

PEMOGRAMAN BASIS DATA JARINGAN

TUGAS BESAR AKHIR SEMESTER



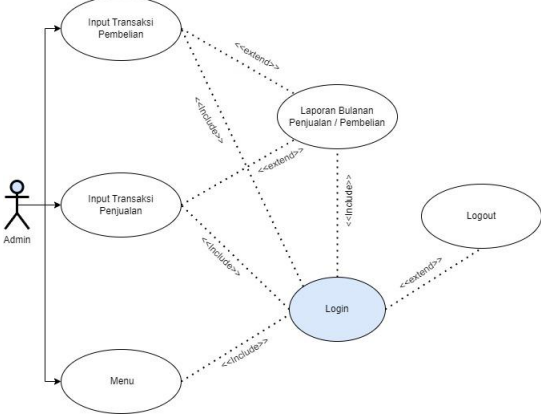
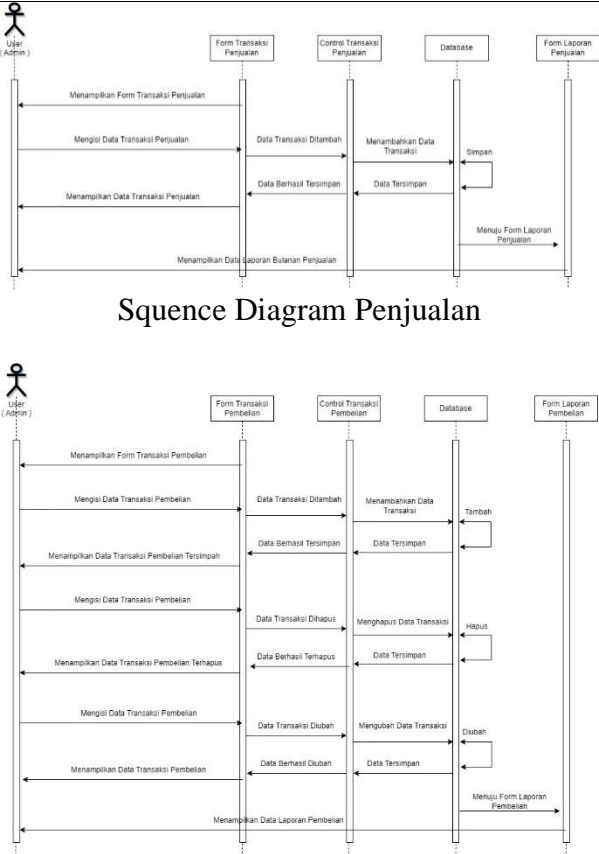
Mata Kuliah : Pemograman Basis Data Jaringan
Dosen : Mardiyono, S.Kom., M.Sc
Disusun oleh : Aditya Kurniawan (3.34.20.2.01)
Arina Hasanah (3.34.20.2.05)
Hilal Al Hamdi (3.34.20.2.12)
Kelas : IK-3C

