LISTING PROGRAM

1. Home

Private Sub abt_Click()
    frmAbout.Show
End Sub

Private Sub dtJarak_Click()
    Form1.Show
End Sub

Private Sub dtUser_Click()
    frmUser.Show
End Sub

Private Sub dtVertex_Click()
    Form5a.Show
End Sub

Private Sub Form_Activate()
    If bolLogon = True Then
        mnuData.Enabled = True
        Me.login.Enabled = False
        Me.logout.Enabled = True
    Else
        mnuData.Enabled = False
        Me.login.Enabled = True
        Me.logout.Enabled = False
    End If
    Timer1.Enabled = True
End Sub

Private Sub Form_Load()
    picMap.Picture = LoadPicture(App.Path & "\Peta\Denah-1.jpg")
End Sub

Private Sub Hlp_Click()
    frmHelp.Show
End Sub

Private Sub koor_Click()
    frmKordinat.Show
End Sub

Private Sub Lap_Click()
    frmLap.Show
End Sub

Private Sub login_Click()
    frmLogin.Show
End Sub

Private Sub logout_Click()
    Dim X As String
    X = MsgBox("Apakah mau keluar?", vbYesNo)
    If X = vbYes Then
        mnuData.Enabled = False
        Me.mnuData.Enabled = False
Else
End If
End Sub

Private Sub mnuExit_Click()
End
End Sub

Private Sub mnuST_Click()
frmMenu.Show
End Sub

Private Sub Timer1_Timer()
If Timer1.Enabled = True Then
    Line1.BorderColor = &H0&
    Shape1.FillColor = vbRed
    Line10.BorderColor = &H0&
    Shape2.FillColor = vbBlue
    Line9.BorderColor = &H0&
    Shape3.FillColor = vbYellow
    Shape4.FillColor = vbGreen
    Shape5.FillColor = vbCyan
    Shape6.FillColor = vbBlack
    Shape7.FillColor = vbRed
    Shape8.FillColor = vbGreen
    Timer1.Enabled = False
    Timer2.Enabled = True
Else
    Shape1.FillColor = &HFFFFFF
    Shape2.FillColor = &HFFFFFF
    Shape3.FillColor = &HFFFFFF
    Shape4.FillColor = &HFFFFFF
    Shape5.FillColor = &HFFFFFF
    Shape6.FillColor = &HFFFFFF
    Shape7.FillColor = &HFFFFFF
    Shape8.FillColor = &HFFFFFF
    Timer1.Enabled = True
End If
End Sub

Private Sub Timer2_Timer()
If Timer2.Enabled = True Then
    Line1.BorderColor = &HFF&
    Shape1.FillColor = &HFFFFFF
    Line10.BorderColor = &HFF&
    Shape2.FillColor = &HFFFFFF
    Line9.BorderColor = &HFF&
    Shape3.FillColor = &HFFFFFF
    Shape4.FillColor = &HFFFFFF
    Shape5.FillColor = &HFFFFFF
    Shape6.FillColor = &HFFFFFF
    Shape7.FillColor = &HFFFFFF
    Shape8.FillColor = &HFFFFFF
    Timer2.Enabled = False
    Timer1.Enabled = True
Else
    Shape1.FillColor = vbRed
    Shape2.FillColor = vbBlue
    Shape3.FillColor = vbYellow

Shape4.FillColor = vbGreen
Shape5.FillColor = vbCyan
Shape6.FillColor = vbBlack
Shape7.FillColor = vbRed
Shape8.FillColor = vbGreen
Timer2.Enabled = True
End If

End Sub

2. Login

Option Explicit
Dim rsUser As Recordset
Private Sub cmdCancel_Click()
End
End Sub

Private Sub cmdOK_Click()
On Error Resume Next
Set rsCari = New ADODB.Recordset
    rsCari.Open "Select * from [tUser] where UserId='" & txtUser.Text & 
    "' and Passwd='" & txtPass.Text & ", CN, adOpenDynamic, adLockOptimistic
If rsCari.EOF = True Then
    MsgBox "Password salah"
    txtPass = ""
    txtUser = ""
    bolLogon = False
    txtUser.SetFocus
Else
    Me.Hide
    bolLogon = True
    Home.Show
End If
End Sub

Private Sub Form_Activate()
    txtPass = ""
    txtUser = ""
    txtUser.SetFocus
End Sub

Private Sub Form_Load()
    Koneksi
End Sub

Private Sub txtPass_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        cmdOk.Enabled = True
        cmdOk.SetFocus
    End If
End Sub

Private Sub txtUser_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        txtPass.Locked = False
        txtPass.SetFocus
    End If
End Sub
3. Shortest Path

Dim distance_1 As Long
Private NumNodes As Integer
Private Infinity As Integer
Private Street() As StreetType
Private Distance() As Integer
Private Path() As Integer
Private Included() As Integer
Private A_Show As Integer
Private SelCity As String
Dim j As Integer
Dim Asal As String * 3
Dim Tujuan As String * 3
Dim IDHasil As Integer
Sub CariID()
  Set rsCari = New ADODB.Recordset
  rsCari.Open "Select * from tHasil order by IDHasil Desc", CN, 1, 2
  If Not rsCari.EOF Then
    IDHasil = rsCari!IDHasil + 1
  Else
    IDHasil = 1
  End If
  Set rsCari = Nothing
End Sub
Sub Segar()
  Set rsCari = New ADODB.Recordset
  rsCari.Open "Select * from tVertex order by IDVertex asc", CN, 1, 2
  Do While Not rsCari.EOF
    Set k = lvVertex.ListItems.Add(, , rsCari!KDKategori)
    k.SubItems(1) = rsCari!nmVertex
    rsCari.MoveNext
  If rsCari.EOF Then Exit Do  
  End If
  Loop
  Set rsCari = Nothing
End Sub
Private abt_Click()
frmAbout.Show
End Sub
Private Bantu_Click()
frmHelp.Show
End Sub
Private Combo1_Click()
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tVertex where nmVertex='" & Combo1.Text & "'", CN, 1, 2
  If Not rsCari.EOF Then
    Source.Text = rsCari!KDKategori
    lblNama1.Caption = rsCari!nmVertex
    Combo2.SetFocus
  Else
    Source.Text = ""
End Sub
End If
Set rsCari = Nothing

