LAPORAN TUGAS BESAR

LANGKAH-LANGKAH PEMBUATAN PROGRAM

Mata Kuliah	: Pemrograman visual
Dosen	: Angga Wahyu Wibowo, S.Kom., M.Eng.

Disusun oleh

Nama	: Muhammad Sultan Rafi
NIM	: 3.34.19.1.15

PROGRAM STUDI TEKNIK INFORMATIKA
JURUSAN TEKNIK ELEKTRO POLITEKNIK
NEGERI SEMARANG
2020

Langkah – Langkah pembuatan program

1. Membuat Database sebagai pengumpulan data.

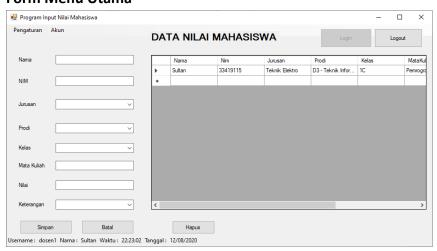|	Tabel ▲	Tindakan							Baris ❓	Jenis	Penyortiran	Ukuran	Beban
☐	db_login	⭐	📄 Jelajahi	📐 Struktur	🔍 Cari	⊱ᶜ Tambahkan	🗑 Kosongkan	⊘ Hapus	2	InnoDB	utf8mb4_general_ci	16.0 KB	-
☐	db_mainmenu	⭐	📄 Jelajahi	📐 Struktur	🔍 Cari	⊱ᶜ Tambahkan	🗑 Kosongkan	⊘ Hapus	1	InnoDB	utf8mb4_general_ci	32.0 KB	-
☐	jurusan	⭐	📄 Jelajahi	📐 Struktur	🔍 Cari	⊱ᶜ Tambahkan	🗑 Kosongkan	⊘ Hapus	5	InnoDB	utf8mb4_general_ci	16.0 KB	-
☐	kelas	⭐	📄 Jelajahi	📐 Struktur	🔍 Cari	⊱ᶜ Tambahkan	🗑 Kosongkan	⊘ Hapus	12	InnoDB	utf8mb4_general_ci	16.0 KB	-
☐	prodi	⭐	📄 Jelajahi	📐 Struktur	🔍 Cari	⊱ᶜ Tambahkan	🗑 Kosongkan	⊘ Hapus	26	InnoDB	utf8mb4_general_ci	16.0 KB	-
	5 tabel	Jumlah							46	InnoDB	utf8mb4_general_ci	96.0 KB	0 B

- db_login berisi kumpulan data username dan password user
- db_mainmenu berisi kumpulan data nilai mahasiswa
- jurusan berisi kumpulan nama jurusan
- prodi berisi kumpulan nama program studi

2. Membuat modul untuk menghubungkan antara database dengan program.
   Pilih Project -> Add module -> Beri nama module -> add.
   Lalu masukkan coding berikut.

```
Imports System.Data.Odbc
Module Module1
    Public Conn As New OdbcConnection
    Public Da As OdbcDataAdapter
    Public Ds As DataSet
    Public Rd As OdbcDataReader
    Public Cmd As OdbcCommand
    Public MyDb As String
    Public Sub Koneksi()
        MyDb = "Driver={Mysql ODBC 3.51
Driver};Database=db_inputnilai;server=localhost;uid=root"
        Conn = New OdbcConnection(MyDb)
        If Conn.State = ConnectionState.Closed Then Conn.Open()
    End Sub
End Module
```

3. Membuat form yang dibutuhkan program, yaitu form menu utama, login, dan ganti password.
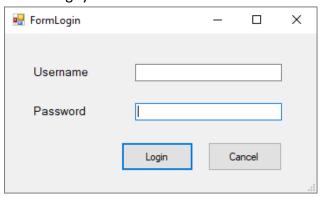   **Form Menu Utama**

Tools yang dibutuhkan pada form ini adalah toolstrip, label, textbox, button, dan data grid view.

a. Toolstrip menu item yang digunakan hanya dua, yaitu pengaturan dan akun. Pada toolstrip pengaturan terdapat sub-toolstrip yaitu Login, Logout, dan keluar.

