Листинг программы

#include <iostream>

#include <conio.h>

#include <Windows.h>

void Bresenham(HDC &hdc, int Xd, int Yd, int Xf, int Yf, COLORREF color)

{

int Dx,Dy,Dx2,Dy2,Dxy,S;

int Xinc,Yinc,X,Y;

int col,i;

col = 5;

if (Xd < Xf) Xinc = 1; else Xinc = -1;

if (Yd < Yf) Yinc = 1; else Yinc = -1;

Dx = abs(Xd - Xf);

Dy = abs(Yd - Yf);

Dx2 = Dx + Dx; Dy2 = Dy + Dy;

X = Xd; Y = Yd;

SetPixelV(hdc, X, Y, color);

if(Dx > Dy)

{

S = Dy2 - Dx;

Dxy = Dy2 - Dx2;

for(i = 0; i < Dx; i++)

{

if(S >= 0)

{

Y = Y + Yinc;

S = S + Dxy;

}

else S = S = Dy2;

X = X + Xinc;

SetPixelV(hdc, X, Y, color);

}

}

else

{

S = Dx2 - Dy;

Dxy = Dx2 - Dy2;

for(i=0; i < Dy; i++)

{

if(S>=0)

{

X = X + Xinc;

S = S + Dxy;

}

else S= S + Dx2;

Y = Y + Yinc;

SetPixelV(hdc, X, Y, color);

}

}

}

void Luke(HDC &hdc, int Xd, int Yd, int Xf, int Yf, COLORREF color)

{

int Dx,Dy,Cumul;

int Xinc,Yinc,X,Y;

int col;

int i;

X = Xd; Y = Yd; col = 4;

SetPixelV(hdc, X, Y, color);

if(Xd < Xf) Xinc = 1; else Xinc = -1;

if(Yd < Yf) Yinc = 1; else Yinc = -1;

Dx = abs(Xd - Xf);

Dy = abs(Yd - Yf);

if(Dx > Dy)

{

Cumul = Dx/2;

for(i = 0; i < Dx; i++)

{

X = X + Xinc;

Cumul = Cumul + Dy;

if(Cumul >= Dx)

{

Cumul = Cumul - Dx;

Y = Y + Yinc;

}

SetPixelV(hdc, X, Y, color);

}

}

else

{

Cumul = Dy/2;

for(i = 0; i < Dy; i++)

{

Y = Y + Yinc;

Cumul = Cumul + Dx;

if(Cumul >= Dy)

{

Cumul = Cumul - Dy;

X = X + Xinc;

}

SetPixelV(hdc, X, Y, color);

}

}

}

int main()

{

HWND hwnd = GetConsoleWindow();

SetWindowTextW(hwnd, L"Компьютерная графика - Лысенко Антон");

HDC hdc = GetDC(hwnd);

COLORREF color = RGB(255,255,255);

Bresenham(hdc,59,130,107,52,color);

Bresenham(hdc,107,52,134,136,color);

Luke(hdc,272,129,272,46,color);

Luke(hdc,272,46,331,46,color);

Luke(hdc,331,46,331,129,color);

Luke(hdc,331,129,272,129,color);

\_getch();

}

Результат работы

