

**Department of Computer Science & Engineering(CSE)**

**Lab -06**

Name : Jabed Iqbal Joy

Student ID : C193049

Semester : 7th

Section : 7BM

Email : c193049@ugrad.iiuc.ac.bd

Contact : 01837844828

Course Code : CSE-4742

Course Title : Computer Graphics Lab

Name of the course Teacher :

**Mahadi Hassan**

Assistant Professor

Department of CSE, IIUC

Date of Submission **:** 30/03/2023

1. Flood Fill algorithm

Code: #include <graphics.h>

void floodFill(int x, int y, int fill\_color, int old\_color) {

if (getpixel(x, y) == old\_color) {

putpixel(x, y, fill\_color);

floodFill(x+1, y, fill\_color, old\_color);

floodFill(x-1, y, fill\_color, old\_color);

floodFill(x, y+1, fill\_color, old\_color);

floodFill(x, y-1, fill\_color, old\_color);

}

}

int main() {

int gd = DETECT, gm;

initgraph(&gd, &gm, "");

// Draw a rectangle and fill it with color

rectangle(50, 50, 100, 100);

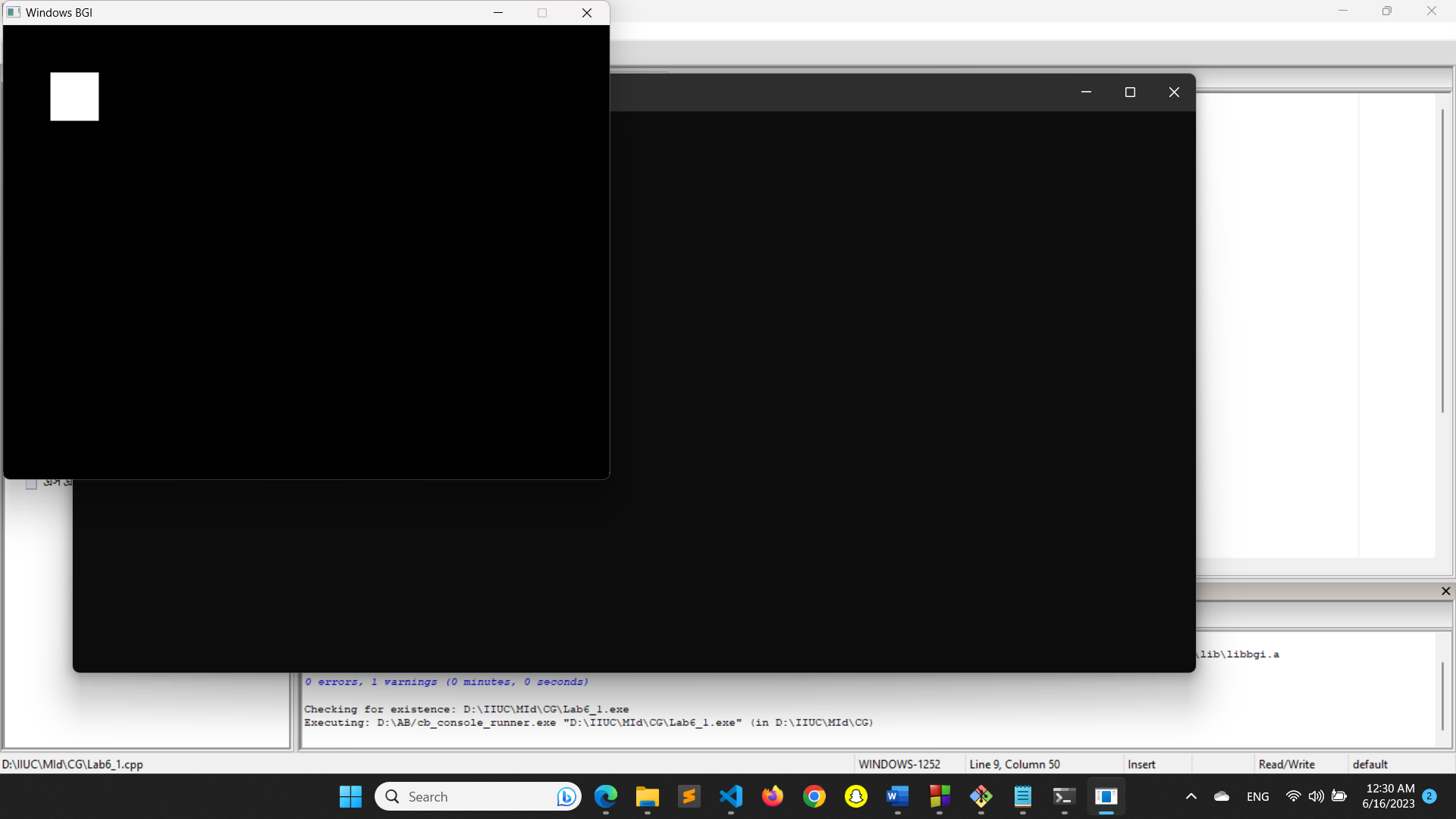
floodFill(75, 75, WHITE, BLACK);

