```
Program TopTenFunctions;
{from mind to motion}

//////////////////////////////////////////////////////////////////////////
//  #sign:1 PM max: MAXBOX8: 4/1/2014 12:05:12 PM
//  Purpose: how to call best functions, on progress with experiments
//  #path>C:\maXbook\maxbox3\mX3999\maxbox3\examples\
//  Lines of Code #locs:265
//////////////////////////////////////////////////////////////////////////
//TODO: Save the QRCode to webserver_file, #locs:265

Const
   UrlGoogleQrCode='http://chart.apis.google.com/chart?chs=%dx%d&cht=qr&chld=%s&chl=%s';
   AFILENAME= 'mX3QRCode3Googletools.png';
   AFILENAME2= 'mX3QRCode3Systools.png';
   QDATA= 'this is maXland mind blowing stuff on a firebox';
   MEDIAPATH =  'exercices\';
   KEYPATH = 'crypt\';

Type
  TQrImage_ErrCorrLevel=(L,M,Q,H);


procedure LetSystools2DBarcode;
begin
  with {TStCustom2DBarcode}TStPDF417Barcode.create(self) do begin
   ECCLevel:= eclevel6;
   Code:= QDATA;
   Caption:= QDATA;
   CaptionLayout;
   //RelativeBarHeight:= true;
   //BarHeight:= 500;
   SaveToFile(ExePath+AFILENAME2);
   OpenDoc(ExePath+AFILENAME2);
   free;
 end;
 (* with {TStCustom2DBarcode} TStMaxiCodeBarcode.create(self) do begin
   ECCLevel:= 3;
   Code:= QDATA; Caption:= QDATA;
   CaptionLayout;
   //BarHeight:= 400;
   SaveToFile(ExePath+AFILENAME);
   OpenDoc(ExePath+AFILENAME);
   free;
 end;*)
end;

procedure GetQRCodeDemo;
begin
 if IsInternet then begin   //1
    GetQrCode3(150,150,'Q',QDATA, ExePath+AFILENAME);
    OpenDoc(ExePath+AFILENAME);
  end else
    LetSystools2DBarcode;
end;
//TODO:#1 Returns the QR Code direct of the last modification of the given File

procedure ChangeFileDemo;
begin
   Stringtofile(exepath+'\docs\contain2xml.txt',
   ReplaceString(fileToString(exepath+'\docs\'+'maxbox3_9.xml'),
                    '"/> ','"/>'+CRLF),true);
   OpenDoc(exepath+'\docs\contain2xml.txt');
end;

procedure maxcalc_Demo;
begin
  printF('this is %.6f',[maXcalc('ln(2)+fact(388)+2!')]);
  printF('this is %.6f',[maXcalc('(4!)^(3!)')]);
  printF('this is %.6f',[maXcalc('4!+4!')]);
  printF('this is %.6f',[maXcalc('log(22)')]);
  printF('this is logN %.6f',[maXcalc('2%256')]);
  writeln('ln(e): '+floattostr(maXcalc('ln(e)')))
  maXcalcF('e+10^6');
  printF('addition theorem %.18f ',[maXcalc('sin(2.5/2)')])
  printF('addition theorem %.18f ',[maXcalc('sqrt(1/2*(1-cos(2.5)))')])
  printF('addition theorem2 %22.18f ',[maXcalc('cos(2.5/2)')])
  printF('addition theorem2 %22.18f ',[maXcalc('sqrt(1/2*(1+cos(2.5)))')])
  maXcalcF('2%256+2^10');
end;

procedure CompressDemo;
begin
//Compress a folder and decompress it in /Decompress2
  Compress(exepath+'examples\earthplay2', exepath+'examples\mXziptest2.zip');
  DeCompress(exepath+'examples\Decompress2',exepath+'examples\mXziptest2.zip');
end;

procedure TimeSetDemo;