End Sub

Private Sub Combo2_Click()
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tVertex where nmVertex='" & Combo2.Text & ", CN, 1, 2
If Not rsCari.EOF Then
    Target.Text = rsCari!KDKategori
    lblNama2.Caption = rsCari!nmVertex
    cmdFindPath.Enabled = True
    cmdFindPath.SetFocus
Else
    Target.Text = ""
End If
Set rsCari = Nothing
End Sub

Private Sub mnuData_Click()
Timer2.Enabled = False
Timer1.Enabled = False
Form1.Show
End Sub

Private Sub cmdQuit_Click()
Timer1.Enabled = False
Me.Hide
Unload Me
End Sub

Sub Hapus()
Set rsCari = New ADODB.Recordset
rsCari.Open "Delete from tHasil", CN, 1, 2
Set rsCari = Nothing
End Sub

Private Sub Form_Load()
Call Koneksi
Call Hapus
Call Segar
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tVertex order by nmVertex asc", CN, 1, 2
If Not rsCari.EOF Then
    Do Until rsCari.EOF
        Combo1.AddItem rsCari!nmVertex
        rsCari.MoveNext
        If rsCari.EOF Then
            Exit Do
        End If
    Loop
End If
Set rsCari = Nothing
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tVertex order by nmVertex asc", CN, 1, 2
If Not rsCari.EOF Then
    Do Until rsCari.EOF
        Combo2.AddItem rsCari!nmVertex
        rsCari.MoveNext
        If rsCari.EOF Then

Exit Do
End If
Loop
End If
Set rsCari = Nothing

MainInit
RePlaceCentered1 Me
Me.Left = (Screen.Width - Me.Width) / 2
Me.Top = (Screen.Height - Me.Height) / 2
ClearMap
If (NumCities() < 1) Or (NumStreets < 1) Then
   Unload Me
   Exit Sub
End If
NumNodes = NumCities()
Infinity = 32767
ReDim Street(1 To NumStreets()) As StreetType
ReDim Distance(1 To NumNodes) As Integer
ReDim Path(1 To NumNodes) As Integer
ReDim Included(1 To NumNodes) As Integer
End Sub

Private Sub Form_Unload(Cancel As Integer)
Timer1.Enabled = False
Me.Hide
Unload Me
End Sub

Private Function AllIncluded() As Boolean
   Dim RetVal As Boolean
   Dim i As Integer
   RetVal = True ' Assume all are included
   For i = 1 To NumNodes
      If Included(i) = False Then RetVal = False
   Next
   AllIncluded = RetVal
End Function

Private Sub cmdClear_Click()
Source.Text = ""
Target.Text = ""
List1.Clear
Mileage.Caption = ""
Combo1 = ""
Combo2 = ""
lblNama1 = ""
lblNama2 = ""
ClearMap
picMap.Cls
Call Hapus
End Sub

Private Sub cmdFindPath_Click()
FindPath
End Sub

Private Sub FindPath()
'On Error Resume Next
   Dim Location As Integer
Dim bFirst As Boolean  
Dim sPath As String  
Dim Test As String  
Dim tt As String  
Dim ii As Integer  
Dim i As Integer  
Dim j As Integer  
Dim s As Integer  
Dim t As Integer  
Dim nmVertex As String
ClearMap

For i = 1 To NumStreets()  
Get #1, i, Street(i)  
Next i

For i = 1 To NumCities()  
Get #2, i, GetCity  
Test = UCase(Trim(GetCity))  
If UCase(Trim(Source)) = Test Then s = i  
If UCase(Trim(Target)) = Test Then t = i  
If (s <> 0) And (t <> 0) Then Exit For  
Next

If (s = 0) Or (t = 0) Then  
    MsgBox "***** Lokasi tidak ada **** " + IIf(s = 0, Chr(13) _  
        + Source, ")") + IIf(t = 0, Chr(13) + Target, ")")  
    Exit Sub  
End If

Initialize s, t

Do
    If A_Show Then  
        tt = ""
        For ii = 1 To NumNodes  
            tt = tt + Format(ii, "00") & " " & Format(Distance(ii), _  
                "00000") & " " & Format(Path(ii), "00") & " " & _  
                Format(Included(ii), "00") + Chr(13)  
        Next
        If MsgBox(tt, 1) = vbCancel Then Exit Sub  
    End If
    'distance_1 = Sqr((tt - tt + 1) ^ 2 + (ii - ii + 1) ^ 2)

    j = MinNode()  
    Included(j) = True  
    For i = 1 To NumNodes  
        If Included(i) = False Then  
            ' menghitung jarak terpendek
            If (Weight(j, i) < Infinity) And _  
                (Distance(j) < Infinity) Then  
                If Distance(j) + Weight(j, i) < Distance(i) Then  
                    Distance(i) = Distance(j) + Weight(j, i)  
                    Path(i) = j  
                End If  
            End If  
        End If  
    Next  
    Loop Until AllIncluded()

    j = t
    sPath = Trim(Str(j))
Do
  i = Path(j)
  sPath = Trim(Str(i)) + ", " + sPath
  j = i
  If i = -1 Then
    MsgBox "Tidak ada jalur yang memungkinkan"
    Exit Sub
  End If
Loop Until (i = Path(i))
LastPath = sPath

