



```
define bandingreso                                ' bandera ingreso clave
Define AppVersion 1.4                             ' define la version del programa ...
```

```
Global vartemp, temp, tbl_list, col_lst, ingr_tab as string
Global verifica1, verifica2, verifica3, verifica4, verifica as string
global este1, norte1 as float
global tablasr(50), columnasr(50) as string
global este2, norte2 as float
global dx, dy, velocidad, teta as float
GLOBAL MAP_SCOPE, bandera, xv, num_cols AS INTEGER
global cpi as float
global user_select, i_numcols, user_scol As SmallInt
global ind01, ind02, ind03, ind04, ind05 as integer
```

```
*****
' 0. Crea un dialogo mediante el cual se ingresa una clave.
'
' MapBasic program to facilitate the navigation through the data
' of the Gisacuicola geographic database.
'
*****
```

```
Sub Main
  cpi = 3.141593
  bandera = 0
  ' OnError Goto HandleError
```

Crea el dialogo que permite seleccionar el tab y las columnas que se requieren para generar las polilyneas.

```
  Create ButtonPad "Generación Vector Velocidad" As
    PushButton
    HelpMsg "Genera Vectores de Velocidad con Fac=1000"
    Calling Dialog_op
      ID 1
    Icon MI_ICON_HOT_LINK
    PushButton
    HelpMsg "Abre Workspace"
    Calling open_work
      ID 2
    Icon MI_ICON_OPEN_FILE
    PushButton
    HelpMsg "Adios"
    Calling GoodBye
      ID 3
    Icon MI_ICON_CUT
    Title "VECTVEL"
    width 4
    Show
```

End Sub

' \*\*\*\*\*

sub Dialog\_op

Dialog

TITLE "Generacion Automatica de Lineas"

Control Button

ID 1

Title "Abrir Tabla"

calling Select\_TAB

Control Button

ID 5

Title "Genera Vector Velocidad"

calling dibuja\_lin

Control ListBox

Title tbl\_list

position 10,5

width 100

height 127

ID 4

calling escoge\_cols

Value 1

Into user\_select

Control PopupMenu

position 120,40

width 150

Title col\_lst

ID 2

calling select\_ceste

into user\_scol

Control PopupMenu

position 120,70

width 150

Title col\_lst

ID 6

calling select\_cnorte

value 1

into user\_scol

Control PopupMenu

position 120,100

width 150

Title col\_lst

ID 7

calling select\_azimuth

value 1

into user\_scol

Control PopupMenu

position 120,130

width 150

```

        Title col_lst
        ID 8
        calling select_magnitud
        value 1
        into user_scol
Control StaticText
  Title "Escoge CESTE:"
  Position 120, 30
Control StaticText
  Title "Escoge CNORTE:"
  Position 120, 60
Control StaticText
  Title "Escoge AZIMUTH:"
  Position 120, 90
Control StaticText
  Title "Escoge MAGNITIUD:"
  Position 120, 120
Control CheckBox
  Title "Factor Escala:100"
  value false
ID 9
  Position 25, 155
  calling unchk_box09
Control CheckBox
  Title "Factor Escala:1000"
  value true
ID 10
  Position 25, 185
  calling unchk_box10

Control CancelButton
  ID 3
  calling Dialogbyby

end sub

! *****

sub open_work
  dim i, f, num_tbls as integer
  run menu command 108

end sub

! *****

sub Select_TAB
  dim i, f, num_tbls as integer
  run menu command M_File_Open
  num_tbls = NumTables()

  if num_tbls = 0 then
    note "No existen Tablas abiertas"
  end if
end sub

```

```

        else
            Alter control 4 Title ""
            for i=1 to num_tbls
                tbl_list = tbl_list + TableInfo(i,TAB_INFO_NAME) + ";"
                tablasr(i) = TableInfo(i,TAB_INFO_NAME)
            next
            Alter control 4 title tbl_list
            tbl_list = ""
        end if
    end sub

```

! \*\*\*\*\*

```

sub Ident_TAB
'
'    dim i, f, num_tbls as integer
'
'    num_tbls = NumTables()
'    note num_tbls
'
'    if num_tbls = 0 then
'        note "No existen Tablas abiertas"
'    else
'        Alter control 4 Title ""
'        for i=1 to num_tbls
'            tbl_list = tbl_list + TableInfo(i,TAB_INFO_NAME) + ";"
'            tablasr(i) = TableInfo(i,TAB_INFO_NAME)
'        next
'        note tbl_list
'        Alter control 4 title tbl_list
'        tbl_list = ""
'    end if
end sub

