

## LISTING PROGRAM

**\*\*\*\* Login \*\*\*\***

Public Class frmLogin

Private Sub frmLogin\_KeyPress(ByVal sender As Object, ByVal e As System.Windows.Forms.KeyPressEventArgs) Handles Me.KeyPress

    If Asc(e.KeyChar) = Keys.Enter Then

        SendKeys.Send("{tab}")

    End If

End Sub

Private Sub frmLogin\_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load

    Koneksi()

End Sub

Sub cekUser()

    cmd = New OdbcCommand("Select \* from tbuser where user\_id=" & txtUser.Text & "", Conn)

    rd = cmd.ExecuteReader

    rd.Read()

    If Not rd.HasRows Then

        MsgBox("Maaf..., User Id Salah", MsgBoxStyle.Critical, "Perhatian...!")

        txtUser.Text = ""

        txtUser.Focus()

    End If

End Sub

Sub cekPassword()

    cmd = New OdbcCommand("Select \* from tbuser where user\_Id=" & txtUser.Text & " and password=md5(" & txtPass.Text & ")", Conn)

    rd = cmd.ExecuteReader

    rd.Read()

    If rd.HasRows Then

        Me.Visible = False

        frmMenuSAW.Show()

    Else

        MsgBox("Maaf..., Password Salah", MsgBoxStyle.Critical, "Perhatian...!")

        txtPass.Text = ""

        txtPass.Focus()

    Exit Sub

End If

End Sub

Private Sub btnBatal\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnBatal.Click

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Me.Close()  
End Sub
```

**\*\*\*\* Entry Data Pemohon\*\*\*\***

```
Imports System.Data.Odbc  
Public Class frmPemohon  
    Dim cKode_kelas As String  
    Dim valid As Boolean  
    Sub databaru()  
        txtNama.Text = ""  
        txtAlamat.Text = ""  
        txtNama.Focus()  
    End Sub  
    Sub kosongkan()  
        Call tidaksiapisi()  
        txtid.Text = ""  
        txtNama.Text = ""  
        txtAlamat.Text = ""  
        cboKelas.Enabled = True  
        txtid.Enabled = True  
        txtId.Focus()  
        Call TampilPeriode()  
    End Sub  
    Sub siapisi()  
        txtNama.Enabled = True  
        txtAlamat.Enabled = True  
        btnEdit.Enabled = False  
        btnHapus.Enabled = False  
        btnSimpan.Enabled = True  
    End Sub  
    Sub tidaksiapisi()  
        txtNama.Enabled = False  
        txtAlamat.Enabled = False  
        btnSimpan.Enabled = False  
        btnHapus.Enabled = False  
        btnEdit.Enabled = False  
    End Sub  
    Sub TampilGrid()  
        da = New OdbcDataAdapter("Select id_pemohon,nama_pemohon,alamat  
from pemohon where " & _  
                                "kode_kelas = " & cKode_kelas & " and periode = " &  
cboPeriode.Text & " order by id_pemohon", Conn)  
        ds = New DataSet  
        ds.Clear()  
        da.Fill(ds, "pemohon")
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    DGV.DataSource = (ds.Tables("pemohon"))
    DGV.ReadOnly = True
    DGV.AllowUserToAddRows = False
    DGV.Columns(0).Width = 90
    DGV.Columns(1).Width = 170
    DGV.Columns(2).Width = 160

    DGV.GridColor = Color.Blue
    DGV.DefaultCellStyle.ForeColor = Color.Blue
    DGV.RowHeadersDefaultCellStyle.BackColor = Color.DeepPink
    DGV.AlternatingRowsDefaultCellStyle.BackColor = Color.Yellow
    DGV.SelectionMode = DataGridViewSelectionMode.FullRowSelect
    DGV.ColumnHeadersDefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV.Columns(0).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV.Columns(0).HeaderText = "Id Pemohon"
    DGV.Columns(1).HeaderText = "Nama pemohon"
    DGV.Columns(2).HeaderText = "Alamat"