List1.Clear
List1.AddItem "Jarak Terpendek :"
bFirst = True
Location = InStr(sPath, ",")
Do While Location > 0
  t = Val(Mid(sPath, 1, Location - 1))
  Get #2, t, GetCity
  Call CariID
  Set rsCari = New ADODB.Recordset
  rsCari.Open "Select * from tvertex where KdKategori='" & Trim(GetCity) & "'", CN, 1, 2
  If Not rsCari.EOF Then
    nmVertex = rsCari!nmVertex
  Else
    nmVertex = ""
  End If
  Set rsCari = Nothing
  If bFirst Then
    List1.AddItem "<< " & Trim(GetCity) & " " & RTrim(nmVertex)
    AddBlinkingPoint ReadCoords(t), RGB(0, 255, 0), RGB(0, 200, 0), True
    Call CariID
    Set rsCari = New ADODB.Recordset
    rsCari.Open "tHasil", CN, 1, 2
    rsCari.AddNew
    rsCari!IDHasil = IDHasil
    rsCari!Rute = Trim(GetCity) & " " & RTrim(nmVertex)
    rsCari.Update
    Set rsCari = Nothing
  Else
    List1.AddItem "-o- " & Trim(GetCity) & " " & nmVertex
    Call CariID
    Set rsCari = New ADODB.Recordset
    rsCari.Open "tHasil", CN, 1, 2
    rsCari.AddNew
    rsCari!IDHasil = IDHasil
    rsCari!Rute = Trim(GetCity) & " " & RTrim(nmVertex)
    rsCari.Update
    Set rsCari = Nothing
    AddBlinkingPoint ReadCoords(t), vbYellow
  End If
sPath = Mid(sPath, Location + 1)
Location = InStr(sPath, ",")
bFirst = False
Loop
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tvertex where KdKategori='" & Trim(Target.Text) & ", CN, 1, 2"
If Not rsCari.EOF Then
    nmVertex = rsCari!nmVertex
Else
    nmVertex = ""
End If
Set rsCari = Nothing
Call CariID
Set rsCari = New ADODB.Recordset
rsCari.Open "tHasil", CN, 1, 2
rsCari.AddNew
rsCari!IDHasil = IDHasil
rsCari!Rute = Trim(Target.Text) & " " & RTrim(nmVertex)
rsCari.Update
Set rsCari = Nothing

Call CariID
Set rsCari = New ADODB.Recordset
rsCari.Open "tHasil", CN, 1, 2
rsCari.AddNew
rsCari!IDHasil = IDHasil
rsCari!Jarak = Distance(t)
rsCari.Update
Set rsCari = Nothing
List1.AddItem "--------------------------"
List1.AddItem "Total Jarak " & Distance(t) & " m"
If Distance(t) < 1 Then
    MsgBox "Tujuan tidak boleh sama dengan Asal"
    Exit Sub
End If
AddBlinkingPoint ReadCoords(t), RGB(255, 0, 0), RGB(150, 0, 0), True
Source.SetFocus
End Sub
Private Sub cmdClose_Click()
    Me.Hide
    LastPath = ""
    Unload Me
End Sub
Private Sub Initialize(ByVal s As Integer, ByVal t As Integer)
    Dim Wgt As Integer
    Dim i As Integer
    For i = 1 To NumNodes
        Wgt = Weight(s, i)
        Distance(i) = Wgt
        Included(i) = (s = i)
        If Wgt >= 0 And Wgt <> Infinity Then
            Path(i) = s
        Else
            Path(i) = -1
        End If
        If Distance(i) > Distance(t) Then
            Distance(t) = Distance(i)
            Source.SetFocus
        End If
        If Included(i) Then
            Distance(i) = 0
        End If
    Next i
End Sub
Private Function MinNode() As Integer
    Dim Temp As Integer
    Dim Node As Integer
    Dim Min As Integer
    Dim i As Integer
    Min = Infinity
    For i = 1 To NumNodes
        If Included(i) = False Then
            Temp = i
            If Distance(i) < Min Then
                Min = Distance(i)
                Node = i
            End If
        End If
    Next
    If Min = Infinity Then
        Node = Temp
    End If
    MinNode = Node
End Function

Private Function Weight(ByVal lSource As Integer, ByVal j As Integer) As Integer
    Dim RetVal As Integer
    Dim i As Integer
    RetVal = 0
    If j = lSource Then
        Weight = 0
        Exit Function
    End If
    For i = 1 To UBound(Street)
        If (Street(i).From = lSource And Street(i).To = j) Or _
           (Street(i).From = j And Street(i).To = lSource) Then
            RetVal = Street(i).Wgt
            Exit For
        End If
    Next
    If RetVal = 0 Then RetVal = Infinity
    Weight = RetVal
End Function

Private Sub Form_QueryUnload(Cancel As Integer, UnloadMode As Integer)
    LastPath = ""
    Me.Hide
    Cancel = True
End Sub

Private Sub Source_GotFocus()
    Source.SelStart = 0
    Source.SelLength = Len(Source)
End Sub

Private Sub Source_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
        Case 10, 13

Target.SetFocus
    KeyAscii = 0
End Select
End Sub

Private Sub Target_GotFocus()
    Target.SelStart = 0
    Target.SelLength = Len(Target)
End Sub

Private Sub Target_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
        Case 10, 13
            cmdFindPath_Click
            KeyAscii = 0
    End Select
End Sub

Private Sub Timer1_Timer()
    Static oPickOnMap As Boolean
    Static oPath As String
    Static iBlink As Integer
    Static oTmrBPts As Long
    If Not Me.Visible Then Exit Sub
    If PickOnMap <> oPickOnMap Then
        If PickOnMap Then
            picMap.MousePointer = 2
        Else
            picMap.MousePointer = 0
        End If
        oPickOnMap = PickOnMap
    End If
    If oPath <> LastPath Then
        DrawLastPath
        oPath = LastPath
    End If
    If iBlink = 0 Then
        DrawBlinkingPoints
    End If
    If oTmrBPts <> tmrBPts Then
        picMap.Cls
        DrawLastPath
        oTmrBPts = tmrBPts
    End If
    iBlink = (iBlink + 1) Mod 5
End Sub