- **Login**

    berfungsi untuk user ketika ingin masuk menggunakan program. Form Login terhubung dengan database db_login. Jika Username dan Password terdapat pada database dan diisi dengan benar maka login akan berhasil. Pada form ini menggunakan tools label, textbox dan button. Berikut adalah Interface dan Codingnya.


```vb
Imports System.Data.Odbc
Public Class FormLogin
    Private Sub Cancel_Click(sender As Object, e As EventArgs) Handles Cancel.Click
        Me.Hide()
    End Sub
    Sub terbuka()
        FormMenuUtama.LoginToolStripMenuItem.Enabled = False
        FormMenuUtama.LogoutToolStripMenuItem.Enabled = True
        FormMenuUtama.KeluarToolStripMenuItem.Enabled = True
        FormMenuUtama.AkunToolStripMenuItem.Enabled = True
        FormMenuUtama.Button2.Enabled = True
        FormMenuUtama.Simpan.Enabled = True
        FormMenuUtama.Button1.Enabled = False
        FormMenuUtama.Batal.Enabled = True
        FormMenuUtama.Button3.Enabled = True
        FormMenuUtama.TextBox1.Enabled = True
        FormMenuUtama.TextBox2.Enabled = True
        FormMenuUtama.TextBox3.Enabled = True
        FormMenuUtama.ComboBox1.Enabled = True
        FormMenuUtama.ComboBox2.Enabled = True
        FormMenuUtama.ComboBox3.Enabled = True
        FormMenuUtama.TextBox4.Enabled = True
        FormMenuUtama.ComboBox5.Enabled = True
        FormMenuUtama.TextBox1.Text = ""
        FormMenuUtama.TextBox2.Text = ""
        FormMenuUtama.TextBox3.Text = ""
        FormMenuUtama.ComboBox5.Items.Add("Lulus")
        FormMenuUtama.ComboBox5.Items.Add("Remidial")
        FormMenuUtama.DataGridView1.Enabled = True
        FormMenuUtama.DataGridView1.Visible = True
        Call Koneksi()
        Da = New OdbcDataAdapter("Select Nama,Nim,Jurusan,Prodi,Kelas,MataKuliah,Nilai,Keterangan From db_mainmenu", Conn)
        Ds = New DataSet
```

```vb
        Da.Fill(Ds, "db_mainmenu")
        FormMenuUtama.DataGridView1.DataSource = Ds.Tables("db_mainmenu")
        FormMenuUtama.DataGridView1.ReadOnly = True
        FormMenuUtama.kondisiawal()

    End Sub

    Sub kondisiawal()
        TextBox1.Text = ""
        TextBox2.Text = ""
    End Sub

    Private Sub Login_Click(sender As Object, e As EventArgs) Handles Login.Click
        If TextBox1.Text = "" Or TextBox2.Text = "" Then
            MsgBox("Username dan Password Tidak Boleh Kosong !")
        Else
            Call Koneksi()
            Cmd = New OdbcCommand("Select * From db_login where Username='" &
TextBox1.Text & "' and Password='" & TextBox2.Text & "'", Conn)
            Rd = Cmd.ExecuteReader
            Rd.Read()
            If Rd.HasRows Then
                Me.Close()
                Call terbuka()
                FormMenuUtama.TSLabel2.Text = Rd!Username
                FormMenuUtama.TSLabel4.Text = Rd!Nama
            Else
                MsgBox("Username atau Password Salah !")
            End If
        End If
    End Sub

    Private Sub FormLogin_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        Call kondisiawal()
    End Sub
    End Class
```
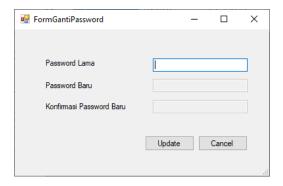
- **Logout**

Pada fungsi ini tidak terdapat interface/form. Fungsi ini berfungsi untuk men-disable seluruh tools yang terdapat pada main menu dan mengharuskan user untuk melakukan login.

