A circular logo with text

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**Q1. Write a program to implement Bresenham’s line drawing algorithm**.

**Code:**

#include <iostream>

#include <graphics.h>

using namespace std;

void bresenhamLine(int x1, int y1, int x2, int y2) {

int dx = x2 - x1;

int dy = y2 - y1;

int p = 2 \* dy - dx;

int x = x1, y = y1;

while (x <= x2) {

putpixel(x, y, WHITE);

if (p >= 0) {

y++;

p += 2 \* dy - 2 \* dx;

} else {

p += 2 \* dy;

}

x++;

}

}

int main() {

int gd = DETECT, gm;

char data[] = "C:\\MinGW\\lib\\libbgi.a";

initgraph(&gd, &gm, data);

int x1 = 100, y1 = 100, x2 = 200, y2 = 150;

bresenhamLine(x1, y1, x2, y2);

getch();

closegraph();

return 0;

}

**Output:**

**A white line in a black background

Description automatically generated**

**Q2. Write a program to implement a midpoint circle drawing algorithm.**

**Code:**

#include <iostream>

#include <graphics.h>

using namespace std;

void midpointCircle(int xc, int yc, int r) {

    int x = 0, y = r;

    int p = 1 - r;

    while (x <= y) {

        putpixel(xc + x, yc + y, WHITE);

        putpixel(xc - x, yc + y, WHITE);

        putpixel(xc + x, yc - y, WHITE);

        putpixel(xc - x, yc - y, WHITE);

        putpixel(xc + y, yc + x, WHITE);

        putpixel(xc - y, yc + x, WHITE);

        putpixel(xc + y, yc - x, WHITE);

        putpixel(xc - y, yc - x, WHITE);

        if (p < 0) {

            p += 2 \* x + 3;

        } else {

            p += 2 \* (x - y) + 5;

            y--;

        }

        x++;

    }

}

int main() {

    int gd = DETECT, gm;

    initgraph(&gd, &gm, "");

    int xc = 200, yc = 200, r = 100;

    midpointCircle(xc, yc, r);

    getch();

    closegraph();

    return 0;

}

**Output:**

A screenshot of a computer

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**Q3. Write a program to clip a line using Cohen and Sutherland line clipping algorithm.**

**Code:**

#include <iostream>

#include <graphics.h>

using namespace std;

const int INSIDE = 0;

const int LEFT = 1;

const int RIGHT = 2;

const int BOTTOM = 4;

const int TOP = 8;

int xmin = 100, ymin = 100, xmax = 300, ymax = 300;

int computeCode(int x, int y) {

    int code = INSIDE;

    if (x < xmin) code |= LEFT;

    else if (x > xmax) code |= RIGHT;

    if (y < ymin) code |= BOTTOM;

    else if (y > ymax) code |= TOP;

    return code;

}

void cohenSutherlandClip(int x1, int y1, int x2, int y2) {

    int code1 = computeCode(x1, y1);

    int code2 = computeCode(x2, y2);

    bool accept = false;

    while (true) {

        if ((code1 == 0) && (code2 == 0)) {

            accept = true;

            break;

        } else if (code1 & code2) {

            break;

        } else {

            int x, y;

            int outcode = code1 ? code1 : code2;

            if (outcode & TOP) {

                x = x1 + (x2 - x1) \* (ymax - y1) / (y2 - y1);

                y = ymax;

            } else if (outcode & BOTTOM) {

                x = x1 + (x2 - x1) \* (ymin - y1) / (y2 - y1);

                y = ymin;

            } else if (outcode & RIGHT) {

                y = y1 + (y2 - y1) \* (xmax - x1) / (x2 - x1);

                x = xmax;

            } else {

                y = y1 + (y2 - y1) \* (xmin - x1) / (x2 - x1);

                x = xmin;

            }

            if (outcode == code1) {

                x1 = x;

                y1 = y;

                code1 = computeCode(x1, y1);

            } else {

                x2 = x;

                y2 = y;

                code2 = computeCode(x2, y2);

            }

        }

    }

    if (accept) {

        setcolor(WHITE);

        rectangle(xmin, ymin, xmax, ymax);

        setcolor(GREEN);

        line(x1, y1, x2, y2);