getch();

closegraph();

return 0;

}



1. Boundary Fill.

Code:

#include <graphics.h>

void boundaryFill(int x, int y, int fill\_color, int bound\_color) {

if (getpixel(x, y) != fill\_color && getpixel(x, y) != bound\_color) {

putpixel(x, y, fill\_color);

boundaryFill(x+1, y, fill\_color, bound\_color);

boundaryFill(x-1, y, fill\_color, bound\_color);

boundaryFill(x, y+1, fill\_color, bound\_color);

boundaryFill(x, y-1, fill\_color, bound\_color);

}

}

int main() {

int gd = DETECT, gm;

initgraph(&gd, &gm, "");

// Draw a rectangle and fill its border with color

rectangle(50, 50, 100, 100);

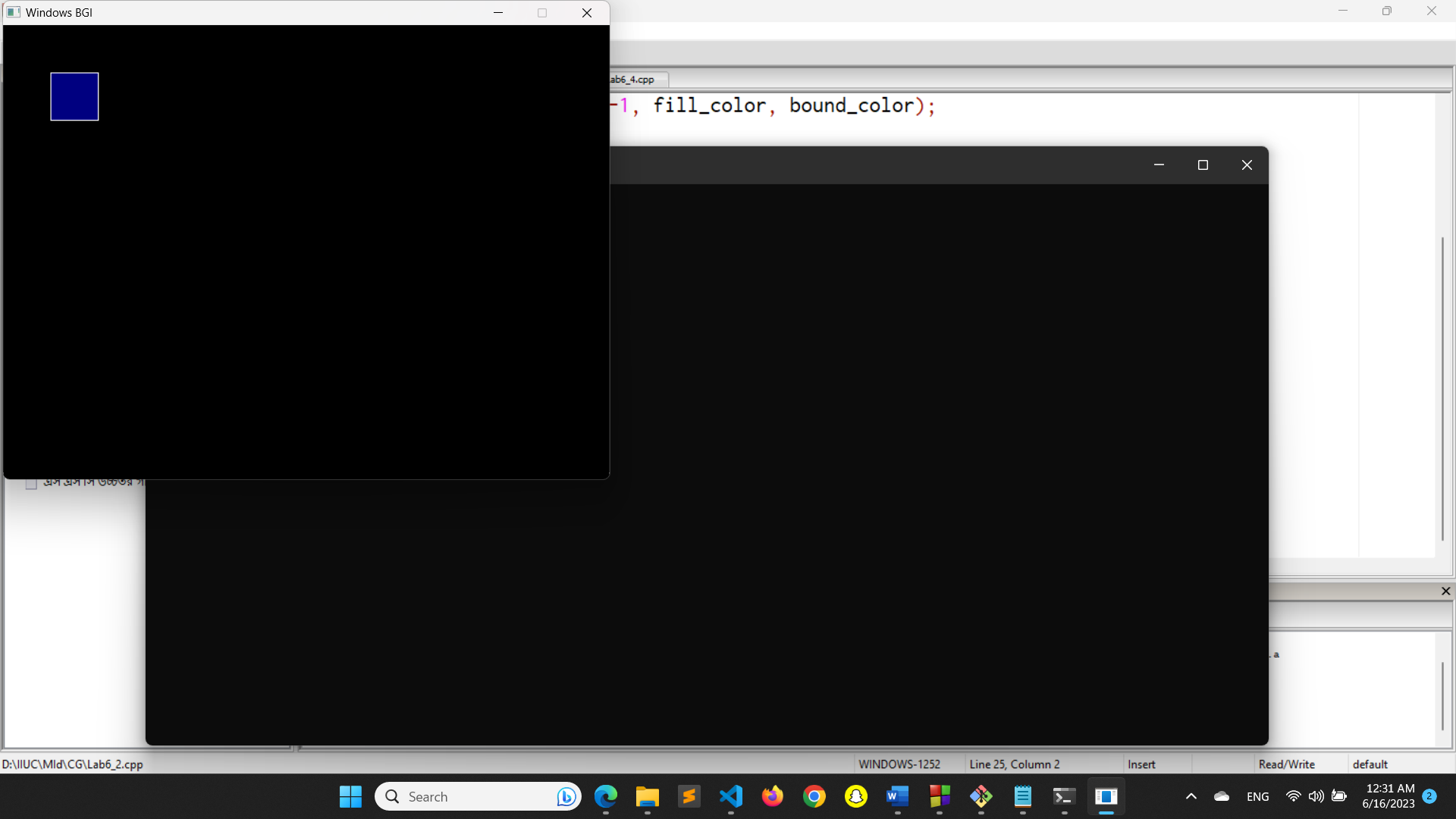
boundaryFill(75, 75, BLUE, WHITE);