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//run the procedure in Admin mode to set the time!
var  mySTime: TIdSNTP;
begin
  mySTime:= TIdSNTP.create(self);
  try
    mySTime.host:='0.debian.pool.ntp.org'
    writeln('the internettime: '+datetimetoStr(mystime.datetime));
    if mySTime.Synctime then
      writeln('Operating System sync now!');
  finally
    Speak('Your system time is now sync with the internet time '
       +TimeToStr(mystime.datetime))
    mySTime.free;
  end
end;

procedure OpenFileDemo;
begin
  OpenFile(ExePath+'\examples\androidlcl\pascal_gui.jpg');
end;

procedure PlayMediaDemo;
var wmp: Variant;
 //Maybe you'll be more comfortable with automation.
 //It provides most of the functionality as the interfaces provide.
begin
   wmp:= CreateOleObject('WMPlayer.OCX');
   //wmp.OpenPlayer(Exepath+'examples\maxbox.wav');
   if ISInternet then begin
     wmp.URL:= 'http://www.softwareschule.ch/download/airmaxloop3.mp3';
     wmp.OpenPlayer(wmp.URL);
   end else
     wmp.OpenPlayer(Exepath+'examples\maxbox.wav');
   //wmp.controls.play;
end;

//To Refactor:
function IsNetworkConnected3: Boolean;
begin
  result:= GetSystemMetrics(SM_NETWORK) and $01 = $01
end;

function WGetDemo: boolean;
//Function wGet2(aURL, afile: string): boolean;' //without file open
begin
  writeln('WGetDemo:  '+DateTimeToInternetStr(now, true))
  result:= false;
  wGet('http://www.softwareschule.ch/download/maxbox_starter4.pdf','mytestpdf.pdf');
    //[RegEx VX4]
  result:= true;
end;

//set the maildef.ini file first!
function SendEmailDemo: boolean;
begin
//procedure SendEmail(mFrom,  mTo,  mSubject,  mBody,  mAttachment: variant);
 result:= false;
 SendEmail('max@kleiner.ch','max@kleiner.com','this is test399.94','the OpenSSL fox','');
 result:= true;
end;


var  selectFile,cryptlog,AESpassw: string;

procedure EncryptMediaAES(sender: TObject);
begin
  //if AESpassw <> '' then begin
    AESpassw:= 'maXbox';
    if PromptForFileName(selectFile,'Files(*.*)|*.*',//others
                       '', 'Select your file to crypt', MEDIAPATH, False)
    then begin
     //Display this full file/path value
      writeln(ExtractFileName(selectFile)+' encrypt...');
      Application.ProcessMessages;
      Screen.Cursor:= crHourglass;
      with TStopwatch.Create do begin
        Start;
        AESSymetricExecute(selectFile, selectFile+'_encrypt',AESpassw);
        writeln('File Encrypted!');
        Screen.Cursor:= crDefault;
        Stop;
        writeln('Time consuming: ' +GetValueStr +' of: '+
              inttoStr(getFileSize(selectFile))+' File Size');
        Free;
      end;
      writeln('Crypted file: '+ExtractFileName(selectFile)+'_encrypt');
      //WriteLog(cryptLog, clstbox.items.text)
    end;
  //end else Showmessage('Set your password first!');
```