```

! \*\*\*\*\*

```

sub unchk_box09
    dim i, f, num_tbls as integer
    i = readcontrolvalue(9)
    Alter control 10 value false
end sub

```

! \*\*\*\*\*

```

sub unchk_box10
    dim i, f, num_tbls as integer
    i = readcontrolvalue(10)
    Alter control 9 value false
end sub

```

! \*\*\*\*\*

```

sub escoge_cols()

```

```

dim temp as string
dim i, f, num_tbls as integer
note xv
xv = readcontrolvalue(4)
note "xv = " & xv

num_cols = TableInfo(tablasr(xv), TAB_INFO_NCOLS)

if num_cols = 0 or xv= 0 then
    note "No existen columnas"
else
    Alter control 2 Title ""
    Alter control 6 Title ""
    Alter control 7 Title ""
    Alter control 8 Title ""
    for i=1 to num_cols
        col_lst = col_lst + ColumnInfo(tablasr(xv),"col" &
str$(i),COL_INFO_NAME) + ";"
        columnasr(i) = ColumnInfo(tablasr(xv),"col" &
str$(i),COL_INFO_NAME)
    next
    note col_lst
    Alter control 2 title col_lst
    Alter control 6 title col_lst
    Alter control 7 title col_lst
    Alter control 8 title col_lst
    col_lst = ""
end if

note "voy a cerrar esta tabla: " & tablasr(xv)
rename table tablasr(xv) as "tablaxx"
'close table tablasr(xv)
'open table tablasr(xv) as tablaxx
end sub

! *****
sub select_ceste
dim i, f, cuenta, num_tbls as smallint
dim xx as float
dim calculo, cestex, cnortex, promediox as float
dim tablaX, columnaX as string

i = readcontrolvalue(2)
f = ColumnInfo(tablaxx,"col" & str$(i),COL_INFO_TYPE)

calculo = 0
cestex = 0
cnortex = 0

tablaX = tablasr(xv)
columnaX = columnasr(i)

```

```

if f >1 and f<5 then
    fetch first from tablaxx
    do while not eot(tablaxx)
        cestex = tablaXx.col(i)
        calculo = calculo + cestex
        cuenta = cuenta + 1
        note cestex & " //" & calculo
    fetch next from tablaxx
    loop

    promediox = calculo / cuenta

    if promediox < 180000 or promediox > 1000000 then
        note "Probablemente la columna contiene datos incorrectos"
        alter control 2 value 1
    else
        note "Promedio de Datos de columna " & columnasr(i) & " es
consistente"
        note "El promedio de la muestra es: " & promediox
    end if
else
    note "Datos NO consistentes...Escoja otro campo"
    alter control 2 value 1
end if
ind01 = i
end sub

```

```

' *****
sub select_cnorte
    dim i, f, cuenta, num_tbls as smallint
    dim xx as float
    dim calculo, cnortex, promediox as float
    dim tablay, columnay as string

    i = readcontrolvalue(6)
    f = ColumnInfo(tablaxx,"col" & str$(i),COL_INFO_TYPE)

    calculo = 0
    cnortex = 0

    tablay = tablasr(xv)
    columnay = columnasr(i)

    if f >1 and f<5 then
        fetch first from tablaxx
        do while not eot(tablaxx)
            cnortex = tablaXx.col(i)
            calculo = calculo + cnortex
            cuenta = cuenta + 1
            note cnortex & " //" & calculo
        fetch next from tablaxx
        loop
    end if
end sub

```

```

        promediox = calculo / cuenta

    if promediox < 9000000 or promediox > 10000000 then
        note "Probablemente la columna contiene datos incorrectos"
        alter control 6 value 1
    else
        note "Promedio de Datos de columna " & columnasr(i) & " es
consistente"
        note "El promedio de la muestra es: " & promediox
    end if
else
    note "Datos NO consistentes...Escoja otro campo"
    alter control 6 value 1
end if
ind02 = i
end sub

```

```

! *****

```

```

sub select_azimuth
    dim i, f, cuenta, num_tbls as smallint
    dim xx as float
    dim calculo, azimuthx, promediox as float
    dim tablay, columnay as string

    i = readcontrolvalue(7)
    f = ColumnInfo(tablaxx,"col" & str$(i),COL_INFO_TYPE)

    calculo = 0
    azimuthx = 0

    tablay = tablasr(xv)
    columnay = columnasr(i)

    if f >1 and f<5 then
        fetch first from tablaxx
        do while not eot(tablaxx)
            azimuthx = tablaXx.col(i)
            calculo = calculo + azimuthx
            cuenta = cuenta + 1
            note azimuthx & " //" & calculo
            fetch next from tablaxx
        loop

        promediox = calculo / cuenta

        if promediox < 0 or promediox > 360 then
            note "Probablemente la columna contiene datos incorrectos"
            alter control 7 value 1
        else
            note "Promedio de Datos de columna " & columnasr(i) & " es
consistente"
            note "El promedio de la muestra es: " & promediox
        end if
    end if
end sub