getch();

closegraph();

return 0;

}



1. Bitmap font.

Code:

#include <graphics.h>

// Define a bitmap font for the letter 'A'

int bitmap\_A[8][8] = {

{0, 0, 1, 1, 0, 0, 0, 0},

{0, 1, 0, 0, 1, 0, 0, 0},

{1, 0, 0, 0, 0, 1, 0, 0},

{1, 0, 0, 0, 0, 1, 0, 0},

{1, 1, 1, 1, 1, 1, 0, 0},

{1, 0, 0, 0, 0, 1, 0, 0},

{1, 0, 0, 0, 0, 1, 0, 0},

{1, 0, 0, 0, 0, 1, 0, 0}

};

void draw\_char\_A( int x, int y, int color) {

for (int i = 0; i < 12; i++) {

for (int j = 0; j < 8; j++) {

if (bitmap\_A[i][j] == 1) {

putpixel(x + j, y + i, color);

}

}

}

}

int main() {

int gd = DETECT, gm;

initgraph(&gd, &gm, "");

// Draw the letter 'A' at (100, 100) in red

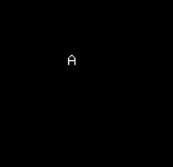
draw\_char\_A( 100, 100, WHITE);

getch();

closegraph();

return 0;

}



1. Outline font.

Code:

#include <graphics.h>

// Define a bitmap font for the letter 'A'

int bitmap\_A[17][12] =

{

{1, 1,1, 1, 1, 1, 1, 1,1,1,1, 0},

{1, 0,0, 0, 0, 0, 0, 0,0,0,0, 1},

{1, 0,0, 0, 0, 0, 0, 0,0,0,0, 1},

{1, 0,0, 0, 0, 0, 0, 0,0,0,0, 1},

{1, 0,0, 0, 0, 0, 0, 0,0,0,0, 1},

{1, 0,0, 0, 0, 0, 0, 0,0,0,0, 1},

{1, 0, 1, 1, 1, 1, 1, 1,1,1,1, 0},

{1, 0, 1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 0,1, 0, 0, 0, 0, 0,0,0,0, 0},

{1, 1,1, 0, 0, 0, 0, 0,0,0,0, 0}

};

void draw\_char\_A( int x, int y, int color)

{

for (int i = 0; i < 17; i++)

{

for (int j = 0; j < 12; j++)

{

if (bitmap\_A[i][j] == 1)

{

putpixel(x + j, y + i, color);

}

}

}

}

int main()

{

int gd = DETECT, gm;

initgraph(&gd, &gm, "");

// Draw the letter 'A' at (100, 100) in red

draw\_char\_A( 100, 100, WHITE);

getch();

closegraph();

return 0;

}