Private Sub DrawLastPath()
    Static iRecur As Integer
    Dim Location As Integer
    Dim sPath As String
    Dim P1 As POINTAPI
    Dim P2 As POINTAPI
    Dim t As Integer
    Dim n As Integer
    Dim c As Long
    If iRecur = 0 Then picMap.Cls
    If (Len(Trim(LastPath)) = 0) Then Exit Sub
sPath = LastPath

iRecur = iRecur + 1

Location = InStr(sPath, ",")
Do While Location > 0
    t = Val(Mid(sPath, 1, Location - 1))
    sPath = Mid(sPath, Location + 1)
    Location = InStr(sPath, ",")
    If n > 0 Then
        P2 = ReadCoords(t)
        picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
        picMap.Line (P1.X * Screen.TwipsPerPixelX, P1.Y * Screen.TwipsPerPixelY) - 
        (P2.X * Screen.TwipsPerPixelX, P2.Y * Screen.TwipsPerPixelY), c
        P1 = P2
    Else
        P1 = ReadCoords(t)
        n = 1
    End If
Loop
t = Val(sPath)
If n > 0 Then
    P2 = ReadCoords(t)
    picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
    picMap.Line (P1.X * Screen.TwipsPerPixelX, P1.Y * Screen.TwipsPerPixelY) - 
    (P2.X * Screen.TwipsPerPixelX, P2.Y * Screen.TwipsPerPixelY), c
End If
If iRecur < 2 Then DrawLastPath
iRecur = iRecur - 1
End Sub

Private Sub DrawBlinkingPoints()
    Dim pt As BlinkingPoint
    Dim i As Integer
    Dim X As Single
    Dim Y As Single
    Dim c As Long
    i = 1
    While i <= NumBPts
        pt = BlinkPt(i)
        X = (pt.Pos.X) * Screen.TwipsPerPixelX
        Y = (pt.Pos.Y) * Screen.TwipsPerPixelY
        picMap.DrawWidth = 8
        picMap.Circle (X, Y), 1, vbBlack
        c = IIf(pt.BState > 0, pt.Color2, pt.Color)
        picMap.DrawWidth = 6
        picMap.Circle (X, Y), 1, c
        If pt.Blink Then pt.BState = (pt.BState + 1) Mod 2
        BlinkPt(i) = pt
        i = i + 1
    Wend
End Sub

4. Menu Data
Option Explicit
Private Sub cmdCoordsEdit_Click()
    Dim bExit As Boolean
    Me.Hide
    Form5a.Show
    RePlaceCentered Form5a
    Do Until bExit
        bExit = Not Form5a.Visible
        DoEvents
    Loop
    ClearMap
    RePlaceCentered Me
End Sub

Private Sub cmdEdit_Click()
    Timer1.Enabled = False
    Dim bExit As Boolean
    Me.Hide
    Form3a.Show
    RePlaceCentered3 Form3a
    Do Until bExit
        bExit = Not Form3a.Visible
        DoEvents
    Loop
    ClearMap
    Me.Show
    RePlaceCentered3 Me
End Sub

Private Sub cmdFindPath_Click()
    Dim bExit As Boolean
    Me.Hide
    ClearMap
    Me.Show
    RePlaceCentered Me
End Sub

Private Sub cmdQuit_Click()
    Timer1.Enabled = False
    frmMenu.Timer1.Enabled = True
    Me.Hide
    Unload Me
End Sub

Private Sub Form_Load()
    MainInit
    RePlaceCentered3 Me
End Sub

Private Sub Form_Unload(Cancel As Integer)
    Timer1.Enabled = False
    Me.Hide
    Unload Me
End Sub

5. Edit Verteks
Option Explicit
Private Street As StreetType
Private TString As String * 20
Private SelStreetIndex As Integer

Private Sub cmdClose_Click()
    MsgBox "Ada " & NumCities() & " Dalam file."
    Me.Hide
    Unload Me
End Sub

Private Sub cmdAdd_Click()
    Dim oCity As String
    Dim Test As String
    Dim i As Integer
    FromCity = Trim(FromCity)
    ToCity = Trim(ToCity)
    Distance = Abs(Val(Distance))
    If Len(FromCity) = 0 Or Len(ToCity) = 0 Then
        MsgBox "Input Data Ke dan Dari Vertexs"
        FromCity.SetFocus
        Exit Sub
    End If
    If SelStreetIndex < 1 Then SelStreetIndex = NumStreets() + 1
    Street.From = GetCityIndex(FromCity, True)
    Street.To = GetCityIndex(ToCity, True)
    Street.Wgt = Abs(Val(Distance))
    If (Street.From > 0) And (Street.To > 0) Then
        Put #1, SelStreetIndex, Street
    Else
        MsgBox "Error penambahan vertex!", vbCritical
    End If
    ListCity
    FromCity.SetFocus
End Sub

Private Sub cmdNew_Click()
    SelStreetIndex = 0
    List1.ListIndex = -1
    List1_Click
    Timer1_Timer
    FromCity.SetFocus
End Sub

Private Sub Distance_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
        Case 8, Asc("0") To Asc("9")
        Case 13
            cmdAdd.SetFocus
        Case Else
            KeyAscii = 0
    End Select
End Sub
Private Sub Form_Activate()
    Me.Left = (Screen.Width - Me.Width) / 2
    Me.Top = (Screen.Height - Me.Height) / 2
End Sub

Private Sub Form_Load()
    Me.Left = (Screen.Width - Me.Width) / 2
    Me.Top = (Screen.Height - Me.Height) / 2
    ListCity
End Sub

Private Sub ListCity()
    Dim fCity As String * 20
    Dim tCity As String * 20
    Dim i     As Integer
    List1.Clear
    For i = 1 To NumStreets()
        fCity = String(20, " ")
        tCity = String(20, " ")
        Get #1, i, Street
        Get #2, Street.From, fCity
        Get #2, Street.To, tCity
        List1.AddItem AddTabs(Left(Trim(fCity), 19), 2) & _
           AddTabs(Left(Trim(tCity), 19), 2) & _
           Street.Wgt
    Next i
    GetCity = String(20, " ")
    If SelStreetIndex Then
        If SelStreetIndex > List1.ListCount Then
            List1_Click
        Else
            List1.ListIndex = SelStreetIndex - 1
        End If
    End If
End Sub