End Sub
Sub TampilKelas()
    cboKelas.Items.Clear()
    cmd = New OdbcCommand("select distinct nama_kelas,kode_kelas from
kelas_benih", Conn)
    rd = cmd.ExecuteReader
    While rd.Read
        cboKelas.Items.Add(rd.Item(0))
    End While
End Sub
Sub TampilPeriode()
    cboPeriode.Items.Clear()
    cmd = New OdbcCommand("select distinct Periode from Pemohon order by
periode desc", Conn)
    rd = cmd.ExecuteReader
    While rd.Read
        cboPeriode.Items.Add(rd.Item(0))
    End While
End Sub
Sub CekData()
    cmd = New OdbcCommand("select * from pemohon where id_pemohon="
& txtId.Text & " " & _
        "and kode_kelas = " & cKode_kelas & " and periode = " &
cboPeriode.Text & "", Conn)
    rd = cmd.ExecuteReader

```

```

rd.Read()
If rd.HasRows = True Then
    txtNama.Text = rd.Item("Nama_Pemohon")
    txtAlamat.Text = rd.Item("Alamat")
    Call tidaksiapisi()
    btnEdit.Enabled = True
    btnHapus.Enabled = True
    txtId.Enabled = False
    cboKelas.Enabled = False
Else
    Call databaru()
    Call siapisi()

End If
End Sub
Sub Validasi()
    If txtId.Text = "" Then
        MsgBox("Id Pemohon Belum diisi", , "Perhatian...!")
        txtId.Focus()
        valid = False
        Exit Sub
    Else
        valid = True
    End If
    If txtNama.Text = "" Then
        MsgBox("Nama Pemohon Belum diisi", , "Perhatian...!")
        txtNama.Focus()
        valid = False
        Exit Sub
    Else
        valid = True
    End If
    If txtAlamat.Text = "" Then
        MsgBox("Alamat Pemohon Belum diisi", , "Perhatian...!")
        txtAlamat.Focus()
        valid = False
        Exit Sub
    Else
        valid = True
    End If
End Sub

```

```

Private Sub cboKelas_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles cboKelas.KeyPress
    e.Handled = True

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End Sub
Private Sub cboKelas_SelectedIndexChanged(ByVal sender As System.Object,
ByVal e As System.EventArgs) Handles cboKelas.SelectedIndexChanged
    cmd = New OdbcCommand("Select * from kelas_benih where
nama_kelas='" & cboKelas.Text & "'", Conn)
    rd = cmd.ExecuteReader
    rd.Read()
    If rd.HasRows Then
        cKode_kelas = rd.Item(0)
    End If
    Call TampilGrid()
End Sub

```

```

Private Sub btnSimpan_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnSimpan.Click
    Call Validasi()
    If valid = True Then
        cmd = New OdbcCommand("Select * from pemohon where
id_pemohon='" & txtId.Text & "' and " & _
            "kode_kelas = '" & cKode_kelas & "' and periode = '" &
cboPeriode.Text & "'", Conn)
        rd = cmd.ExecuteReader
        rd.Read()
        If Not rd.HasRows Then
            Dim sqltambah As String = "Insert into pemohon
(periode,kode_kelas,id_pemohon,nama_pemohon,alamat) values " & _
                "(" & cboPeriode.Text & "','" & cKode_kelas & "','" & txtId.Text & "','"
& txtNama.Text & "','" & txtAlamat.Text & "')"
            cmd = New OdbcCommand(sqltambah, Conn)

        Else
            Dim sqledit As String = "Update pemohon set " & _
                "nama_pemohon='" & txtNama.Text & "', " & _
                "alamat='" & txtAlamat.Text & "' " & _
                " where id_pemohon='" & txtId.Text & "' and kode_kelas = '" &
cKode_kelas & "' and periode = '" & cboPeriode.Text & "'"
            cmd = New OdbcCommand(sqledit, Conn)

        End If
        cmd.ExecuteNonQuery()
        Call TampilGrid()
        Call kosongkan()
    End If
End Sub
Private Sub btnEdit_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnEdit.Click

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    btnEdit.Enabled = False
    btnHapus.Enabled = False
    Call siapisi()
    txtNama.Focus()
End Sub
```

