=2*(dx-dy);
60 inc2=2*dx;
61 for(i=0;i<dy;i++) {
62 if (pk>=0) {
63 x+=incx;
64 pk+=inc1;
65 }
66 else
67 pk+=inc2;
68 y+=incy;
69 draw_pixel(x,y);
70 printf("x=%d y=%d\n",x,y);
71 printf("pk=%d \n",pk);
72 }
73 }
74 }
75 void myDisplay() {
76 draw_line(x1, x2, y1, y2);
77 glFlush();
78 }
79 int main(int argc, char **argv) {
80
81 printf("Enter (x1, y1, x2, y2)\n");
82 scanf("%d %d %d %d",&x1,&y1,&x2,&y2);
83
84 glutInit(&argc, argv);
85 glutInitDisplayMode(GLUT_SINGLE|GLUT_RGB);
86 glutInitWindowSize(500,500);
87 glutInitWindowPosition(50,50);
88 glutCreateWindow("Bresenham's Line Drawing");
89 myInit();
90 glutDisplayFunc(myDisplay);
91 glutMainLoop();
92 return 0;
93 }
94


x+=incx;
pk+=inc1;
C:\Users\csemlab\Desktop\lab3\bin\Debug\lab3.exe
pk=-40
x=70 y=107
pk=80
x=71 y=108
pk=40
x=72 y=109
pk=0
x=73 y=110
pk=-40
x=73 y=111
pk=80
x=74 y=112
pk=40
x=75 y=113
pk=0
x=76 y=114
pk=-40
x=76 y=115
pk=80
x=77 y=116
pk=40
x=78 y=117
pk=0
x=79 y=118
pk=-40
x=79 y=119
pk=80
x=80 y=120
pk=40
Bresenham's Line Drawing
return 0;
}