    }

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    int x1 = 50, y1 = 150, x2 = 250, y2 = 350;

    cohenSutherlandClip(x1, y1, x2, y2);

    getch();

    closegraph();

    return 0;

}**Output:** A screenshot of a computer

Description automatically generated

**4. Write a program to clip a polygon using Sutherland Hodgemann algorithm.**

**Code:**

#include <graphics.h>

#include <iostream>

#include <vector>

using namespace std;

struct Point {

    int x, y;

};

// Clip boundary values

int x\_min = 100, y\_min = 100;

int x\_max = 400, y\_max = 400;

// Function to check if a point is inside the clipping window

bool inside(Point p, int edge) {

    switch (edge) {

        case 1: return p.x >= x\_min; // Left edge

        case 2: return p.x <= x\_max; // Right edge

        case 3: return p.y >= y\_min; // Bottom edge

        case 4: return p.y <= y\_max; // Top edge

    }

    return false;

}

// Function to find the intersection point between polygon edge and window boundary

Point intersection(Point p1, Point p2, int edge) {

    Point i;

    float m = (float)(p2.y - p1.y) / (p2.x - p1.x);

    switch (edge) {

        case 1: // Left edge

            i.x = x\_min;

            i.y = p1.y + (x\_min - p1.x) \* m;

            break;

        case 2: // Right edge

            i.x = x\_max;

            i.y = p1.y + (x\_max - p1.x) \* m;

            break;

        case 3: // Bottom edge

            i.y = y\_min;

            i.x = p1.x + (y\_min - p1.y) / m;

            break;

        case 4: // Top edge

            i.y = y\_max;

            i.x = p1.x + (y\_max - p1.y) / m;

            break;

    }

    return i;

}

// Sutherland-Hodgman clipping algorithm

vector<Point> clipPolygon(vector<Point> polygon, int edge) {

    vector<Point> clippedPolygon;

    int n = polygon.size();

    Point s = polygon[n - 1]; // Starting point (previous vertex)

    for (int i = 0; i < n; i++) {

        Point p = polygon[i]; // Current vertex

        if (inside(p, edge)) {

            if (inside(s, edge)) {

                // Both points are inside, add the current point

                clippedPolygon.push\_back(p);

            } else {

                // Previous point is outside, current point is inside, add intersection and current point

                clippedPolygon.push\_back(intersection(s, p, edge));

                clippedPolygon.push\_back(p);

            }

        } else {

            if (inside(s, edge)) {

                // Previous point is inside, current point is outside, add intersection

                clippedPolygon.push\_back(intersection(s, p, edge));

            }

        }

        s = p; // Update previous point

    }

    return clippedPolygon;

}

// Function to draw a polygon

void drawPolygon(vector<Point> polygon, int color) {

    int n = polygon.size();

    setcolor(color);

    for (int i = 0; i < n; i++) {

        line(polygon[i].x, polygon[i].y, polygon[(i + 1) % n].x, polygon[(i + 1) % n].y);

    }

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    // Original polygon vertices

    vector<Point> polygon = {{150, 150}, {300, 50}, {450, 150}, {350, 250}, {200, 250}};

    // Draw clipping window

    rectangle(x\_min, y\_min, x\_max, y\_max);

    // Draw the original polygon in RED

    drawPolygon(polygon, RED);

    getch();

    // Clip polygon against the four edges of the clipping window

    for (int edge = 1; edge <= 4; edge++) {

        polygon = clipPolygon(polygon, edge);

    }

    // Clear the screen and draw the clipped polygon in GREEN

    cleardevice();

    rectangle(x\_min, y\_min, x\_max, y\_max);

    drawPolygon(polygon, GREEN);

    getch();

    closegraph();

    return 0;

}

**Output:**

**A screenshot of a computer

Description automatically generated**

**5. Write a program to fill a polygon using the Scan line fill algorithm.**

**Code:**

#include <iostream>

#include <graphics.h>

using namespace std;

struct Point {

    int x, y;