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end;

procedure DecryptMediaAES(sender: TObject);
var clearout: string;
begin
  //if AESpassw <> '' then begin
    AESpassw:= 'maXbox';
    if PromptForFileName(selectFile,'Files(*_encrypt)|*_encrypt',//others
                         '', 'Select your file to decrypt', MEDIAPATH, False)
    then begin
      // Display this full file/path value
      writeln(ExtractFileName(selectFile)+' decrypt...');
      writeln('File to Decrypt: '+ExtractFileName(selectFile));
      Application.ProcessMessages;
      Screen.Cursor:= crHourglass;
      with TStopwatch.Create do begin
        Start;
        AESDecryptFile(selectFile+'_decrypt',selectFile,AESpassw);
        clearout:= selectFile+'_decrypt';
        Delete(clearout, length(clearout)-15, 8); //-7!
        RenameFile(selectFile+'_decrypt', clearout);
        Screen.Cursor:= crDefault;
        Stop;
        writeln('Time consuming: ' +GetValueStr +' of: '+
              intToStr(getFileSize(clearout))+' File Size');
        Free;
      end;
      writeln('File Decrypted!');
      //WriteLog(cryptLog, clstbox.items.text)
    end;
  //end else Showmessage('Set your password first!');
end;

procedure GetAllFilesofTodayDemo;
var ml: TStringlist;
    i: integer;
begin
  ml:= TStringlist.create;
  try
    ml:= getTodayFiles(Exepath,'*.*');
    for i:= 1 to ml.count-1 do
           writeln(ml.strings[i]);
  finally
    ml.Free;
  end;
end;


procedure CalcPrecisionDemoTest;
begin
  printF('light speed of 2000 meters %.14f',[2000 /MetersPerLightSecond]);
  printF('light speed test back %.14f',
                [(2000 /MetersPerLightSecond)*-(1-MetersPerLightSecond/2000)]);
  printF('light speed test back %.14f',
           [(2000 /MetersPerLightSecond)+
            (2000 /MetersPerLightSecond)*-(1-MetersPerLightSecond/2000)]);
end;

begin  //main
  Writeln('EXE Date Stamp: '+dateTimeTostr(FileTimeGMT(exepath+'maxbox3.exe')));
  //GetQrCodeTest(150,150,'Q', 'this is maXland on the maXbox');
  //call of the Lib Best_of_Box
  GetQRCodeDemo        //01

  ChangeFileDemo;    //011
  maxCalcF('SQRT(PI)');
  maxcalc_Demo;        //02
  Writeln('thread count: '+inttoStr(NumProcessThreads));
  //CompressDemo;     //03
  Writeln('thread count: '+inttoStr(NumProcessThreads));

   //TimeSetDemo;      //04
   OpenFileDemo;       //05
   //PlayMediaDemo;    //06

  {if WGetDemo then    //07
     writeln('download success - will open file');}

  {if SendEmailDemo then    //08
     writeln('email send success - should open mailbox'); }

  {EncryptMediaAES(self);   //09
  DecryptMediaAES(self); }

  GetAllFilesofTodayDemo;   //10
  CalcPrecisionDemoTest;    //11
End.

Doc:
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http://theroadtodelphi.wordpress.com/2010/12/06/generating-qr-codes-with-delphi/

Using the Google Chart Tools / Image Charts (aka Chart API) you can easily generate QR codes, this kind of images are a special type of two-dimensional barcodes. They are also known as hardlinks or physical world hyperlinks.

The QR Codes store up to 4,296 alphanumeric characters of arbitrary text. QR codes can be read by an optical device with the appropriate software. Such devices range from dedicated QR code readers to mobile phones.

Using Delphi there are several ways you can generate QR codes - to encode any text (URL, phone number, simple message). QR Codes store up to 4,296 alphanumeric characters of arbitrary text.
The 2D Barcode VCL components is a set of components designed for generating and printing barcode symbols in your Delphi or C++ Builder applications. Use the components set like any other VCL components.
J4L Components includes the QR-code implementation featuring: auto, byte, alpha, numeric and kanji encoding.

The Google Chart Tools (Chart API) also let you generate QR-code images using an HTTP POST or
All do you need to generate a QrCode is make a get request to this URI

http://chart.apis.google.com/chart?chs=200x200&cht=qr&chld=M&chl=Go+Delphi+Go


QR (Quick Response) codes are starting to pick up steam among the growing smartphone-browsing crowd – a statistic that has marketers brimming with creative ideas and promotions.  Still, no one wants to open their device to a glut of text messages and alerts from codes they’ve scanned.

Fortunately, these companies have found innovative and unique ways to not only get you to scan their code, but boost their brand awareness in the process.  Here are a few of the most memorable ones – and a few examples to get your mind stirring.
Who’s Using QR Codes?

