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Color Choice Game Program in C ++ Builder

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Annotation: This article discusses the color selection game program in c ++ builder and its functions, Image - the ability to place a graphic image anywhere on the object form.

Keywords: Canvas, Brush, Color, Brush, Height, Width, Mode, ClientHeight.

Introduction:
The visual component library of the Delphi programming system contains objects that allow you to create a number of graphs. Some of them are: TImage, TShape and TBevel objects.

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- Image - This object allows you to place a graphic image anywhere on the form. Images in .bmp, .ico, .wmf format are displayed. The object is located in the Additional Components palette. Pictures can be pasted using the Picture row in the Object Inspector property. If these images are placed on a form, then the .exe file has a large size

possible. Images can also be output during program execution. To do this, write the following lines: If OpenDialog1.

The Center and Stretch rows, which are the object inspector properties of this object, are the most important, and both rows belong to the Boolean type. If the Center row is true, then the image is in the middle of the TImage object on the form. If the Stretch line is true, then the image takes up the entire size of the TImage object in the form.

- Shape - used to create simple graphic shapes in the form of circles, squares, rectangles and similar geometric shapes. The Pen row in the Object property allows you to specify the color and appearance of the drawing lines. The brush line shows the color of the inside of the drawing. These properties can also be performed during program execution.

In the Delphi programming language, the programmer allows the programmer to create schemes and diagrams, illustrations. The program displays the graphic on the surface of the object (form or Image component). The Canvas property matches the surface of the object. To draw a graphic element (straight line, circle, rectangle, etc.) on the surface of an object, you must use a method that corresponds to the Canvas property of that object. For example Form1.canvas. The Rectangle (10,10,100,100) instruction draws a rectangle in the program window.

Drawing area

The Canvas property seen above is an object of type Tcanvas. Methods of extracting graphic primitives Consider the Canvas property as an area of abstract drawing. The drawing area consists of individual dots - pixels. The position of a pixel is determined by its horizontal (X) and vertical (Y)

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coordinates. Left upper pixel coordinates (0.0). Coordinates increase from top to bottom and from left to right. Area dimensions can be determined from the Height and Width properties of the image component and the ClientHeight and Clientwidth properties of the form.
Pen
The pencil is used to draw geometric figures. The appearance of the line is determined by the properties of the Train object shown in the table below.
Train (pencil) properties.

Specification
Color Line color
Width Line thickness
Style Line view
Mode Reflection mode
The line thickness is given in pixels by the width property. The line type is determined by the style property. The following table lists the named constants that define the line type.

Style property values

Constanta	Line view
psSolid	Continuous line
psDash	Dotted line, long bars
psDot	Dotted line, short bars
psDashDot	Dotted line, long and short lines
	sequence
psDashDotDot	Dotted line, one long and two short
	sequence of barcodes
psClear	Line Display

The Mode property shows the relationship between the color of the line and the background color. Usually the line color
Defined by the value of the Pen.Color property.
The programmer can give an inverse color relative to the background color for the line. In this case, the line is different even if the line and background color are the same.
The following table lists the constants that can be used as the value of the Mode property.

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Mode property values

Konstanta	Line color
pmBlack	Black, Pen. The color property does not depend on the value
pmWhite	White, Pen. The color property does not depend on the value
pmCopy	Line color Pen. Depends on the value of the color property
pmNotCopy	Line color Pen. Inverses the value of the color property
pmNot	The line inverses the color of the corresponding point of the color field

pmNotCopy	Line color Pen. Inverses the value of the color property
pmNot	The line inverses the color of the corresponding point of the color field

I have a brush
A brush (Canvas.Brush) is used to draw closed areas and to paint the inside of an area. The brush object has two properties shown in the table.