Private Sub Form_QueryUnload(Cancel As Integer, UnloadMode As Integer)
    Me.Hide
    Cancel = True
End Sub

Private Sub FromCity_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
    Case 13
        ToCity.SetFocus
        KeyAscii = 0
    End Select
End Sub

Private Sub List1_Click()
    Dim Street  As StreetType
    Dim Point   As POINTAPI
    Dim i       As Integer
    ClearMap
    i = List1.ListIndex
    If i >= 0 Then
        Get #1, i + 1, Street
        FromCity = ReadCity(Street.From)
ToCity = ReadCity(Street.To)

Timer2.Enabled = True
LastPath = Street.From & ", " & Street.To
AddBlinkingPoint ReadCoords(Street.From), RGB(0, 255, 0), RGB(0, 200, 0), True
AddBlinkingPoint ReadCoords(Street.To), RGB(255, 0, 0), RGB(150, 0, 0), True
Distance = Street.Wgt
SelStreetIndex = i + 1
Else
SelStreetIndex = 0
FromCity = ""
ToCity = ""
Distance = "0"
End If
GetCity = String(20, " ")
Timer1_Timer

End Sub

Private Sub Timer1_Timer()
Static oSelStreetIndex As Integer
Static bMap As Boolean

If Not Form3a.Visible Then Exit Sub
If SelStreetIndex <> oSelStreetIndex Then
If SelStreetIndex > 0 Then
cmdNew.Enabled = True
cmdAdd.Caption = "Update Rute"
Else
cmdNew.Enabled = False
cmdAdd.Caption = "Tambah Rute"
End If
Else
SelStreetIndex = oSelStreetIndex
End If
End Sub

Private Sub Timer2_Timer()
Static oPickOnMap As Boolean
Static oPath As String
Static iBlink As Integer
Static oTmrBPts As Long
If Not Me.Visible Then Exit Sub
Pick a Point on the Map ' If PickOnMap <> oPickOnMap Then
If PickOnMap Then
picMap.MousePointer = 2
Else
picMap.MousePointer = 0
End If
Else
oPickOnMap = PickOnMap
End If
Redraw last Path ' If oPath <> LastPath Then
DrawLastPath1
oPath = LastPath
End If
Redraw Location Points '
If iBlink = 0 Then
    DrawBlinkingPoints1
End If
If oTmrBPts <> tmrBPts Then
    picMap.Cls
    DrawLastPath1
    oTmrBPts = tmrBPts
End If
iBlink = (iBlink + 1) Mod 5
End Sub

Private Sub ToCity_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
        Case 13
            Distance.SetFocus
            KeyAscii = 0
    End Select
End Sub

Private Sub DrawLastPath1()
    Static iRecur As Integer
    Dim Location As Integer
    Dim sPath As String
    Dim P1 As POINTAPI
    Dim P2 As POINTAPI
    Dim t As Integer
    Dim n As Integer
    Dim c As Long
    If iRecur = 0 Then picMap.Cls
    If (Len(Trim(LastPath)) = 0) Then Exit Sub
    sPath = LastPath
    iRecur = iRecur + 1
    c = IIf(iRecur = 2, RGB(255, 150, 0), vbBlack)
    Location = InStr(sPath, ",")
    Do While Location > 0
        t = Val(Mid(sPath, 1, Location - 1))
        sPath = Mid(sPath, Location + 1)
        Location = InStr(sPath, ",")
        If n > 0 Then
            P2 = ReadCoords(t)
            picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
            P1 = P2
        Else
            P1 = ReadCoords(t)
        End If
        n = 1
    Loop
    t = Val(sPath)
    If n > 0 Then
        P2 = ReadCoords(t)
        picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
(P2.X * Screen.TwipsPerPixelX, P2.Y * Screen.TwipsPerPixelY), c
End If
If iRecur < 2 Then DrawLastPath1
iRecur = iRecur - 1
End Sub
Private Sub DrawBlinkingPoints1()
Dim pt As BlinkingPoint1
Dim i As Integer
Dim X As Single
Dim Y As Single
Dim c As Long
i = 1
While i <= NumBPts
    pt = BlinkPt(i)
    X = (pt.Pos.X) * Screen.TwipsPerPixelX
    Y = (pt.Pos.Y) * Screen.TwipsPerPixelY
    picMap.DrawWidth = 8
    picMap.Circle (X, Y), 1, vbBlack
    c = IIf(pt.BState > 0, pt.Color2, pt.Color)
    picMap.DrawWidth = 6
    picMap.Circle (X, Y), 1, c
    If pt.Blink Then pt.BState = (pt.BState + 1) Mod 2
    BlinkPt(i) = pt
    i = i + 1
Wend
End Sub

6. Edit Jarak

Private SelCityIndex As Integer
Private Sub Form_Activate()
    Me.Left = (Screen.Width - Me.Width) / 2
    Me.Top = (Screen.Height - Me.Height) / 2
End Sub
Private Sub Form_Load()
    List
End Sub
Private Sub cmdClose_Click()
    ClearBlinkingPoints
    Me.Hide
    Unload Me
End Sub
Private Sub cmdPick_Click()
    If Me.Visible Then
        PickOnMap = Not PickOnMap
    Else
        Me.Show
    End If
End Sub
Private Sub cmdSave_Click()
    Dim Point As POINTAPI
    Dim Tmp As String
    If SelCityIndex Then
Private Sub Form_QueryUnload(Cancel As Integer, UnloadMode As Integer)
    Me.Hide
    Cancel = True
End Sub

Private Sub List1_Click()
    Dim Point As POINTAPI
    Dim i     As Integer
    Timer1.Enabled = True
    i = List1.ListIndex
    EnableControls (i >= 0)
    ClearBlinkingPoints
    If i >= 0 Then
        GetCity = String(20, " ")
        Get #2, i + 1, GetCity
        Get #3, i + 1, Point
        txtCity = Trim(GetCity)
        txtX = Point.X
        txtY = Point.Y
        AddBlinkingPoint Point, , , True
        SelCityIndex = i + 1
        cmdSave.Enabled = True
        cmdPick.Enabled = True
    Else
        SelCityIndex = 0
        txtCity = ""
    End If
    GetCity = String(20, " ")
End Sub