Nearly half of all smartphone users have used their phones while shopping in brick-and-mortar stores – 40% of them to compare the competition’s prices.  Statistics for who’s scanning QR codes and with what device appear to be mixed, although most data places iPhone users at the top, with the user age range being 25-34. Japan and the U.S. are currently leaps and bounds ahead of other countries in QR code scans (around 60% approximately) – with Canada and the U.K. trailing dozens of percentage points behind.

Still, QR code creation jumped a whopping 1,253% in 2011, with two million of them created in less than three months. By far, most were used to lead users to a web address, but they can also store vCard details, Google Maps info and even Youtube video links.


Action Steps for Working with QR Codes

So how can you take advantage of this growing trend for your business?  Keep in mind that much more than web addresses can be scanned. For example, you could:

    1 Direct employers to your resume, your LinkedIn profile or your Vcard
    2 Use a QR code in a direct mail piece, business card or postcard to provide a discount
    3 Give customers an inside look at your new Facebook promotion
    4 Take them to a page with more detailed information that wouldn’t easily fit in a print ad
    5 Use them to deliver step-by-step instructional videos or a printable setup sheet
    6 Have the QR code send a tweet when scanned, or check in with Foursquare
    7 Let them enroll in an event such as a webinar or teleseminar
    8 Use the QR code to let customers send themselves a reminder via SMS
    9 Link them to a special “Exclusive” YouTube video

uses
 PngImage,
 HTTPApp,
 WinInet;

type
TQrImage_ErrCorrLevel=(L,M,Q,H);

const
UrlGoogleQrCode='http://chart.apis.google.com/chart?chs=%dx%d&cht=qr&chld=%s&chl=%s';
QrImgCorrStr   : array [TQrImage_ErrCorrLevel] of string=('L','M','Q','H');

procedure WinInet_HttpGet(const Url: string;Stream:TStream);
const
BuffSize = 1024*1024;
var
  hInter   : HINTERNET;
  UrlHandle: HINTERNET;
  BytesRead: DWORD;
  Buffer   : Pointer;
begin
  hInter := InternetOpen('', INTERNET_OPEN_TYPE_PRECONFIG, nil, nil, 0);
  if Assigned(hInter) then
  begin
    Stream.Seek(0,0);
    GetMem(Buffer,BuffSize);
    try
      UrlHandle:= InternetOpenUrl(hInter, PChar(Url), nil, 0, INTERNET_FLAG_RELOAD, 0);
        if Assigned(UrlHandle) then
        begin
          repeat
            InternetReadFile(UrlHandle, Buffer, BuffSize, BytesRead);
            if BytesRead>0 then
            Stream.WriteBuffer(Buffer^,BytesRead);
         until BytesRead = 0;
         InternetCloseHandle(UrlHandle);
       end;
    finally
      FreeMem(Buffer);
    end;
    InternetCloseHandle(hInter);
  end
end;

//this function return a Stream (PngImage inside) with a Qr code.
procedure GetQrCode(Width,Height:Word;Correction_Level:TQrImage_ErrCorrLevel;const Data:string;StreamImage :
TMemoryStream);
Var
 EncodedURL  : string;
begin
  EncodedURL:=Format(UrlGoogleQrCode,[Width,Height,QrImgCorrStr[Correction_Level],HTTPEncode(Data)]);
  WinInet_HttpGet(EncodedURL,StreamImage);
end;

http://www.delphi-central.com/callback.aspx

 public
    { Public-Deklarationen }
    constructor Create(Owner:TComponent); override;
    destructor Destroy; override;
    procedure Assign(Source: TPersistent);override;
    procedure DrawBarcode(Canvas:TCanvas);
    procedure DrawText(Canvas:TCanvas);
    property CanvasHeight :Integer read GetCanvasHeight;
    property CanvasWidth :Integer read GetCanvasWidth;
  published
    { Published-Deklarationen }
   { Height of Barcode (Pixel)}
    property Height : integer read FHeight write SetHeight;
    property Text   : string read FText write SetText;
    property Top    : Integer read FTop write SetTop;
    property Left   : Integer read FLeft write SetLeft;
   { Width of the smallest line in a Barcode }
    property Modul  : integer read FModul  write SetModul;
    property Ratio  : Double read FRatio write SetRatio;
    property Typ    : TBarcodeType read FTyp write SetTyp default bcCode_2_5_interleaved;
   { build CheckSum ? }
    property Checksum:boolean read FCheckSum write SetCheckSum default FALSE;
    property CheckSumMethod:TCheckSumMethod read FCheckSumMethod write FCheckSumMethod default csmModulo10;