```
Private Sub btnHapus_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnHapus.Click
    cmd = New OdbcCommand("Select * from penilaian where id_pemohon="
& txtId.Text & " and " & _
        "kode_kelas = " & cKode_kelas & " and periode = " &
cboPeriode.Text & "", Conn)
    rd = cmd.ExecuteReader
    rd.Read()
    If rd.HasRows Then
        MsgBox("Maaf, Pemohon tersebut tidak dapat di Hapus...", ,
"Perhatian...!")
    Else
        If MessageBox.Show("Yakin akan dihapus..?", "Hapus Data",
MessageBoxButtons.YesNo) = Windows.Forms.DialogResult.Yes Then
            cmd = New OdbcCommand("Delete from pemohon where
id_pemohon=" & txtId.Text & " and " & _
                "kode_kelas = " & cKode_kelas & " and periode = " &
cboPeriode.Text & "", Conn)
            cmd.ExecuteNonQuery()

            End If
        End If
        Call TampilGrid()
        Call kosongkan()
    End Sub
```

```
Private Sub btnBatal_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnBatal.Click
    Call kosongkan()
End Sub
```

```
Private Sub btnTutup_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnTutup.Click
```

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    Me.Dispose()
End Sub
Private Sub DGV_CellDoubleClick(ByVal sender As Object, ByVal e As
System.Windows.Forms.DataGridViewCellEventArgs) Handles
DGV.CellDoubleClick
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        txtId.Text = DGV.SelectedRows.Item(0).Cells(0).Value()
        Call CekData()
    End Sub

    Private Sub frmPemohon_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles Me.KeyPress
        If Asc(e.KeyChar) = Keys.Enter Then
            SendKeys.Send("{tab}")
        End If
    End Sub

    Private Sub frmPemohon_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
        Call TampilGrid()
        Call databaru()
        Call tidaksiapisi()
        Call kosongkan()
        Call TampilKelas()
        Call TampilPeriode()

    End Sub

    Private Sub txtId_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles txtId.KeyPress
        If e.KeyChar = Chr(13) Then
            Call CekData()
        End If
    End Sub

    Private Sub cboPeriode_Validated(ByVal sender As Object, ByVal e As
System.EventArgs)
        Call TampilGrid()
    End Sub

    Private Sub DGV_CellContentClick(ByVal sender As System.Object, ByVal e
As System.Windows.Forms.DataGridViewCellEventArgs) Handles
DGV.CellContentClick

    End Sub
End Class

```

**\*\*\*\* Laporan Nilai Hasil Perhitungan Metode SAW\*\*\*\***

```

Imports System.Data.Odbc
Public Class FrmProsesSAW
    Dim rd2, rd3, rd4 As OdbcDataReader

```

```

Dim cKode_Kls As String
Dim cKode_cr(50), cKet(50), cId_Pemohon(50) As String
Dim nBobot(50), nMax(50), nMin(50) As Single
Dim A, B, jmlKriteria As Byte
Dim strkode_Kriteria() As String
Sub TampilKelas()
    cboKelas.Items.Clear()
    cmd = New OdbcCommand("select distinct nama_kelas,Kode_Kelas from
Kelas_benih", Conn)
    rd = cmd.ExecuteReader
    While rd.Read
        cboKelas.Items.Add(rd.Item(0))
    End While
End Sub
Sub TampilPeriode()
    cboPeriode.Items.Clear()
    cmd = New OdbcCommand("select distinct Periode from Pemohon order by
periode desc", Conn)
    rd = cmd.ExecuteReader
    While rd.Read
        cboPeriode.Items.Add(rd.Item(0))
    End While
End Sub
Private Sub btnTutup_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnTutup.Click
    Me.Close()
End Sub

Private Sub FrmProsesSAW_Load(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Load
    Call TampilKelas()
    Call TampilPeriode()
End Sub

Private Sub cboKelas_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles cboKelas.KeyPress
    e.Handled = True
End Sub

Private Sub cboKelas_SelectedIndexChanged(ByVal sender As System.Object,
ByVal e As System.EventArgs) Handles cboKelas.SelectedIndexChanged
    cmd = New OdbcCommand("Select * from Kelas_benih where
nama_kelas='" & cboKelas.Text & "'", Conn)
    rd = cmd.ExecuteReader
    rd.Read()
    If rd.HasRows Then