Private Sub EnableControls(ByVal bEnable As Boolean)
    txtY.Enabled = bEnable
    txtX.Enabled = bEnable
    cmdSave.Enabled = bEnable
    cmdPick.Enabled = bEnable
    txtCity.Enabled = bEnable
End Sub

Private Sub Timer1_Timer()
    Dim bMap As Boolean
    If Not Me.Visible Then Exit Sub
    If bMap <> Me.Visible Then
        If Me.Visible Then
            cmdPick.Caption = "Buat Titik Pada Verteks"
        Else
            cmdPick.Caption = "Denah"
        End If
        'RePlaceCenteredJarak Me
        bMap = Me.Visible
    End If
End Sub
Private Sub Timer2_Timer()
    Static oPickOnMap As Boolean
    Static oPath      As String
    Static iBlink     As Integer
    Static oTmrBPts   As Long
    If Not Me.Visible Then Exit Sub
    ' Pick a Point on the Map '    
    If PickOnMap <> oPickOnMap Then
        If PickOnMap Then
            picMap.MousePointer = 2
        Else
            picMap.MousePointer = 0
        End If
        oPickOnMap = PickOnMap
    End If
    ' Redraw last Path '    
    If oPath <> LastPath Then
        DrawLastPath1
        oPath = LastPath
    End If
    ' Redraw Location Points '    
    If iBlink = 0 Then
        DrawBlinkingPoints1
    End If
    If oTmrBPts <> tmrBPts Then
        picMap.Cls
        DrawLastPath1
        oTmrBPts = tmrBPts
    End If
    iBlink = (iBlink + 1) Mod 5
End Sub

Private Sub DrawBlinkingPoints1()
    Dim pt  As BlinkingPoint
    Dim i   As Integer
    Dim X   As Single
    Dim Y   As Single
    Dim c   As Long
    i = 1
    While i <= NumBPts
        pt = BlinkPt(i)
        X = (pt.Pos.X) * Screen.TwipsPerPixelX
        Y = (pt.Pos.Y) * Screen.TwipsPerPixelY
        picMap.DrawWidth = 8
        picMap.Circle (X, Y), 1, vbBlack
        c = IIf(pt.BState > 0, pt.Color2, pt.Color)
        picMap.DrawWidth = 6
        picMap.Circle (X, Y), 1, c
        If pt.Blink Then pt.BState = (pt.BState + 1) Mod 2
        BlinkPt(i) = pt
        i = i + 1
    Wend
End Sub

Private Sub DrawLastPath1()
    Static iRecur As Integer
    Dim Location  As Integer
    Dim sPath     As String
    Dim P1        As POINTAPI
    Dim P2        As POINTAPI
    Dim t         As Integer
Dim n As Integer
Dim c As Long

If iRecur = 0 Then picMap.Cls
If (Len(Trim(LastPath)) = 0) Then Exit Sub
sPath = LastPath

iRecur = iRecur + 1

Location = InStr(sPath, ",")
Do While Location > 0
    t = Val(Mid(sPath, 1, Location - 1))
    sPath = Mid(sPath, Location + 1)
    Location = InStr(sPath, ",")
    If n > 0 Then
        P2 = ReadCoords(t)
        picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
        picMap.Line (P1.X * Screen.TwipsPerPixelX, P1.Y * Screen.TwipsPerPixelY) -
        (P2.X * Screen.TwipsPerPixelX, P2.Y * Screen.TwipsPerPixelY), c
    End If
    n = 1
Loop

If n > 0 Then
    P2 = ReadCoords(t)
    picMap.DrawWidth = IIf(iRecur < 2, 4, 2)
    picMap.Line (P1.X * Screen.TwipsPerPixelX, P1.Y * Screen.TwipsPerPixelY) -
    (P2.X * Screen.TwipsPerPixelX, P2.Y * Screen.TwipsPerPixelY), c
End If
If iRecur < 2 Then DrawLastPath1
iRecur = iRecur - 1
End Sub

Private Sub txtX_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
    Case 8, Asc("0") To Asc("9")
    Case 13
        txtY.SetFocus
    Case Else
        KeyAscii = 0
    End Select
End Sub

Private Sub List()
    Dim Point As POINTAPI
    Dim sCity As String * 20
    Dim i As Integer

    List1.Clear
    For i = 1 To NumCities()
        sCity = String(20, " ")
        Get #2, i, sCity
        Point = ReadCoords(i)
    Next i
End Sub
List1.AddItem AddTabs(Left(Trim(sCity), 19), 2) & _
AddTabs("X: " & Point.X, 1) & _
"Y: " & Point.Y
Next i
If SelCityIndex < 1 Then SelCityIndex = 1
If SelCityIndex > List1.ListCount Then SelCityIndex = List1.ListCount
If List1.ListCount > 0 Then
    List1.ListIndex = SelCityIndex - 1
End If
End Sub

Private Sub txtY_KeyPress(KeyAscii As Integer)
    Select Case KeyAscii
    Case 8, Asc("0") To Asc("9")
    Case 13
        txtY.SetFocus
    Case Else
        KeyAscii = 0
    End Select
End Sub

Private Sub picMap_MouseUp(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Select Case Button
    Case vbLeftButton
        If PickOnMap Then
            If Me.Visible Then
                Me.txtX = X / Screen.TwipsPerPixelX
                Me.txtY = Y / Screen.TwipsPerPixelY
            End If
            PickOnMap = False
        End If
    End If
End Select
End Sub