   { 0 - 360 degree }
    property Angle  :double read FAngle write SetAngle;
    property ShowText:TBarcodeOption read FShowText write SetShowText default bcoNone;
    property ShowTextFont: TFont read FShowTextFont write SetShowTextFont;
    property ShowTextPosition: TShowTextPosition read FShowTextPosition write SetShowTextPosition default
stpTopLeft;
    property Width : integer read GetWidth write SetWidth stored False;
    property Color:TColor read FColor write FColor default clWhite;
    property ColorBar:TColor read FColorBar write FColorBar default clBlack;
      property OnChange:TNotifyEvent read FOnChange write FOnChange;
  end;

function CheckSumModulo10(const data:string):string;
function ConvertMmToPixelsX(const Value:Double):Integer;
function ConvertMmToPixelsY(const Value:Double):Integer;
function ConvertInchToPixelsX(const Value:Double):Integer;
function ConvertInchToPixelsY(const Value:Double):Integer;

TTarArchive Usage
-----------------
- Choose a constructor
- Make an instance of TTarArchive                  TA := TTarArchive.Create (Filename);
- Scan through the archive                         TA.Reset;
                                                   WHILE TA.FindNext (DirRec) DO BEGIN
- Evaluate the DirRec for each file                  ListBox.Items.Add (DirRec.Name);
- Read out the current file                          TA.ReadFile (DestFilename);
  (You can ommit this if you want to
  read in the directory only)                        END;
- You're done                                      TA.Free;


TTarWriter Usage
----------------
- Choose a constructor
- Make an instance of TTarWriter                   TW := TTarWriter.Create ('my.tar');
- Add a file to the tar archive                    TW.AddFile ('foobar.txt');
- Add a string as a file                           TW.AddString (SL.Text, 'joe.txt', Now);
- Destroy TarWriter instance                       TW.Free;
- Now your tar file is ready.
```

```
The last slash might be optional. Right?
How about something like this:

$url =~ m|([^/]+)/?$|;
my $end_of_url = $1;

The $ on the end anchors the regular expression to the end of the string. The [^/] means anything that's not
a slash and the + after means I want one or more things that are not slashes. Notice that this is in a
capture group which are marked with parentheses.
I end the regular expression with /? which means that there may or may not be a slash on the very end of the
string. I                                                                                                    'v
constantly escape them.

The last part of the URL is now in $1 and I can set my own scalar variable to save this Result.
share|improve this answer


procedure GetQrCodeImage(Width,Height: Word; Correct_Level: string;
           const Data:string; aimage: TImage; apath: string);
var
  encodedURL: string;
  idhttp: TIdHttp;// THTTPSend;
  pngStream: TMemoryStream;
begin
  encodedURL:= Format(UrlGoogleQrCode,[Width,Height, Correct_Level, HTTPEncode(Data)]);
  //WinInet_HttpGet(EncodedURL,StreamImage);
  idHTTP:= TIdHTTP.Create(NIL)
  pngStream:= TMemoryStream.create;
  with TLinearBitmap.Create do try
    idHTTP.Get1(EncodedURL, pngStream)
    pngStream.Position:= 0;
    LoadFromStream2(pngStream,'PNG');
    aImage.Picture:= NIL;
    AssignTo(aimage.picture.bitmap);
    SaveToFile(apath);
    //OpenDoc(apath);
  finally
    Dispose;
    Free;
    idHTTP.Free
    pngStream.Free;
  end;
end;

