**Ellipse**

//---------------------------------------------------------------------------

#include <vcl.h>

#pragma hdrstop

#include "Unit1.h"

//---------------------------------------------------------------------------

#pragma package(smart\_init)

#pragma resource "\*.dfm"

int xc,yc,rx,ry;

float p,x,y;

void ellipse();

TForm1 \*Form1;

//---------------------------------------------------------------------------

\_\_fastcall TForm1::TForm1(TComponent\* Owner)

: TForm(Owner)

{

}

//---------------------------------------------------------------------------

void \_\_fastcall TForm1::Button1Click(TObject \*Sender)

{

rx=StrToInt(Edit1->Text);

ry=StrToInt(Edit2->Text);

xc=StrToInt(Edit3->Text);

yc=StrToInt(Edit4->Text);

x=0;

y=ry;

p=(ry\*ry)-(rx\*rx\*ry)+((rx\*rx)/4);

do

{

if (p<0)

{

p = p + (2\*ry\*ry\*x) + (ry\*ry);

x=x+1;

y=y;

ellipse();

}

else

{

x=x+1;

y=y-1;

p= p + (2\*ry\*ry\*x) + (ry\*ry)-(2\*rx\*rx\*y);

ellipse();

}

}while((2\*ry\*ry\*x)<(2\*rx\*rx\*y));

p = (ry\*ry\*(x+(1/2))\*(x+(1/2)))+ (rx\*rx\*(y-1)\*(y-1))-(rx\*rx\*ry\*ry);

do

{

if (p>0)

{

x =x;

y=y-1;

p=p-(2\*rx\*rx\*y)+(rx\*rx);

ellipse();

}

else

{

x=x+1;

y=y-1;

p=p+(2\*ry\*ry\*x)-(2\*rx\*rx\*y)+(rx\*rx);

ellipse();

}

}while(y>=0);

}

void ellipse()

{

Form1->Image1->Canvas->Pixels[xc+x][yc+y]=RGB(115,120,100);

Form1->Image1->Canvas->Pixels[xc+x][yc-y]=RGB(200,250,100);

Form1->Image1->Canvas->Pixels[xc-x][yc-y]=RGB(100,110,120);

Form1->Image1->Canvas->Pixels[xc-x][yc+y]=RGB(210,250,130);

}

//---------------------------------------------------------------------------

Output Screen