7. Kordinat

Option Explicit
' Dim X1 As Integer, Y1 As Integer, X2 As Integer, Y2 As Integer, Snap As Integer
Dim X As Single
Dim Y As Single
Dim Sine As Double
Dim bFlag As Boolean
Dim IDVertex As Integer
Dim NmFile As String
Dim bolAda As Boolean
Sub CariID()
    Set rsCari = New ADODB.Recordset
    rsCari.Open "Select * from tVertex order by IDVertex desc", CN, 1, 2
    If Not rsCari.EOF Then
        IDVertex = rsCari!IDVertex + 1
    Else
        IDVertex = 1
    End If
    Set rsCari = Nothing
End Sub
Private Sub cmdAdd_Click()
    cmdAdd.Enabled = False
tambah = True
Cari = False
Combo1.Enabled = True
Combo1.SetFocus
End Sub

Private Sub cmdClear_Click()
    cmdUpdate.Enabled = False
    IDVertex = 0
    txtX.Text = ""
    txtY.Text = ""
    Combo1.Text = ""
    Labell1.Caption = ""
    picMap.Cls
    cmdSave.Enabled = False
    tambah = False
    Cari = True
    Command2.Enabled = False
    txtKet = ""
End Sub

Private Sub cmdExit_Click()
    Unload Me
End Sub

Private Sub cmdSave_Click()
    Call CariID
    Set rsSave = New ADODB.Recordset
    rsSave.Open "tVertex", CN, 1, 2
    rsSave!IDVertex = IDVertex
    rsSave!Kode = "S" & IDVertex
    rsSave!nmVertex = Combo1.Text
    rsSave!Keterangan = txtKet
    rsSave.Update
    Set rsSave = Nothing
    cmdClear_Click
    cmdUpdate.Enabled = False
    Command1.Enabled = False
    Cari = True
    tambah = False
    cmdSave.Enabled = False
End Sub

Private Sub cmdUpdate_Click()
    Set rsUpdate = New ADODB.Recordset
    rsUpdate.Open "Update tVertex SET x=" & txtX.Text & ", y=" & txtY.Text & ", where IDVertex=" & IDVertex & ", CN, 1, 2
    Set rsUpdate = Nothing
    IDVertex = 0
    txtX.Text = ""
    txtY.Text = ""
    Combo1.Text = ""
    Labell1.Caption = ""
    MsgBox "Kordinat vertex telah di Update"
    cmdUpdate.Enabled = False
End Sub

Private Sub Combo1_Click()
    On Error Resume Next
    If Cari = True Then
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tVertex where NmVertex=" & Combo1.Text & "", CN, 1, 2
If Not rsCari.EOF Then
    IDVertex = rsCari!IDVertex
    Combo1 = rsCari!NmVertex
    txtKet.Text = rsCari!Keterangan
    X = rsCari!X
    Y = rsCari!Y
    txtX = X
    txtY = Y
    Command2.Enabled = True
    picMap.DrawWidth = 5
    picMap.PSet (X, Y), RGB(0, 256, 100)
End If
Set rsCari = Nothing
ElseIf tambah = True Then
End If
End Sub

Private Sub Combo1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    If tambah = True Then
        Set rsCari = New ADODB.Recordset
        rsCari.Open "Select * from tVertex where NmVertex=" & Combo1.Text & "", CN, 1, 2
        If Not rsCari.EOF Then
            MsgBox "Verteks Sudah Ada"
            Combo1.Text ="
            bolAda = True
            Combo1.SetFocus
        Else
            bolAda = False
            txtKet.Enabled = True
            txtKet.SetFocus
        End If
        Set rsCari = Nothing
    End If
End If
End Sub

Private Sub Command1_Click()
    Command1.Enabled = False

    picMap.DrawWidth = 8
    picMap.PSet (txtX, txtY), RGB(0, 256, 0)
    cmdUpdate.Enabled = True
End Sub

Private Sub Command2_Click()
If IDVertex <> 0 Then
    Set rsCari = New ADODB.Recordset
    rsCari.Open "Delete from tVertex where IDVertex=" & IDVertex & "", CN, 1, 2
    Set rsCari = Nothing
    cmdClear_Click
    Combo1 ="
Else
    MsgBox "Pilih Vertex yang mau dihapus .."
End If
ElseIf tambah = True Then
End If
End Sub
Private Sub Form_Activate()
    cmdUpdate.Enabled = False
    Command1.Enabled = False
    Cari = True
    tambah = False
    cmdSave.Enabled = False
    Command2.Enabled = False
End Sub

Private Sub Form_Load()
    Call Koneksi
    Set rsCari = New ADODB.Recordset
    rsCari.Open "Select * from tVertex order by IDVertex asc", CN, 1, 2
    If Not rsCari.EOF Then
        Do Until rsCari.EOF
            IDVertex = rsCari!IDVertex
            Combo1.AddItem rsCari!nmVertex
            rsCari.MoveNext
            If rsCari.EOF Then
                Exit Do
            End If
        Loop
    End If
    Set rsCari = Nothing
End Sub

Private Sub picMap_MouseDown(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Label1(1).Caption = "X=" & X & ", Y=" & Y
    txtX.Text = X
    txtY.Text = Y
    Command1.Enabled = True
End Sub

Private Sub picMap_MouseMove(Button As Integer, Shift As Integer, X As Single, Y As Single)
    Label1(1).Caption = "X=" & X & ", Y=" & Y
End Sub

Private Sub txtKet_KeyPress(KeyAscii As Integer)
    If KeyAscii = 13 Then
        If tambah = True Then
            cmdSave.Enabled = True
            cmdSave.SetFocus
        End If
    End If
End Sub

Option Explicit
Dim rsPasswd As Recordset
Private Sub cmdBatal_Click()
    txtUserID.Text = ""
End Sub

8. Data User
txtPasswd.Text = ""
ubah = False
tambah = False
Cari = False
cmdRubah.Enabled = False
cmdHapus.Enabled = False
cmdcari.Enabled = True
cmdtambah.Enabled = True
cmdtambah.SetFocus
End Sub

Private Sub cmdCari_Click()
Cari = True
cmdtambah.Enabled = False
cmdcari.Enabled = False
txUserID.Locked = False
txUserID.SetFocus
End Sub