```



```

        cKode_Kls = rd.Item(0)
    End If
End Sub

```

Private Sub btnProses\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProses.Click

```

        cmd = New OdbcCommand("select * from penilaian where Kode_Kelas = '" & cKode_Kls & "' " & _
            "and periode = '" & cboPeriode.Text & "' ", Conn)
        rd = cmd.ExecuteReader
        rd.Read()
        If rd.HasRows = True Then
            Call Penentuan_MaxMin()
            Call Hitung_MatriksR()
            Call Hitung_Perangkingan()
            Call Tampil_Kriteria()
            Call TampilMatriksKeputusan()
            Call TampilHasil_Rangkin()
            Call TampilMatriksTernormalisasi()
        Else
            DGV1.Columns.Clear()
            DGV2.Columns.Clear()
            DGV3.Columns.Clear()
            DGV4.Columns.Clear()
            MsgBox("Maaf, Penilaian untuk Kelas Benih pd Periode tsb, belum ada", ,
                "Perhatian...!")
        End If
    End Sub

```

```

End Sub
Sub Penentuan_MaxMin()
    cmd = New OdbcCommand("select * from kriteria where Kode_Kelas = '" & cKode_Kls & "' order by kode_cr", Conn)
    rd = cmd.ExecuteReader
    A = 0
    While rd.Read
        cKode_cr(A) = rd.Item("kode_cr")
        cKet(A) = rd.Item("jenis_cr")
        nBobot(A) = rd.Item("bobot")
        'Menentukan Nilai Max dan Min

        If cKet(A) = "B" Then
            cmd = New OdbcCommand("select Max(nilai) as nMax from penilaian
                where Kode_Kelas = '" & cKode_Kls & "' " & _

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        "and periode = '" & cboPeriode.Text & "' and Kode_cr = '" &
cKode_cr(A) & "'", Conn)
        rd2 = cmd.ExecuteReader
        rd2.Read()
        If rd2.HasRows = True Then nMax(A) = rd2.Item(0)
        rd2.Close()
    Else
        cmd = New OdbcCommand("select Min(nilai) as nMax from penilaian
where Kode_Kelas = '" & cKode_Kls & "' " & _
        "and periode = '" & cboPeriode.Text & "' and Kode_cr = '" &
cKode_cr(A) & "'", Conn)
        rd2 = cmd.ExecuteReader
        rd2.Read()
        If rd2.HasRows = True Then nMin(A) = rd2.Item(0)
        rd2.Close()
    End If
    A = A + 1
End While
End Sub
Sub Hitung_MatriksR()
    Dim nMatriksR As Single
    Dim cBlkBagi As String
    cmd = New OdbcCommand("select * from penilaian where Kode_Kelas = '"
& cKode_Kls & "' " & _
        "and periode = '" & cboPeriode.Text & "' group by id_pemohon
order by id_pemohon", Conn)
    rd = cmd.ExecuteReader
    A = 0
    Do While rd.Read
        cId_Pemohon(A) = rd.Item("id_pemohon")
        cmd = New OdbcCommand("select * from penilaian where
id_pemohon='" & cId_Pemohon(A) & "' " & _
        "and periode = '" & cboPeriode.Text & "' and Kode_Kelas = '" &
cKode_Kls & "' order by id_pemohon", Conn)
        rd2 = cmd.ExecuteReader
        B = 0
        cBlkBagi = ""
        Do While rd2.Read
            cmd = New OdbcCommand("select * from penilaian where
id_pemohon='" & cId_Pemohon(A) & "' " & _
            "and periode = '" & cboPeriode.Text & "' and Kode_Kelas = '" &
cKode_Kls & "' " & _
            "and kode_cr = '" & cKode_cr(B) & "' order by id_pemohon",
Conn)
            rd3 = cmd.ExecuteReader
            rd3.Read()