Brush. style property values

Constanta	Soha's style of painting
bsSolid	Continuous dyeing
bsClear	Does not paint the area
bsHorizontal	Horizontal Barcoding
bsVertical	Vertical tapping
bsFDiagonal	Dioganal dashing, leaning forward
bsBDiagonal	Dioganal dashing, reversing

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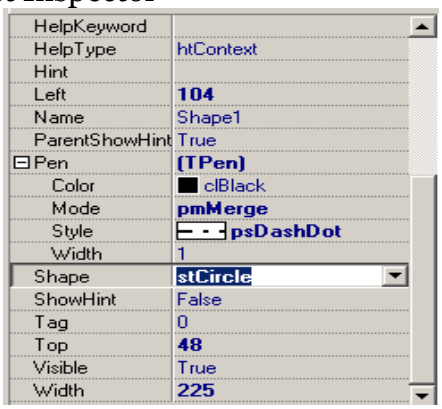
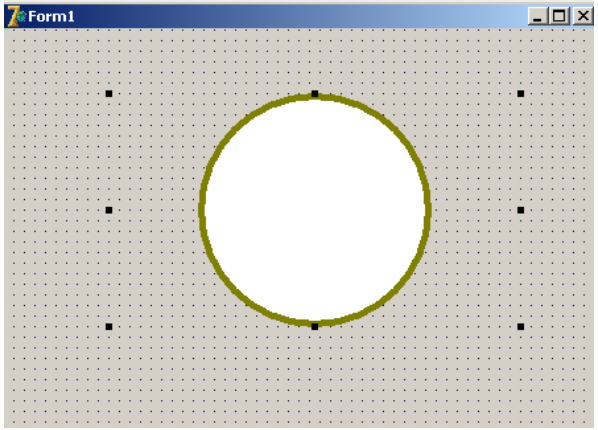
bsCross Grid Horizontal-vertical dashing

bsDiagCross Grid Diagonal Sharpening
Here are some examples using the above
Example 1. Create a circle using the Shape button.
1. Select the Shape button from the Additional Components palette.
2. Select the Pen item of the Object Inspector



Draw a circle.

3. Select the stCircle item in the Pen row - (choose the circle command).



Drawing surface in C ++ Builder environment - TCanvas class allows you to draw a drawing while the program is running. This class includes properties and techniques that allow you to draw graphic primitives, copy parts of images and surfaces, and print text.
Each component with a Canvas property, in turn, contains pen, cyst font objects, and has Pen, Brush, and Font properties, respectively.
The Pen property is the color (Canvas-> Pen-> Color), the thickness of the line in pixels (Canvas-> Pen-> Width) has the category of the line being drawn (Canvas-> Pen-> Style). The line category can take the following values:
psSolid - continuous line;

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psDash - a line consisting of dashes; psDot is a line of dots;
psDashDot - a line consisting of dots and dashes; psDashDotDot - a line consisting of lines and dots;
psClear - invisible line;
psInsideFrame is a line inside a rectangle that delimits the drawing surface.
The brush property is to fill geometric shapes, such as rectangles and ellipses, with lines. It has the following properties:
Canvas-> Brush-> Color - cyst color;
Canvas-> Brush-> Style - Defines a cyst category and can take the following values:
bsSolid - completely paints the surface of the shape with the given color; bsClear - does not paint the surface of the shape;
bsHorizontal - the shape surface is filled with parallel lines; bsVertical - the shape surface is filled with vertical lines; bsFDiagonal - the shape surface is filled with upward-facing lines; bsFDiagonal - the shape surface is filled with lines up and down; bsCross - the shape surface is filled with mesh;
bsDiagCross - with a grid of curved surfaces
will be filled. Canvas is one of the most important features of the object
The Canvas-> Pixels property is [x] [y], which determines the color of the pixels in the specified coordinates. These property values can be read and written to.
The following functions can be used to draw geometric shapes: Arc (int X1, int Y1, int X2, int Y2, int X3, int Y3, int X4, int X4) - arc drawing. Here (X1, Y1) and (X2, Y2) are the coordinates of the upper left and lower right ends of the rectangular sphere drawn, respectively. (X3, Y3) and (X4, Y4) are the beginning and end of the arc, respectively
coordinates.
Chord (int X1, int Y1, int X2, int Y2, int X3, int Y3, int X4, int X4) - draw an ellipse. Here (X1, Y1) and (X2, Y2) are the coordinates of the upper left and lower right ends of the rectangular sphere drawn, respectively. Points (X3, Y3) and (X4, Y4) are the coordinates of the beginning and end of the watter, respectively. Ellipse (int X1, int Y1, int X2, int Y2) - draw an ellipse filled with color. Here (X1, Y1) and (X2, Y2) are the coordinates of the upper left and lower right ends of the rectangular sphere drawn, respectively.
Rectangle (int X1, int Y1, int X2, int Y2) - draw a rectangle filled with color. Here (X1, Y1) and (X2, Y2) are the coordinates of the upper left and lower right ends of the rectangular sphere drawn, respectively.
For example. Draw a picture on the surface of the form
Ellipse, rectangle, and polygon shapes were used to draw a house using the canvas properties. Pencil and cyst properties were used to control the color and fill in the shape surface. Image sizes vary according to the size of the form.

```
#include <vcl.h> #pragma hdrstop #include "Unit1.h"
//---------------------------------------------------------------------------
#pragma package(smart_init) #pragma resource "*.dfm" TForm1 *Form1;
//---------------------------------------------------------------------------
   fastcall TForm1::TForm1(TComponent* Owner)
: TForm(Owner)
{
}
```