procedure GetQrCode3(Width,Height: Word; Correct_Level: string;
           const Data:string; apath: string);
var
  encodedURL: string;
  idhttp: TIdHttp;// THTTPSend;
  png: TLinearBitmap;//TPNGObject;
  pngStream: TMemoryStream;
begin
  encodedURL:= Format(UrlGoogleQrCode,[Width,Height, Correct_Level, HTTPEncode(Data)]);
  //WinInet_HttpGet(EncodedURL,StreamImage);
  idHTTP:= TIdHTTP.Create(NIL)
  pngStream:= TMemoryStream.create;
  with TLinearBitmap.Create do try
    idHTTP.Get1(EncodedURL, pngStream)
    pngStream.Position:= 0;
    LoadFromStream2(pngStream,'PNG');
    //aImage.Picture:= NIL;
    //AssignTo(aimage.picture.bitmap);
    SaveToFile(apath);
    OpenDoc(apath);
  finally
    Dispose;
    Free;
    idHTTP.Free
    pngStream.Free;
  end;
end;


procedure CreateMyFastForm;
 //diaform:= CreateMessageDialog('my fast form perform',mtconfirmation, []);
var
    //dbform: TForm;
    ard: TRadioGroup;
    //mimg: TImage;
begin
   dbform:= CreateMessageDialog('My Fast Form Template - FFP',mtwarning,
                                       [mball, mbyes, mbhelp, mbok]);
   with dbform do begin
     font.size:= 12;
     caption:= 'FFP XML Demo';
     setBounds(50,50,800,600)
     FormStyle:= fsStayontop;
     //Color:= 12234;  //clWebGold;//12234;
     autoScroll:= true;
   with TLabel.Create(self) do begin
     parent:= dbform;
     SetBounds(400,60,500,600)
     font.size:= 18;
     //dblist.Add('All Converted to...XML')
     caption:= 'QRCode in a Stream Dream...';
   end;
   with TRadioGroup.Create(self) do begin
     parent:= dbform;
     top:= 90;
     left:= 60;
     items.add('first entry of');
     items.add('second entry off');
     items.add('third entry off');
     ItemIndex:= 2;
     //writeln(Items.Strings[ItemIndex]);
   end;
  with TBitBtn.Create(self) do begin
    Parent:= dbform;
    setbounds(570, 490,190, 40);
    caption:= 'File to Barcode';
    font.size:= 12;
    glyph.LoadFromResourceName(getHINSTANCE,'TASBARCODE');
    //onclick:= @GetMediaData2;
  end;
  with TBitBtn.Create(self) do begin
    Parent:= dbform;
    setbounds(570, 320,190, 150);
    caption:= 'File to Barcode';
    font.size:= 12;
    glyph.LoadFromResourceName(getHINSTANCE,'JVGAMMAPANELCOLORS');
    //onclick:= @GetMediaData2;
  end;
   Show;
   Canvas.Draw(400,120,getBitMap(Exepath+'\examples\citymax.bmp'));

  FImage:= TImage.create(self);
  with FImage do begin
   parent:= dbform;
   setbounds(50,210,150,150)
  end;

  with Barcode1 do begin
    Top := 400;
    Left := 50;
    Height:= 130;
    //Barcode1.Width:= 230;
    //barcode1.assign
    //Barcode1.Angle := 70;
    Typ := bcCode_2_5_interleaved;
    Showtext:= bcoBoth;
    text:= '0123456789';
    DrawBarcode(Canvas);
    Typ := bcCodeEAN128C; //bcCode_2_5_interleaved;
    Left:= 180;
    text:= '0123456789';
    DrawBarcode(Canvas);
    Typ := bcCode128C; //bcCodePostNet; //,bcCodeEAN128C; //bcCode_2_5_interleaved;
    Left:= 320;
    text:= '0123456789';
    DrawBarcode(Canvas);
   end;
    //Barcode1.DrawText(dbform.Canvas);

  end; //dbform
   //SelectDirectory
end;


----app_template_loaded_code----
```