```

```

If rd3.HasRows = True Then
    'Menghitung Matriks R
    If cKet(B) = "B" Then
        nMatriksR = rd3.Item("nilai") / nMax(B)
    Else
        nMatriksR = nMin(B) / rd3.Item("nilai")
    End If
    cBlkBagi = Replace(nMatriksR, ",", ".")
End If

'Simpan Hasil ke Tabel Matriks_R
cmd = New OdbcCommand("select * from matriks_R where
id_pemohon=" & cId_Pemohon(A) & " and Kode_Kelas = " & cKode_Kls & "
" & _
    "and periode = " & cboPeriode.Text & " and kode_cr = " &
cKode_cr(B) & "", Conn)
rd4 = cmd.ExecuteReader
rd4.Read()
If Not rd4.HasRows Then
    Dim sqlsimpan As String = "Insert into matriks_r
(periode,Kode_Kelas,id_pemohon,kode_cr,nilai) values " & _
    "(" & cboPeriode.Text & "," & cKode_Kls & "," &
cId_Pemohon(A) & "," & cKode_cr(B) & "," & cBlkBagi & ")"
    cmd = New OdbcCommand(sqlsimpan, Conn)
    cmd.ExecuteNonQuery()
Else
    Dim sqlupdate As String = "update matriks_r set nilai= " & cBlkBagi
& " where id_pemohon=" & cId_Pemohon(A) & " and Kode_Kelas = " &
cKode_Kls & " " & _
    "and periode = " & cboPeriode.Text & " and kode_cr = " &
cKode_cr(B) & " "
    cmd = New OdbcCommand(sqlupdate, Conn)
    cmd.ExecuteNonQuery()
End If
B = B + 1
Loop

A = A + 1
Loop

End Sub
Sub Hitung_Perangkingan()
    Dim nRangkin, nJumlah As Single
    Dim cBltKali, cBltJumlah, cKet As String
    cmd = New OdbcCommand("select * from matriks_r where Kode_Kelas =
" & cKode_Kls & " " & _

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        "and periode = '" & cboPeriode.Text & "' group by id_pemohon
order by id_pemohon", Conn)
    rd = cmd.ExecuteReader
    A = 0

    Do While rd.Read
        cId_Pemohon(A) = rd.Item("id_pemohon")
        cmd = New OdbcCommand("select * from matriks_r where
id_pemohon='" & cId_Pemohon(A) & "' " & _
        "and periode = '" & cboPeriode.Text & "' and Kode_Kelas = '" &
cKode_Kls & "' order by id_pemohon", Conn)
        rd2 = cmd.ExecuteReader
        B = 0
        cBlkKali = ""
        cBlkJumlah = ""
        nJumlah = 0
        Do While rd2.Read
            cmd = New OdbcCommand("select * from matriks_r where
id_pemohon='" & cId_Pemohon(A) & "' " & _
            "and periode = '" & cboPeriode.Text & "' and Kode_Kelas = '" &
cKode_Kls & "' " & _
            "and kode_cr = '" & cKode_cr(B) & "' order by id_pemohon",
Conn)
            rd3 = cmd.ExecuteReader
            rd3.Read()
            If rd3.HasRows = True Then
                'Menghitung Matriks R x Bobot
                nRangkin = rd3.Item("nilai") * nBobot(B)
                nJumlah = nJumlah + nRangkin
                cBlkKali = Replace(nRangkin, ",", ".")
                cBlkJumlah = Replace(nJumlah, ",", ".")
            End If

            'Simpan Hasil Perkalian ke Tabel Hasil_WR
            cmd = New OdbcCommand("select * from matriks_r where
id_pemohon='" & cId_Pemohon(A) & "' and Kode_Kelas = '" & cKode_Kls & "'
" & _
            "and periode = '" & cboPeriode.Text & "' and kode_cr = '" &
cKode_cr(B) & "'", Conn)
            rd4 = cmd.ExecuteReader
            rd4.Read()
            If Not rd4.HasRows Then
                Dim sqlsimpan As String = "Insert into matriks_r
(periode,Kode_Kelas,id_pemohon,kode_cr,hasil_wr) values " & _
                "(" & cboPeriode.Text & "','" & cKode_Kls & "','" &
cId_Pemohon(A) & "','" & cKode_cr(B) & "','" & cBlkKali & "')"

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        cmd = New OdbcCommand(sqlsimpan, Conn)
        cmd.ExecuteNonQuery()
    Else
        Dim sqlupdate As String = "update matriks_r set hasil_wr= " &
cBltKali & " where id_pemohon=" & cId_Pemohon(A) & " and Kode_Kelas = "
& cKode_Kls & " " & _
        "and periode = " & cboPeriode.Text & " and kode_cr = " &
cKode_cr(B) & " "
        cmd = New OdbcCommand(sqlupdate, Conn)
        cmd.ExecuteNonQuery()
    End If
    B = B + 1
Loop
'Simpan Jumlah ke Tabel TotalHasil_WR
cmd = New OdbcCommand("select * from totalhasil_wr where
id_pemohon=" & cId_Pemohon(A) & " and Kode_Kelas = " & cKode_Kls & "
" & _
        "and periode = " & cboPeriode.Text & " ", Conn)
rd4 = cmd.ExecuteReader
rd4.Read()
cmd = New OdbcCommand("select * from penilaian where
id_pemohon=" & cId_Pemohon(A) & " " & _
        "and ket = 'Tidak Layak'", Conn)
rd2 = cmd.ExecuteReader
rd2.Read()
If rd2.HasRows = True Then
    cKet = "Tidak Layak"
Else
    cKet = "Layak"
End If
rd2.Close()
If Not rd4.HasRows Then
    Dim sqlsimpan As String = "Insert into totalhasil_wr
(periode,Kode_Kelas,id_pemohon,tot_nilai,Ket) values " & _
        "(" & cboPeriode.Text & "," & cKode_Kls & "," & cId_Pemohon(A)
& "," & cBltJumlah & "," & cKet & ")"
        cmd = New OdbcCommand(sqlsimpan, Conn)
        cmd.ExecuteNonQuery()
    Else
        Dim sqlupdate As String = "update totalhasil_wr set tot_nilai= " &
cBltJumlah & " , ket=" & cKet & " " & _
        "where id_pemohon=" & cId_Pemohon(A) & " and
Kode_Kelas = " & cKode_Kls & " " & _
        "and periode = " & cboPeriode.Text & " "
        cmd = New OdbcCommand(sqlupdate, Conn)
        cmd.ExecuteNonQuery()
    End If
End Sub

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        End If
        A = A + 1
    Loop

End Sub

Sub Tampil_Kriteria()
    da = New OdbcDataAdapter("Select
Kode_Cr,Nama_Cr,Bobot,If(Jenis_Cr='B','Benefit','Cost') " & _
        "from kriteria where kode_kelas = '" & cKode_Kls & "' order
by kode_cr", Conn)
    ds = New DataSet
    ds.Clear()
    da.Fill(ds, "kriteria")
    DGV1.DataSource = (ds.Tables("kriteria"))
    DGV1.ReadOnly = True
    DGV1.AllowUserToAddRows = False
    DGV1.Columns(0).Width = 80
    DGV1.Columns(1).Width = 200
    DGV1.Columns(2).Width = 80
    DGV1.Columns(3).Width = 90

    DGV1.GridColor = Color.Blue
    DGV1.DefaultCellStyle.ForeColor = Color.Blue
    DGV1.RowHeadersDefaultCellStyle.BackColor = Color.DeepPink
    DGV1.AlternatingRowsDefaultCellStyle.BackColor = Color.Yellow
    DGV1.SelectionMode = DataGridViewSelectionMode.FullRowSelect
    DGV1.ColumnHeadersDefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV1.Columns(0).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV1.Columns(2).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV1.Columns(3).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
    DGV1.Columns(0).HeaderText = "Kode Cr"
    DGV1.Columns(1).HeaderText = "Nama Kriteria"
    DGV1.Columns(2).HeaderText = "Bobot"
    DGV1.Columns(3).HeaderText = "Jenis Kriteria"
End Sub

Sub TampilMatriksKeputusan()
    DGV2.ReadOnly = True
    DGV2.AllowUserToAddRows = False
    DGV2.Columns.Clear()
    DGV2.Rows.Clear()
    DGV2.Columns.Add("kode", "Id Pemohon")
    DGV2.Columns.Add("kode", "Nama Pemohon")