- **Keluar**

Fungsi ini berfungsi untuk memberhentikan program.

Toolstrip menu item Akun

Pada toolstrip ini hanya terdapat satu sub-toolstrip, yaitu Ganti password. Ganti password berfungsi untuk mengubah password user. Form Ganti Password terhubung dengan database db_login. Cara kerja ganti password adalah dengan mengharuskan user memasukkan password lama terlebih dahulu dengan benar. Jika benar, maka textbox untuk mengisi password baru akan ter-enable. Jika salah, maka textbox tidak akan terbuka. Berikut adalah interface dan codingnya.

```vbnet
Imports System.Data.Odbc
Public Class FormGantiPassword

    Private Sub Button2_Click(sender As Object, e As EventArgs) Handles Button2.Click
        Me.Close()
    End Sub
    Sub kondisiawal()
        TextBox1.Text = ""
        TextBox2.Text = ""
        TextBox3.Text = ""
        TextBox1.Enabled = True
        TextBox2.Enabled = False
        TextBox3.Enabled = False
    End Sub

    Private Sub TextBox1_TextChanged(sender As Object, e As EventArgs) Handles
TextBox1.TextChanged

    End Sub

    Private Sub TextBox1_KeyPress(sender As Object, e As KeyPressEventArgs) Handles
TextBox1.KeyPress
        If e.KeyChar = Chr(13) Then
            Call Koneksi()
            Cmd = New OdbcCommand("Select * from db_login where Username= '" &
FormMenuUtama.TSLabel2.Text & "' and Password = '" & TextBox1.Text & "'", Conn)
            Rd = Cmd.ExecuteReader
            Rd.Read()
            If Rd.HasRows Then
                TextBox1.Enabled = False
                TextBox2.Enabled = True
                TextBox2.Focus()
                TextBox3.Enabled = True
            Else
                MsgBox("Password Lama Salah !")
                TextBox1.Text = ""
            End If
        End If
    End Sub

    Private Sub FormGantiPassword_Load(sender As Object, e As EventArgs) Handles
MyBase.Load
        Call kondisiawal()
    End Sub

    Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
        If TextBox2.Text = "" Or TextBox3.Text = "" Then
            MsgBox("Password Baru Harus Diisi!")
        Else
            If TextBox2.Text <> TextBox3.Text Then
```
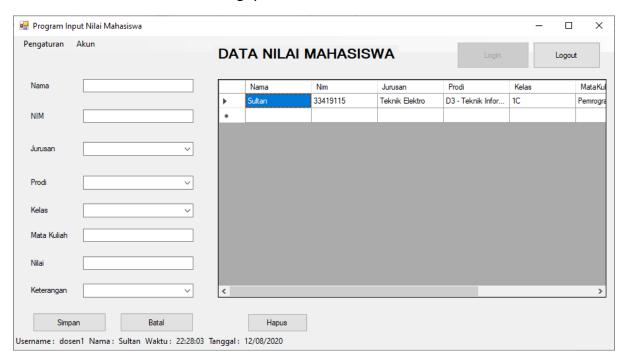
```
                MsgBox("Password Baru dan Konfirmasi Password Baru Harus Sama!")
            Else
                Call Koneksi()
                Dim EditPass As String = "Update db_login set Password = '" &
TextBox3.Text & "' where Username = '" & FormMenuUtama.TSLabel2.Text & "'"
                Cmd = New OdbcCommand(EditPass, Conn)
                Cmd.ExecuteNonQuery()
                MsgBox("Ganti Password Berhasil !")
                Me.Close()
            End If
        End If
    End Sub
End Class
```

Form Menu Utama

Form Menu Utama berfungsi sebagai Form Utama pada program ini. Form ini terhubung dengan database db_login, db_mainmenu, db_jurusan, dan db_prodi. Pada form ini terdapat fitur simpan, batal, dan hapus.