```



```

        else
            note "Datos NO consistentes...Escoja otro campo"
            alter control 7 value 1
        end if
        ind03 = i
    end sub

```

```

' *****

```

```

sub select_magnitud
    dim i, f, cuenta, num_tbls as smallint
    dim xx as float
    dim calculo, magnitudx, promediox as float
    dim tablay, columnay as string

    i = readcontrolvalue(8)
    f = ColumnInfo(tablaxx,"col" & str$(i),COL_INFO_TYPE)

    calculo = 0
    magnitudx = 0

    tablay = tablasr(xv)
    columnay = columnasr(i)

    if f > 1 and f < 5 then
        fetch first from tablaxx
        do while not eot(tablaxx)
            magnitudx = tablaXx.col(i)
            calculo = calculo + magnitudx
            cuenta = cuenta + 1
            note magnitudx & " //" & calculo
            fetch next from tablaxx
        loop

        promediox = calculo / cuenta
    else
        note "Datos NO consistentes...Escoja otro campo"
        alter control 8 value 1
    end if
    ind04 = i
end sub

```

```

' *****

```

```

sub Dibuja_LIN()

    dim i, f, cuenta, num_tbls as smallint
    note tbl_list
    xv = readcontrolvalue(4)
    note tablasr(xv) & " " & xv

    if numtables()=0 or ind01=0 or ind02=0 or ind03=0 or ind04=0 then
        note "acción no puede ser procesada, verifique que las tablas esten
abiertas"
    end if
end sub

```

```

else
    set CoordSys Earth Projection 8, 82, "m", -81, 0, 0.9996, 500000, 10000000
    Bounds (-7746230.6469, 1712.61611073) (8746230.6469, 19998287.3839)

    set map
        layer 0 editable on

    fetch first from tabla
do while not eot(tabla)
    temp = tabla.col(ind01)
    note "temp = " + temp
    este1 = tabla.col(ind01)
    norte1 = tabla.col(ind02)
    velocidad = tabla.col(ind04) * 1000
    note este1 + " , " + norte1 + " , " + velocidad

    if tabla.col(ind03) >=0 and tabla.col(ind03) < 90 then
        teta = (90 - tabla.col(ind03))*cpi/180
        dx = velocidad * cos(teta)
        dy = velocidad * sin(teta)
        este2 = tabla.col(ind01) + dx
        norte2 = tabla.col(ind02) + dy
    elseif tabla.col(ind03) >=90 and tabla.col(ind03) < 180 then
        teta = (tabla.col(ind03) - 90)*cpi/180
        dx = velocidad * cos(teta)
        dy = velocidad * sin(teta)
        este2 = tabla.col(ind01) + dx
        norte2 = tabla.col(ind02) - dy
    elseif tabla.col(ind03) >=180 and tabla.col(ind03) < 270 then
        teta = (270 - tabla.col(ind03))*cpi/180
        dx = velocidad * cos(teta)
        dy = velocidad * sin(teta)
        este2 = tabla.col(ind01) - dx
        norte2 = tabla.col(ind02) - dy
    else
        teta = (tabla.col(ind03) - 270)*cpi/180
        dx = velocidad * cos(teta)
        dy = velocidad * sin(teta)
        este2 = tabla.col(ind01) - dx
        norte2 = tabla.col(ind02) + dy
    end if

    note este1 + " , " + norte1 + " , " + este2 + " , " + norte2 + " , " + cpi + " , " +
teta
        create line (este1,norte1) (este2,norte2)

    fetch next from tabla
loop

end if

end sub
! *****

```

```
Sub DialogHandler
  OnError Goto HandleError

  Exit Sub

HandleError:
  Note "DialogHandler: " + Error$()
  Resume Next

End Sub
```

```
' *****
```

```
Sub About

  OnError Goto HandleError

HandleError:
  Note "About: " + Error$()
  Resume Next

End Sub
```

```
' *****
```

```
Sub GoodBye

  OnError Goto HandleError

  End Program

  Exit Sub

HandleError:
  Note "GoodBye: " + Error$()
  Resume Next

End Sub
```

```
' *****
```

```
Sub Dialogbyby

  ' OnError Goto HandleError

  dialog remove

  ' Exit Sub

'HandleError:
' Note "GoodBye: " + Error$()
' Resume Next

End Sub
```

```
' *****
```