};

void scanLine(Point polygon[], int n) {

    int ymin = polygon[0].y, ymax = polygon[0].y;

    for (int i = 1; i < n; i++) {

        if (polygon[i].y < ymin) ymin = polygon[i].y;

        if (polygon[i].y > ymax) ymax = polygon[i].y;

    }

    for (int y = ymin; y <= ymax; y++) {

        int xIntersections[20], k = 0;

        for (int i = 0; i < n; i++) {

            int x1 = polygon[i].x, y1 = polygon[i].y;

            int x2 = polygon[(i + 1) % n].x, y2 = polygon[(i + 1) % n].y;

            if (y1 != y2) {

                if (y >= min(y1, y2) && y <= max(y1, y2)) {

                    int x = x1 + (y - y1) \* (x2 - x1) / (y2 - y1);

                    xIntersections[k++] = x;

                }

            }

        }

        for (int i = 0; i < k - 1; i += 2) {

            line(xIntersections[i], y, xIntersections[i + 1], y);

        }

    }

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    Point polygon[] = {{200, 100}, {300, 200}, {250, 300}, {150, 300}, {100, 200}};

    int n = sizeof(polygon) / sizeof(polygon[0]);

    setcolor(WHITE);

    for (int i = 0; i < n; i++) {

        line(polygon[i].x, polygon[i].y, polygon[(i + 1) % n].x, polygon[(i + 1) % n].y);

    }

    scanLine(polygon, n);

    getch();

    closegraph();

    return 0;

}

**Output:**

**A white hexagon on a black background

Description automatically generated**

**Q6. Write a program to apply various 2D transformations on a 2D object (use homogeneous Coordinates).**

**Code:**

#include <iostream>

#include <graphics.h>

#include <cmath>

using namespace std;

void applyTransformation(float matrix[3][3], int &x, int &y) {

    int xNew = matrix[0][0] \* x + matrix[0][1] \* y + matrix[0][2];

    int yNew = matrix[1][0] \* x + matrix[1][1] \* y + matrix[1][2];

    x = xNew;

    y = yNew;

}

void drawTransformedObject(float matrix[3][3]) {

    int x1 = 100, y1 = 100;

    int x2 = 200, y2 = 100;

    int x3 = 200, y3 = 200;

    int x4 = 100, y4 = 200;

    applyTransformation(matrix, x1, y1);

    applyTransformation(matrix, x2, y2);

    applyTransformation(matrix, x3, y3);

    applyTransformation(matrix, x4, y4);

    line(x1, y1, x2, y2);

    line(x2, y2, x3, y3);

    line(x3, y3, x4, y4);

    line(x4, y4, x1, y1);

}

void translate(int tx, int ty) {

    float translationMatrix[3][3] = {

        {1, 0, static\_cast<float>(tx)},

        {0, 1, static\_cast<float>(ty)},

        {0, 0, 1}

    };

    drawTransformedObject(translationMatrix);

}

void scale(float sx, float sy) {

    float scaleMatrix[3][3] = {

        {sx, 0, 0},

        {0, sy, 0},

        {0,  0, 1}

    };

    drawTransformedObject(scaleMatrix);

}

void rotate(float angle) {

    float rad = angle \* M\_PI / 180.0;

    float rotationMatrix[3][3] = {

        {cos(rad), -sin(rad), 0},

        {sin(rad), cos(rad), 0},

        {0, 0, 1}

    };

    drawTransformedObject(rotationMatrix);

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    // Original object

    setcolor(WHITE);

    int x1 = 100, y1 = 100, x2 = 200, y2 = 100, x3 = 200, y3 = 200, x4 = 100, y4 = 200;

    line(x1, y1, x2, y2);

    line(x2, y2, x3, y3);

    line(x3, y3, x4, y4);

    line(x4, y4, x1, y1);

    // Apply transformations

    setcolor(YELLOW);

    translate(50, 50);

    setcolor(RED);

    scale(0.5, 0.5);

    setcolor(GREEN);

    rotate(45);

    getch();

    closegraph();

    return 0;}

**Output: A screenshot of a computer

Description automatically generated**

**Q7.Write a program to apply various 3D transformations on a 3D object and then apply parallel and perspective projection on it.**