- Simpan berfungsi untuk menyimpan data yang telah diisi oleh user. Jika user tidak mengisi semua textbox maka data tidak dapat tersimpan.
- Batal berfungsi untuk menghapus seluruh textbox secara instan.
- Hapus berfungsi untuk menghapus data yang terdapat pada database yang ditampilkan oleh data grid view.

Berikut adalah interface dan codingnya


```
Imports System.Data.Odbc
Public Class FormMenuUtama
    Sub Terkunci()
        LoginToolStripMenuItem.Enabled = True
        LogoutToolStripMenuItem.Enabled = False
```

```vb
            KeluarToolStripMenuItem.Enabled = True
            AkunToolStripMenuItem.Enabled = False
            Button2.Enabled = False
            Button1.Enabled = True
            Button3.Enabled = False
            Simpan.Enabled = False
            Batal.Enabled = False
            TextBox1.Enabled = False
            TextBox2.Enabled = False
            TextBox3.Enabled = False
            ComboBox1.Enabled = False
            ComboBox2.Enabled = False
            ComboBox3.Enabled = False
            TextBox4.Enabled = False
            ComboBox5.Enabled = False
            DataGridView1.Enabled = False
            DataGridView1.Visible = False
    End Sub
    Sub kondisiawal()
        TextBox1.Text = ""
        TextBox2.Text = ""
        TextBox3.Text = ""
        ComboBox1.Text = ""
        ComboBox2.Text = ""
        ComboBox3.Text = ""
        TextBox4.Text = ""
        ComboBox5.Text = ""
        Call Koneksi()
        Da = New OdbcDataAdapter("Select
Nama,Nim,Jurusan,Prodi,Kelas,MataKuliah,Nilai,Keterangan From db_mainmenu", Conn)
        Ds = New DataSet
        Da.Fill(Ds, "db_mainmenu")
        DataGridView1.DataSource = Ds.Tables("db_mainmenu")
        DataGridView1.ReadOnly = True

        Da = New OdbcDataAdapter("select * from jurusan", Conn)
        Ds = New DataSet
        Da.Fill(Ds, "jurusan")
        ComboBox1.Items.Clear
        For Each Row As DataRow In Ds.Tables(0).Rows
            ComboBox1.Items.Add(Row("namajurusan").ToString())
        Next
        ComboBox3.Items.Clear()
        ComboBox3.Items.Add("1A")
        ComboBox3.Items.Add("1B")
        ComboBox3.Items.Add("1C")
        ComboBox3.Items.Add("1D")
        ComboBox3.Items.Add("1E")
        ComboBox3.Items.Add("2A")
        ComboBox3.Items.Add("2B")
        ComboBox3.Items.Add("2C")
        ComboBox3.Items.Add("2D")
        ComboBox3.Items.Add("2E")
        ComboBox3.Items.Add("3A")
        ComboBox3.Items.Add("3B")
        ComboBox3.Items.Add("3C")
        ComboBox3.Items.Add("3D")
        ComboBox3.Items.Add("3E")


    End Sub
```

```vb
    Private Sub FormMenuUtama_Load(sender As Object, e As EventArgs) Handles
MyBase.Load
        Call Terkunci()
        TSLabel8.Text = Today
    End Sub

    Private Sub LogoutToolStripMenuItem_Click(sender As Object, e As EventArgs)
Handles LogoutToolStripMenuItem.Click
        Call Terkunci()
    End Sub

    Private Sub LoginToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles
LoginToolStripMenuItem.Click
        FormLogin.ShowDialog()
    End Sub

    Private Sub KeluarToolStripMenuItem_Click(sender As Object, e As EventArgs)
Handles KeluarToolStripMenuItem.Click
        End
    End Sub

    Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
        FormLogin.ShowDialog()
    End Sub

    Private Sub Button2_Click(sender As Object, e As EventArgs) Handles Button2.Click
        Call Terkunci()
    End Sub

    Private Sub Simpan_Click(sender As Object, e As EventArgs) Handles Simpan.Click
        If TextBox1.Text = "" Or TextBox2.Text = "" Or TextBox3.Text = "" Or
ComboBox1.Text = "" Or ComboBox2.Text = "" Or ComboBox3.Text = "" Or TextBox4.Text =
"" Or ComboBox5.Text = "" Then
            MsgBox("Error! Silahkan isi semua data terlebih dahulu")
        Else
            Call Koneksi()
            Dim InputNilai As String = "Insert into db_mainmenu values('" &
TextBox1.Text & "','" & TextBox2.Text & "','" & ComboBox1.Text & "','" &
ComboBox2.Text & "','" & ComboBox3.Text & "','" & TextBox4.Text & "','" &
TextBox3.Text & "','" & ComboBox5.Text & "')"
            Cmd = New OdbcCommand(InputNilai, Conn)
            Cmd.ExecuteNonQuery()
            MsgBox("Data Berhasil Disimpan")
            Call kondisiawal()
        End If
    End Sub

    Private Sub ComboBox1_SelectedIndexChanged(sender As Object, e As EventArgs)
Handles ComboBox1.SelectedIndexChanged
        Call Koneksi()
        Da = New OdbcDataAdapter("Select idprodi, namaprodi From prodi where idjurusan
in (select idjurusan from jurusan where namajurusan = '" + ComboBox1.Text + "')",
Conn)
        Ds = New DataSet
        Da.Fill(Ds, "prodi")
        ComboBox2.Items.Clear()

        For Each Row As DataRow In Ds.Tables(0).Rows
            ComboBox2.Items.Add(Row("namaprodi").ToString())
        Next
    End Sub
```

```vbnet
    Private Sub ComboBox2_SelectedIndexChanged(sender As Object, e As EventArgs)
Handles ComboBox2.SelectedIndexChanged
        Da = New OdbcDataAdapter("Select idkelas, namakelas From kelas where idprodi
in (select idprodi from prodi where namaprodi = '" + ComboBox2.Text + "')", Conn)
        Ds = New DataSet
        Da.Fill(Ds, "kelas")

    End Sub

    Private Sub GantiPasswordToolStripMenuItem_Click(sender As Object, e As EventArgs)
Handles GantiPasswordToolStripMenuItem.Click
        FormGantiPassword.ShowDialog()
    End Sub

    Private Sub ToolStrip1_ItemClicked(sender As Object, e As
ToolStripItemClickedEventArgs) Handles ToolStrip1.ItemClicked

    End Sub

    Private Sub Timer1_Tick(sender As Object, e As EventArgs) Handles Timer1.Tick
        TSLabel6.Text = TimeOfDay
    End Sub

    Private Sub Hapus_Click(sender As Object, e As EventArgs) Handles Batal.Click
        Call kondisiawal()
    End Sub

    Private Sub Button3_Click(sender As Object, e As EventArgs) Handles Button3.Click
        REM MsgBox(DataGridView1.SelectedRows(0).Cells(0).Value.ToString)
        FormHapusData.ShowDialog()


    End Sub

    Private Sub DataGridView1_CellContentClick(sender As Object, e As
DataGridViewCellEventArgs) Handles DataGridView1.CellContentClick
    End Sub

    Private Sub TSLabel1_Click(sender As Object, e As EventArgs) Handles
TSLabel1.Click

    End Sub

    Private Sub ComboBox4_SelectedIndexChanged(sender As Object, e As EventArgs)

    End Sub

    Private Sub ComboBox3_SelectedIndexChanged_1(sender As Object, e As EventArgs)
Handles ComboBox3.SelectedIndexChanged

    End Sub
End Class
```