```

```

    DGV2.Columns.Add("kode", "Alamat")
    Dim lstkode_Kriteria As New List(Of String)
    Dim cNilai As String = ""
    Dim sql As String = "Select nama_cr, kode_cr from kriteria where
Kode_Kelas = '" & cKode_Kls & "' order by kode_cr"
    Dim cmd As New OdbcCommand(sql, Conn)
    Dim rd As OdbcDataReader = cmd.ExecuteReader
    While rd.Read
        DGV2.Columns.Add(rd(0), rd(0))
        lstkode_Kriteria.Add(rd(1))
    End While
    strkode_Kriteria = lstkode_Kriteria.ToArray
    jmlKriteria = lstkode_Kriteria.Count
    rd.Close()

    sql = "select id_pemohon, nama_pemohon, Alamat from pemohon where
periode = '" & cboPeriode.Text & "' " & _
        "and Kode_Kelas = '" & cKode_Kls & "' order by id_pemohon "
    cmd = New OdbcCommand(sql, Conn)
    rd = cmd.ExecuteReader
    Dim i As Integer = 0
    While rd.Read
        DGV2.Rows.Add()
        DGV2.Item(0, i).Value = rd(0)
        DGV2.Item(1, i).Value = rd(1)
        DGV2.Item(2, i).Value = rd(2)
        i += 1
    End While
    rd.Close()

    sql = "select * from penilaian where periode = '" & cboPeriode.Text & "' and
Kode_Kelas = '" & cKode_Kls & "'"
    cmd = New OdbcCommand(sql, Conn)
    rd = cmd.ExecuteReader
    If rd.HasRows Then
        rd.Close()
        For j As Integer = 0 To DGV2.RowCount - 1
            sql = "select kode_cr from penilaian where id_pemohon=" &
DGV2.Item(0, j).Value & "'"
            cmd = New OdbcCommand(sql, Conn)
            rd = cmd.ExecuteReader
            i = 0
            While rd.Read
                cmd = New OdbcCommand("select nilai from penilaian where
kode_cr=" & rd(0) & "' and `id_pemohon`=" & DGV2.Item(0, j).Value & "'",
Conn)