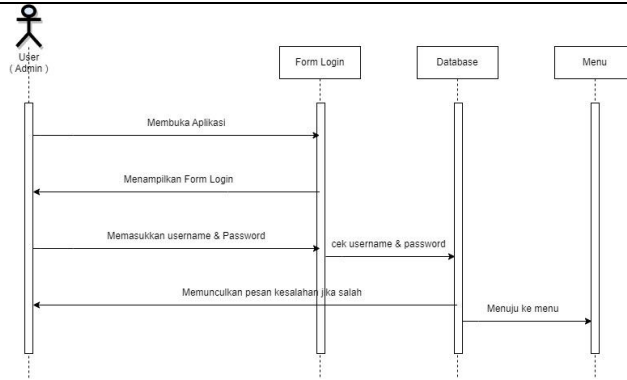
PROGRAM STUDI TEKNIK INFORMATIKA

JURUSAN TEKNIK ELEKTRO

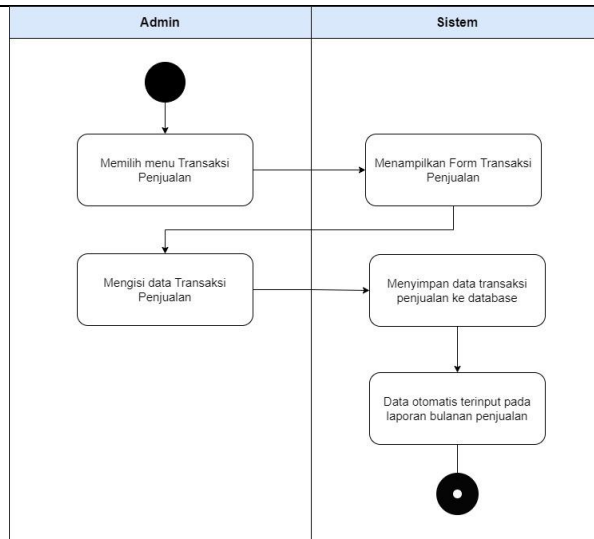
POLITEKNIK NEGERI SEMARANG

2023

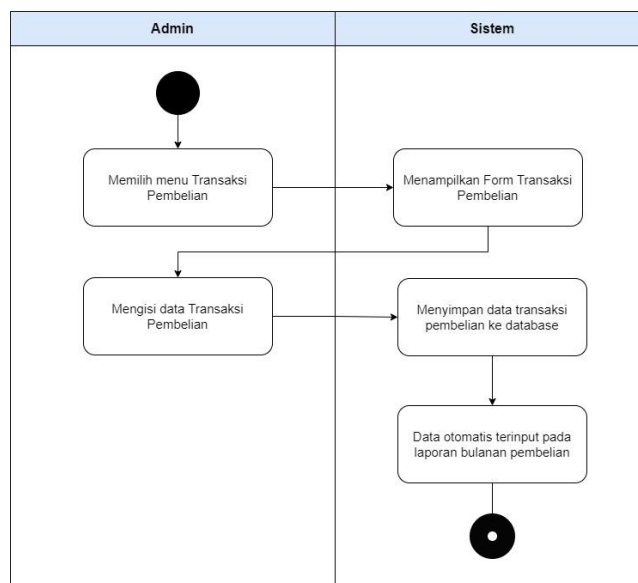
No	Daftar	Isi	Penanggung Jawab
1.	Design UML	 <pre> graph LR Admin((Admin)) InputPembelian([Input Transaksi Pembelian]) InputPenjualan([Input Transaksi Penjualan]) Menu([Menu]) Login([Login]) Laporan([Laporan Bulanan Penjualan / Pembelian]) Logout([Logout]) Admin --> InputPembelian Admin --> InputPenjualan Admin --> Menu Admin --> Login Admin --> Laporan Admin --> Logout InputPembelian -.-> <<include>> Login InputPenjualan -.-> <<include>> Login Menu -.-> <<include>> Login Laporan -.-> <<include>> Login Login -.-> <<extend>> Logout </pre> <p style="text-align: center;">Use Case</p>	Aditya Kurniawan
		 <p style="text-align: center;">Sequence Diagram Penjualan</p> <p style="text-align: center;">Sequence Diagram Pembelian</p>	Aditya Kurniawan



Sequence Diagram Login



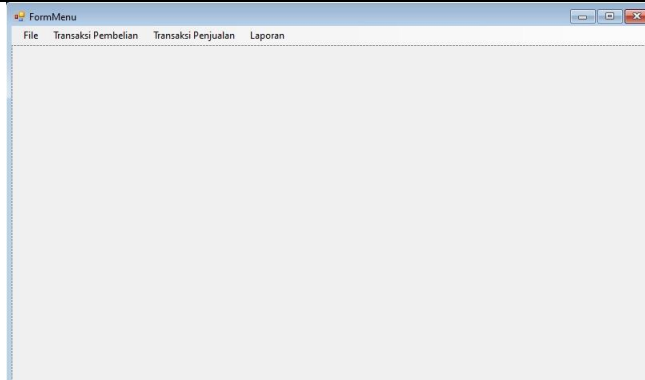
Activity Diagram Penjualan



Activity Diagram Pembelian

Hilal Al Hamdi

		<div data-bbox="534 226 1153 701"> <pre> graph TD subgraph Admin START((START)) --> MLogin[Melakukan Login] MLogin --> MUsername[Menginputkan Username] MUsername --> MPassword[Menginputkan Password] end subgraph Sistem CUP[Cek Username dan Password] --> Validasi{Validasi} Validasi -- Data Valid --> MS[Masuk ke dalam Sistem] MS --> END((END)) Validasi -- Tidak Valid --> E[Error / Tidak dapat Masuk] E --> MPassword end MPassword --> CUP </pre> </div> <p>Activity Diagram Login</p>	
2.	Databas e	<div data-bbox="512 739 1168 1406"> <pre> erDiagram Tabel_Admin --o{ Tabel_Penjualan : "FK" Tabel_Admin --o{ Tabel_Laporan_Pembelian : "FK" Tabel_Supplier --o{ Tabel_Pembelian : "FK" Tabel_Supplier --o{ Tabel_Penjualan : "FK" Tabel_Obat --o{ Tabel_Pembelian : "FK" Tabel_Obat --o{ Tabel_Penjualan : "FK" Tabel_Pembelian --o{ Tabel_Laporan_Pembelian : "FK" Tabel_Pembelian --o{ Tabel_Laporan_Penjualan : "FK" Tabel_Penjualan --o{ Tabel_Laporan_Penjualan : "FK" </pre> </div> <p>ERD</p>	Arina Hasanah
3.	Form	<div data-bbox="517 1489 1171 1881"> </div> <p>Login</p>	Aditya Kurniawan



