**Code:**

#include <iostream>

#include <graphics.h>

using namespace std;

const int INSIDE = 0,LEFT = 1, RIGHT = 2, BOTTOM = 4,TOP = 8;

const int X\_MIN = 100,X\_MAX = 500,Y\_MIN = 100,Y\_MAX = 500;

int computeCode(double x, double y)

{

int code = INSIDE;

if (x < X\_MIN)

code |= LEFT;

else if (x > X\_MAX)

code |= RIGHT;

if (y < Y\_MIN)

code |= BOTTOM;

else if (y > Y\_MAX)

code |= TOP;

return code;

}

void clipLine(double x1, double y1, double x2, double y2)

{

int code1 = computeCode(x1, y1);

int code2 = computeCode(x2, y2);

while (true)

{

if (!(code1 | code2))

{

line(x1, y1, x2, y2);

break;

}

else if (code1 & code2)break;

else

{

int code = code1 ? code1 : code2;

double x, y;

if (code & TOP)

{

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

}

else if (code & BOTTOM)

{

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

}

else if (code & RIGHT)

{

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

}

else // code & LEFT

{

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

}

if (code == code1)

{

x1 = x; y1 = y;

code1 = computeCode(x1, y1);

}

else

{

x2 = x; y2 = y;

code2 = computeCode(x2, y2);

}

}

}

}

int main()

{

initwindow(800,800);

outtextxy(280,50,"ID: 174049");

outtextxy(280,70,"Before clipping");

line(150, 150, 400, 400);

line(50, 400, 200, 50);

line(300, 250, 550, 250);

line(550, 400, 400, 550);

outtextxy(280,80,"After clipping");

clipLine(150, 150, 400, 400);

clipLine(50, 400, 200, 50);

clipLine(300, 250, 550, 250);

clipLine(550, 400, 400, 550);

while(!kbhit()){

delay(100);

}

}

**Result:**