Private Sub cmdHapus_Click()
Set rsHapus = New ADODB.Recordset
    txUserID.Text = ""
    txtPasswd.Text = ""
    MsgBox "User sudah di hapus ..."
cmdRubah.Enabled = False
cmdHapus.Enabled = False
cmdcari.Enabled = True
cmdtambah.Enabled = True
cmdtambah.SetFocus
End Sub

Private Sub cmdKeluar_Click()
Unload Me
End Sub

Private Sub cmdRubah_Click()
ubah = True
cmdRubah.Enabled = False
cmdHapus.Enabled = False
txPasswd.Locked = False
txPasswd.SetFocus
End Sub

Private Sub cmdTambah_Click()
tambah = True
cmdtambah.Enabled = False
cmdcari.Enabled = False
txUserID.Locked = False
txUserID.SetFocus
End Sub

Private Sub Form_Activate()
txUserID.Locked = True
txPasswd.Text = ""
txUserID.Text = ""
ubah = False
tambah = False
Cari = False
cmdRubah.Enabled = False
cmdHapus.Enabled = False
cmdcari.Enabled = True
cmdtambah.Enabled = True
End Sub
Sub MaTi()
txtUserID.Locked = True
txtPasswd.Locked = True
cmdRubah.Enabled = False
cmdHapus.Enabled = False
End Sub
Sub Bersih()
txtUserID.Text = ""
txtPasswd.Text = ""
End Sub
Private Sub Form_Load()
Koneksi
End Sub
Private Sub txtpasswd_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    Set rsPasswd = New ADODB.Recordset
    rsPasswd.Open "Select * from [tUser] where UserID='" &
txtUserID.Text & "' and Passwd='" & txtPasswd.Text & "'", CN,
adOpenDynamic, adLockOptimistic
    If tambah = True Then
        If rsPasswd.EOF = True Then
            Set rsSimpan = New ADODB.Recordset
            rsSimpan.Open "select * from [tUser]", CN,
adOpenDynamic, adLockOptimistic
            rsSimpan.AddNew
            rsSimpan.Fields("UserID") = txtUserID.Text
            rsSimpan.Fields("Passwd") = txtPasswd.Text
            rsSimpan.Update
            txtUserID.Text = ""
txtPasswd.Text = ""
            Bersih
            MsgBox "Data sudah tersimpan"
            tambah = False
            MaTi
            cmdtambah.Enabled = True
            cmdcari.Enabled = True
            cmdtambah.SetFocus
        Else
            MsgBox "User sudah ada ..."
            txtPasswd.Text = ""
txtUserID.Text = ""
txtUserID.SetFocus
        End If
    ElseIf ubah = True Then
        Set rsUbah = New ADODB.Recordset
        rsUbah.Open "Update [tUser] Set Passwd ='" &
txtPasswd.Text & "' where UserID ='" & txtUserID.Text & "'", CN,
adOpenDynamic, adLockOptimistic
        txtUserID.Text = ""
txtPasswd.Text = ""
    End If
ElseIf ubah = True Then
    Set rsUbah = New ADODB.Recordset
    rsUbah.Open "Update [tUser] Set Passwd ='" &
    txtPasswd.Text & "' where UserID ='" & txtUserID.Text & "'", CN,
adOpenDynamic, adLockOptimistic
    txtUserID.Text = ""
txtPasswd.Text = ""
    ElseIf ubah = True Then
        Set rsUbah = New ADODB.Recordset
        rsUbah.Open "Update [tUser] Set Passwd ='" &
txtPasswd.Text & "' where UserID ='" & txtUserID.Text & "'", CN,
MsgBox "Data sudah Ubah"
ubah = False
MaTi
Bersih
cmdtambah.Enabled = True
cmdcari.Enabled = True
cmdtambah.SetFocus
End If
End If
End Sub

Private Sub txtUserId_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
    If tambah = True Then
        Set rsCari = New ADODB.Recordset
        rsCari.Open "Select * from [tUser] where UserID=" &
txtUserID.Text & "'", CN, adOpenDynamic, adLockOptimistic
        If rsCari.EOF = True Then
            txtPasswd.Locked = False
txtPasswd.SetFocus
        Else
            MsgBox "User sudah ada ..."
txtUserID.Text = ""
txtPasswd.Text = ""
txtUserID.SetFocus
        End If
    ElseIf Cari = True Then
        Set rsCari = New ADODB.Recordset
        rsCari.Open "Select * from [tUser] where UserID=" &
txtUserID.Text & "'", CN, 1, 2
        If rsCari.EOF = True Then
            MsgBox "User belum ada ..."
txtUserID.Text = ""
txtUserID.SetFocus
        Else
            txtPasswd.Text = rsCari.Fields("Passwd")
cmdRubah.Enabled = True
cmdHapus.Enabled = True
cmdRubah.SetFocus
        End If
    End If
End If
End If
End Sub

9. Laporan

Option Explicit
Dim bolAda As Boolean

Private Sub cmdCetak_Click()
If bolAda = True Then
    Call Cetak
End If
End Sub

Private Sub cmdQuit_Click()
Unload Me
End Sub

Sub Cetak()
On Error Resume Next
cr.ReportFileName = App.Path & "\Report1.rpt"
cr.RetrieveDataFiles
cr.Connect = "Provider=Microsoft.Jet.OLEDB.4.0;Data Source= & App.Path & "\dbTS.mdb;Persist Security Info=False"
cr.WindowShowRefreshBtn = True
cr.PrintReport
cr.Action = 1
End Sub

Private Sub Form_Activate()
Set rsCari = New ADODB.Recordset
rsCari.Open "Select * from tHasil order by IDHasil asc", CN, 1, 2
If Not rsCari.EOF Then
  bolAda = True
Else
  bolAda = False
  MsgBox "Data tidak ada"
End If
Set rsCari = Nothing
If bolAda = False Then
  Unload Me
End If
End Sub

Private Sub Form_Load()
Call Koneksi
End Sub

Private Sub Form_Unload(Cancel As Integer)
Unload Me
Home.Show
End Sub