**Code: parallel projection**

#include <iostream>

#include <graphics.h>

#include <cmath>

using namespace std;

// Function to apply 3D transformations and then parallel projection

void apply3DTransformation(float matrix[4][4], int &x, int &y, int &z) {

    int xNew = matrix[0][0] \* x + matrix[0][1] \* y + matrix[0][2] \* z + matrix[0][3];

    int yNew = matrix[1][0] \* x + matrix[1][1] \* y + matrix[1][2] \* z + matrix[1][3];

    int zNew = matrix[2][0] \* x + matrix[2][1] \* y + matrix[2][2] \* z + matrix[2][3];

    x = xNew;

    y = yNew;

    z = zNew;

}

// Function to project 3D points onto a 2D plane (Parallel Projection)

void parallelProjection(int x, int y, int z, int &x2D, int &y2D) {

    // In parallel projection, the z-coordinate is ignored

    x2D = x;

    y2D = y;

}

// Draw a transformed 3D object projected in 2D

void drawTransformed3DObject(float matrix[4][4]) {

    // Cube vertices

    int x1 = 100, y1 = 100, z1 = 100;

    int x2 = 200, y2 = 100, z2 = 100;

    int x3 = 200, y3 = 200, z3 = 100;

    int x4 = 100, y4 = 200, z4 = 100;

    int x5 = 100, y5 = 100, z5 = 200;

    int x6 = 200, y6 = 100, z6 = 200;

    int x7 = 200, y7 = 200, z7 = 200;

    int x8 = 100, y8 = 200, z8 = 200;

    // Apply transformation

    apply3DTransformation(matrix, x1, y1, z1);

    apply3DTransformation(matrix, x2, y2, z2);

    apply3DTransformation(matrix, x3, y3, z3);

    apply3DTransformation(matrix, x4, y4, z4);

    apply3DTransformation(matrix, x5, y5, z5);

    apply3DTransformation(matrix, x6, y6, z6);

    apply3DTransformation(matrix, x7, y7, z7);

    apply3DTransformation(matrix, x8, y8, z8);

    // Project 3D points to 2D (Parallel Projection)

    int x1\_2D, y1\_2D, x2\_2D, y2\_2D, x3\_2D, y3\_2D, x4\_2D, y4\_2D;

    int x5\_2D, y5\_2D, x6\_2D, y6\_2D, x7\_2D, y7\_2D, x8\_2D, y8\_2D;

    parallelProjection(x1, y1, z1, x1\_2D, y1\_2D);

    parallelProjection(x2, y2, z2, x2\_2D, y2\_2D);

    parallelProjection(x3, y3, z3, x3\_2D, y3\_2D);

    parallelProjection(x4, y4, z4, x4\_2D, y4\_2D);

    parallelProjection(x5, y5, z5, x5\_2D, y5\_2D);

    parallelProjection(x6, y6, z6, x6\_2D, y6\_2D);

    parallelProjection(x7, y7, z7, x7\_2D, y7\_2D);

    parallelProjection(x8, y8, z8, x8\_2D, y8\_2D);

    // Draw cube edges

    setcolor(WHITE);

    line(x1\_2D, y1\_2D, x2\_2D, y2\_2D);

    line(x2\_2D, y2\_2D, x3\_2D, y3\_2D);

    line(x3\_2D, y3\_2D, x4\_2D, y4\_2D);

    line(x4\_2D, y4\_2D, x1\_2D, y1\_2D);

    line(x5\_2D, y5\_2D, x6\_2D, y6\_2D);

    line(x6\_2D, y6\_2D, x7\_2D, y7\_2D);

    line(x7\_2D, y7\_2D, x8\_2D, y8\_2D);

    line(x8\_2D, y8\_2D, x5\_2D, y5\_2D);

    line(x1\_2D, y1\_2D, x5\_2D, y5\_2D);

    line(x2\_2D, y2\_2D, x6\_2D, y6\_2D);

    line(x3\_2D, y3\_2D, x7\_2D, y7\_2D);

    line(x4\_2D, y4\_2D, x8\_2D, y8\_2D);