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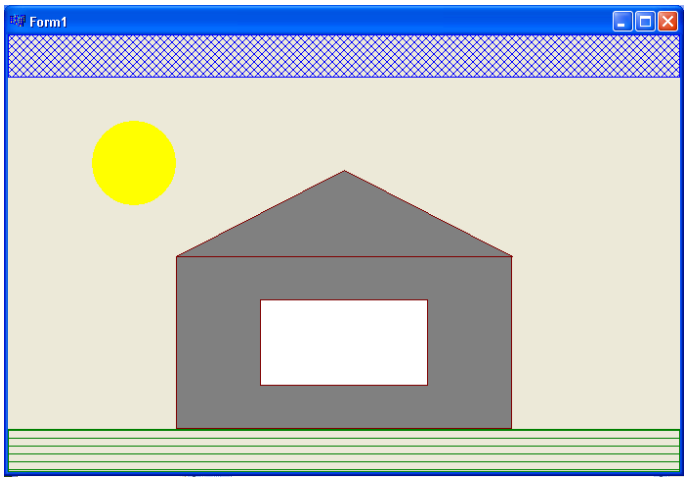
```
//---------------------------------------------------------------------------
void fastcall TForm1::FormResize(TObject *Sender)
{
int w, h, wm, hm; Form1->Refresh();
wm=Form1->ClientWidth; w=wm/8; hm=Form1->ClientHeight; h=hm/10;
// Osmon
Form1->Canvas->Brush->Color=clBlue;  Form1->Canvas->Brush->Style=bsDiagCross;  Form1->Canvas->Pen->Color=clBlue;
Form1->Canvas->Rectangle(0,0,wm,h);
// Maysalar
Form1->Canvas->Brush->Color=clGreen;  Form1->Canvas->Brush->Style=bsHorizontal;  Form1->Canvas->Pen->Color=clGreen; Form1->Canvas->Rectangle(0,hm-h,wm,hm);
// Quyo'sh
Form1->Canvas->Brush->Color=clYellow;  Form1->Canvas->Brush->Style=bsSolid;  Form1->Canvas->Pen->Color=clYellow; Form1->Canvas->Ellipse(w,2*h,2*w,2*h+w);
// Uycha
Form1->Canvas->Brush->Color=clGray;  Form1->Canvas->Brush->Style=bsSolid;  Form1->Canvas->Pen->Color=clMaroon;
Form1->Canvas->Rectangle(2*w, hm-5*h, 6*w, hm-h); TPoint point[4];
point[0].x=2*w;  point[0].y=hm-5*h;  point[1].x=4*w;  point[1].y=hm-7*h;  point[2].x=6*w; point[2].y=hm-5*h;  point[3].x=2*w;  point[3].y=hm-5*h;  Form1->Canvas->Polygon(point,3);
Form1->Canvas->Brush->Color=clWhite;  Form1->Canvas->Brush->Style=bsSolid;  Form1->Canvas->Pen->Color=clMaroon;
Form1->Canvas->Rectangle(3*w, hm-4*h, 5*w, hm-2*h);
```



Cell image generated by the program.

When the program is started, the Form's OnResize event occurs and a cell image appears on the screen.

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References

1. Stanley Lippman. C ++ programming language. Williams -M .: 2014
2. Siddharma Rao. Master C ++ independently for 21 days. Williams - M.: 2013
3. Nikita Cultin. Microsoft Visual C ++ in Tasks and Examples. BHV- Petersburg-Petersburg .: 2010.B. Ostrich.
4. C ++ programming language. Special Edition - Binom-Press », 2006.-1104 p.
5. Pavlovskaya TA C ++. High-level programming -SPb .: Peter. 2005.- 461 p.