```

```

        rd2 = cmd.ExecuteReader
        rd2.Read()
        If rd2.HasRows = True Then
            cNilai = rd2.Item(0)
        End If
        DGV2.Item(i + 3, j).Value = cNilai
        i += 1
    End While
    rd.Close()
Next
Else
    rd.Close()
End If

DGV2.Columns(0).Width = 90
DGV2.Columns(1).Width = 170
DGV2.Columns(2).Width = 150
DGV2.GridColor = Color.Blue
DGV2.DefaultCellStyle.ForeColor = Color.Blue
DGV2.RowHeadersDefaultCellStyle.BackColor = Color.DeepPink
DGV2.AlternatingRowsDefaultCellStyle.BackColor = Color.Yellow
DGV2.SelectionMode = DataGridViewSelectionMode.FullRowSelect
DGV2.ColumnHeadersDefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
DGV2.Columns(0).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
For k As Integer = 3 To jmlKriteria + 2
    DGV2.Columns(k).Width = 70
    DGV2.Columns(k).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
Next

End Sub
Sub TampilMatriksTernormalisasi()
    DGV3.ReadOnly = True
    DGV3.AllowUserToAddRows = False
    DGV3.Columns.Clear()
    DGV3.Rows.Clear()
    DGV3.Columns.Add("kode", "Id Pemohon")
    DGV3.Columns.Add("kode", "Nama Pemohon")
    DGV3.Columns.Add("kode", "Alamat")
    Dim lstkode_Kriteria As New List(Of String)
    Dim cNilai As String = ""
    Dim sql As String = "Select nama_cr,kode_cr from kriteria where
Kode_Kelas = '" & cKode_Kls & "' order by kode_cr"
    Dim cmd As New OdbcCommand(sql, Conn)

```



```

Dim rd As OdbcDataReader = cmd.ExecuteReader
While rd.Read
    DGV3.Columns.Add(rd(0), rd(0))
    lstkode_Kriteria.Add(rd(1))
End While
strkode_Kriteria = lstkode_Kriteria.ToArray
rd.Close()

```

```

sql = "select id_pemohon,nama_pemohon,Alamat from pemohon where
periode = '" & cboPeriode.Text & "' " & _
    "and Kode_Kelas = '" & cKode_Kls & "' order by id_pemohon "
cmd = New OdbcCommand(sql, Conn)
rd = cmd.ExecuteReader
Dim i As Integer = 0
While rd.Read
    DGV3.Rows.Add()
    DGV3.Item(0, i).Value = rd(0)
    DGV3.Item(1, i).Value = rd(1)
    DGV3.Item(2, i).Value = rd(2)
    i += 1
End While
rd.Close()