}

// 3D Translation

void translate3D(int tx, int ty, int tz) {

    float translationMatrix[4][4] = {

        {1, 0, 0, tx},

        {0, 1, 0, ty},

        {0, 0, 1, tz},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(translationMatrix);

}

// 3D Scaling

void scale3D(float sx, float sy, float sz) {

    float scaleMatrix[4][4] = {

        {sx, 0, 0, 0},

        {0, sy, 0, 0},

        {0, 0, sz, 0},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(scaleMatrix);

}

// 3D Rotation around Z-axis

void rotate3D(float angle) {

    float rad = angle \* M\_PI / 180.0;

    float rotationMatrix[4][4] = {

        {cos(rad), -sin(rad), 0, 0},

        {sin(rad), cos(rad), 0, 0},

        {0, 0, 1, 0},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(rotationMatrix);

}

int main() {

    int gd = DETECT, gm;

    initgraph(&gd, &gm, "");

    // Apply transformations and projections

    setcolor(YELLOW);

    translate3D(50, 50, 50);

    setcolor(RED);

    scale3D(1.5, 1.5, 1.5);

    setcolor(GREEN);

    rotate3D(45);

    getch();

    closegraph();

    return 0;

}**Output: A screenshot of a computer

Description automatically generated**

**Code: perspective projection**

#include <iostream>

#include <graphics.h>

#include <cmath>

using namespace std;

// Function to apply 3D transformations

void apply3DTransformation(float matrix[4][4], int &x, int &y, int &z) {

    int xNew = matrix[0][0] \* x + matrix[0][1] \* y + matrix[0][2] \* z + matrix[0][3];

    int yNew = matrix[1][0] \* x + matrix[1][1] \* y + matrix[1][2] \* z + matrix[1][3];

    int zNew = matrix[2][0] \* x + matrix[2][1] \* y + matrix[2][2] \* z + matrix[2][3];

    x = xNew;

    y = yNew;

    z = zNew;

}

// Function to project 3D points onto a 2D plane using Perspective Projection

void perspectiveProjection(int x, int y, int z, int &x2D, int &y2D, int d) {

    x2D = static\_cast<float>(x) \* d / (z + d); // Cast to float for precision

    y2D = static\_cast<float>(y) \* d / (z + d);

}

// Draw a transformed 3D object projected in 2D using Perspective Projection

void drawTransformed3DObject(float matrix[4][4], int d) {

    // Cube vertices

    int x1 = 100, y1 = 100, z1 = 100;

    int x2 = 200, y2 = 100, z2 = 100;

    int x3 = 200, y3 = 200, z3 = 100;

    int x4 = 100, y4 = 200, z4 = 100;

    int x5 = 100, y5 = 100, z5 = 200;

    int x6 = 200, y6 = 100, z6 = 200;

    int x7 = 200, y7 = 200, z7 = 200;

    int x8 = 100, y8 = 200, z8 = 200;

    // Apply transformation

    apply3DTransformation(matrix, x1, y1, z1);

    apply3DTransformation(matrix, x2, y2, z2);

    apply3DTransformation(matrix, x3, y3, z3);

    apply3DTransformation(matrix, x4, y4, z4);

    apply3DTransformation(matrix, x5, y5, z5);

    apply3DTransformation(matrix, x6, y6, z6);

    apply3DTransformation(matrix, x7, y7, z7);

    apply3DTransformation(matrix, x8, y8, z8);

    // Project 3D points to 2D (Perspective Projection)

    int x1\_2D, y1\_2D, x2\_2D, y2\_2D, x3\_2D, y3\_2D, x4\_2D, y4\_2D;

    int x5\_2D, y5\_2D, x6\_2D, y6\_2D, x7\_2D, y7\_2D, x8\_2D, y8\_2D;

    perspectiveProjection(x1, y1, z1, x1\_2D, y1\_2D, d);

    perspectiveProjection(x2, y2, z2, x2\_2D, y2\_2D, d);

    perspectiveProjection(x3, y3, z3, x3\_2D, y3\_2D, d);

    perspectiveProjection(x4, y4, z4, x4\_2D, y4\_2D, d);

    perspectiveProjection(x5, y5, z5, x5\_2D, y5\_2D, d);

    perspectiveProjection(x6, y6, z6, x6\_2D, y6\_2D, d);

    perspectiveProjection(x7, y7, z7, x7\_2D, y7\_2D, d);

    perspectiveProjection(x8, y8, z8, x8\_2D, y8\_2D, d);