```

```

sql = "select * from matriks_r where periode = '" & cboPeriode.Text & "' and
Kode_Kelas = '" & cKode_Kls & "'"
cmd = New OdbcCommand(sql, Conn)
rd = cmd.ExecuteReader
If rd.HasRows Then
    rd.Close()
    For j As Integer = 0 To DGV3.RowCount - 1
        sql = "select kode_cr from matriks_r where id_pemohon='" &
DGV2.Item(0, j).Value & "'"
        cmd = New OdbcCommand(sql, Conn)
        rd = cmd.ExecuteReader
        i = 0
        While rd.Read
            cmd = New OdbcCommand("select nilai from matriks_r where
kode_cr='" & rd(0) & "' and `id_pemohon`='" & DGV2.Item(0, j).Value & "'",
Conn)
            rd2 = cmd.ExecuteReader
            rd2.Read()
            If rd2.HasRows = True Then
                cNilai = rd2.Item(0)
            End If
            DGV3.Item(i + 3, j).Value = cNilai
            i += 1

```

```

        End While
        rd.Close()
    Next
Else
    rd.Close()
End If

DGV3.Columns(0).Width = 90
DGV3.Columns(1).Width = 170
DGV3.Columns(2).Width = 150
DGV3.GridColor = Color.Blue
DGV3.DefaultCellStyle.ForeColor = Color.Blue
DGV3.RowHeadersDefaultCellStyle.BackColor = Color.DeepPink
DGV3.AlternatingRowsDefaultCellStyle.BackColor = Color.Yellow
DGV3.SelectionMode = DataGridViewSelectionMode.FullRowSelect
DGV3.ColumnHeadersDefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
DGV3.Columns(0).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
For k As Integer = 3 To jmlKriteria + 2
    DGV3.Columns(k).Width = 70
    DGV3.Columns(k).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
Next

End Sub
Sub TampilHasil_Rangkin()
    da = New OdbcDataAdapter("Select
a.id_pemohon,b.nama_pemohon,b.Aalamat,a.Tot_Nilai,A.Ket " & _
        " from totalhasil_wr a, pemohon b where " & _
        "a.id_pemohon=b.id_pemohon and a.Kode_Kelas = " & _
cKode_Kls & " and " & _
        "a.periode = " & cboPeriode.Text & " and
a.periode=b.periode order by ket,Tot_Nilai Desc", Conn)
    ds = New DataSet
    ds.Clear()
    da.Fill(ds, "totalhasil_wr")
    DGV4.DataSource = (ds.Tables("totalhasil_wr"))
    DGV4.ReadOnly = True
    DGV4.AllowUserToAddRows = False
    DGV4.Columns(0).Width = 90
    DGV4.Columns(1).Width = 170
    DGV4.Columns(2).Width = 160
    DGV4.GridColor = Color.Blue
    DGV4.DefaultCellStyle.ForeColor = Color.Blue
    DGV4.RowHeadersDefaultCellStyle.BackColor = Color.DeepPink

```

```

        DGV4.AlternatingRowsDefaultCellStyle.BackColor = Color.Yellow
        DGV4.SelectionMode = DataGridViewSelectionMode.FullRowSelect
        DGV4.ColumnHeadersDefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
        DGV4.Columns(0).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
        DGV4.Columns(3).DefaultCellStyle.Alignment =
DataGridViewContentAlignment.MiddleCenter
        DGV4.Columns(3).DefaultCellStyle.Format = "0.00"
        DGV4.Columns(0).HeaderText = "Id Pemohon"
        DGV4.Columns(1).HeaderText = "Nama pemohon"
        DGV4.Columns(2).HeaderText = "Alamat"
        DGV4.Columns(3).HeaderText = "Hasil"
        DGV4.Columns(4).HeaderText = "Keterangan"
    End Sub

    Private Sub cboPeriode_KeyPress(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyPressEventArgs) Handles cboPeriode.KeyPress
        e.Handled = True
    End Sub

    Private Sub cboPeriode_SelectedIndexChanged(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
cboPeriode.SelectedIndexChanged

    End Sub
End Class

```