    // Draw cube edges using 2D projected points

    setcolor(WHITE);

    line(x1\_2D, y1\_2D, x2\_2D, y2\_2D);

    line(x2\_2D, y2\_2D, x3\_2D, y3\_2D);

    line(x3\_2D, y3\_2D, x4\_2D, y4\_2D);

    line(x4\_2D, y4\_2D, x1\_2D, y1\_2D);

    line(x5\_2D, y5\_2D, x6\_2D, y6\_2D);

    line(x6\_2D, y6\_2D, x7\_2D, y7\_2D);

    line(x7\_2D, y7\_2D, x8\_2D, y8\_2D);

    line(x8\_2D, y8\_2D, x5\_2D, y5\_2D);

    line(x1\_2D, y1\_2D, x5\_2D, y5\_2D);

    line(x2\_2D, y2\_2D, x6\_2D, y6\_2D);

    line(x3\_2D, y3\_2D, x7\_2D, y7\_2D);

    line(x4\_2D, y4\_2D, x8\_2D, y8\_2D);

}

// 3D Translation

void translate3D(int tx, int ty, int tz, int d) {

    float translationMatrix[4][4] = {

        {1, 0, 0, static\_cast<float>(tx)},

        {0, 1, 0, static\_cast<float>(ty)},

        {0, 0, 1, static\_cast<float>(tz)},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(translationMatrix, d);

}

// 3D Scaling

void scale3D(float sx, float sy, float sz, int d) {

    float scaleMatrix[4][4] = {

        {sx, 0, 0, 0},

        {0, sy, 0, 0},

        {0, 0, sz, 0},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(scaleMatrix, d);

}

// 3D Rotation around Z-axis

void rotate3D(float angle, int d) {

    float rad = angle \* M\_PI / 180.0;

    float rotationMatrix[4][4] = {

        {cos(rad), -sin(rad), 0, 0},

        {sin(rad), cos(rad), 0, 0},

        {0, 0, 1, 0},

        {0, 0, 0, 1}

    };

    drawTransformed3DObject(rotationMatrix, d);

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    // Distance from the projection plane

    int d = 500;

    // Apply transformations and perspective projection

    setcolor(YELLOW);

    translate3D(50, 50, 50, d);

    setcolor(RED);

    scale3D(1.5, 1.5, 1.5, d);

    setcolor(GREEN);

    rotate3D(45, d);

    getch();

    closegraph();

    return 0;

}

**Output:** **A screenshot of a computer

Description automatically generated**

**Q8.** **Write a program to draw Hermite /Bezier curve.**

**Code:**

#include <graphics.h>

#include <iostream>

using namespace std;

void drawHermiteCurve(int x0, int y0, int x1, int y1, int rx0, int ry0, int rx1, int ry1) {

    float t, h00, h10, h01, h11;

    int x, y;

    for (t = 0.0; t <= 1.0; t += 0.001) {

        h00 = 2\*t\*t\*t - 3\*t\*t + 1;

        h10 = t\*t\*t - 2\*t\*t + t;

        h01 = -2\*t\*t\*t + 3\*t\*t;

        h11 = t\*t\*t - t\*t;

        x = h00\*x0 + h10\*rx0 + h01\*x1 + h11\*rx1;

        y = h00\*y0 + h10\*ry0 + h01\*y1 + h11\*ry1;

        putpixel(x, y, WHITE);

    }

}

int main() {

    int gd = DETECT, gm;

    char data[] = "C:\\MinGW\\lib\\libbgi.a";

    initgraph(&gd, &gm, data);

    int x0 = 100, y0 = 200, x1 = 300, y1 = 300;

    int rx0 = 100, ry0 = 100, rx1 = 200, ry1 = 150;

    drawHermiteCurve(x0, y0, x1, y1, rx0, ry0, rx1, ry1);

    getch();

    closegraph();

    return 0;

}

**Output:** **A screenshot of a computer

Description automatically generated**