Aditya
Kurniawan

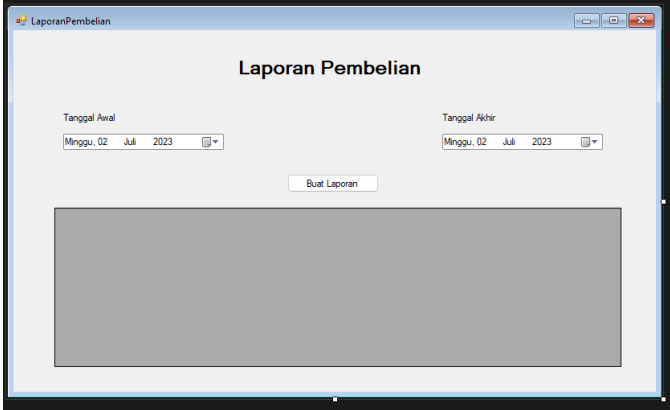
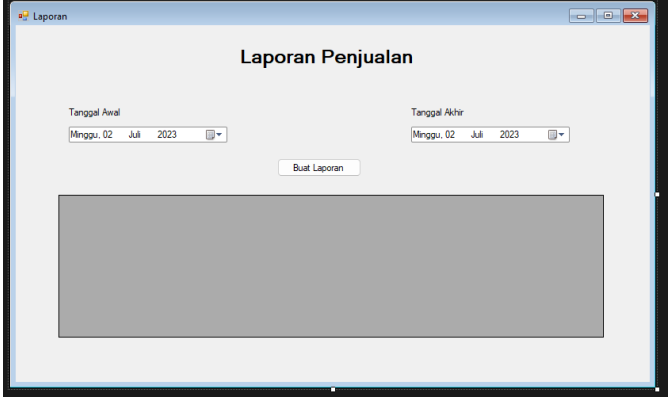
Menu

Arina
Hasanah

Transaksi Pembelian

Arina
Hasanah

Transaksi Penjualan

		 <p>Laporan Pembelian</p>	Hilal Al Hamdi
		 <p>Laporan Penjualan</p>	Hilal Al Hamdi
4.	Coding	<p>Login</p> <pre>Imports System.Data.SqlClient Imports System.Windows Public Class Login Dim connectionString As String = "Data Source=ADITYA-PC\ADITSQLSERVER; " & "user id=sa; password=123456; Integrated Security=True; " & "database=Apotek" Dim ADP As SqlDataAdapter Dim DS As New DataSet Private Sub btnLogin_Click(sender As Object, e As EventArgs) Handles btnLogin.Click Dim username As String = txtUsername.Text Dim password As String = txtPassword.Text Using connection As New SqlConnection(connectionString) Dim query As String = "SELECT COUNT(*) FROM Tabel_Admin WHERE Username = @Username AND Password = @Password" Dim command As New SqlCommand(query, connection)</pre>	Aditya Kurniawan

		<pre> command.Parameters.AddWithValue("@Username", username) command.Parameters.AddWithValue("@Password", password) connection.Open() Dim result As Integer = Convert.ToInt32(command.ExecuteScalar()) If result > 0 Then MessageBox.Show("Login sukses!") ' Menutup form login Me.Hide() ' Membuka form menu Dim menuForm As New Menu() menuForm.ShowDialog() ' Setelah form menu ditutup, tampilkan kembali form login Me.Show() Else MessageBox.Show("Username atau password salah!") End If End Using End Sub Private Sub FormLogin_Load(sender As Object, e As EventArgs) Handles MyBase.Load End Sub Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load End Sub End Class </pre>	
		<pre> Menu Public Class Menu Private Sub LoginToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles LoginToolStripMenuItem.Click Login.ShowDialog() End Sub Sub Terkunci() LoginToolStripMenuItem.Enabled = True LogoutToolStripMenuItem.Enabled = True End Sub Private Sub Menu_Load(sender As Object, e As EventArgs) Handles MyBase.Load </pre>	Aditya Kurniawan

		<pre> Call Terkunci() End Sub Private Sub Panel1_Paint(sender As Object, e As PaintEventArgs) Handles Panel1.Paint End Sub Private Sub TransaksiPembelianToolStripMenuItem_Click(se nder As Object, e As EventArgs) Handles TransaksiPembelianToolStripMenuItem.Click sembunyi() transaksi_pembelian.TopLevel = False Panel1.Controls.Add(transaksi_pembelian) transaksi_pembelian.Show() End Sub Private Sub TransaksiPenjualanToolStripMenuItem_Click(se nder As Object, e As EventArgs) Handles TransaksiPenjualanToolStripMenuItem.Click sembunyi() transaksi_penjualan.TopLevel = False Panel1.Controls.Add(transaksi_penjualan) transaksi_penjualan.Show() End Sub Private Sub LaporanPenjualanToolStripMenuItem_Click(send er As Object, e As EventArgs) Handles LaporanPembelianToolStripMenuItem.Click LaporanPenjualan.TopLevel = False Panel1.Controls.Add(LaporanPenjualan) LaporanPenjualan.Show() End Sub Private Sub LaporanPembelianToolStripMenuItem2_Click(sen der As Object, e As EventArgs) Handles LaporanPembelianToolStripMenuItem.Click LaporanPembelian.TopLevel = False Panel1.Controls.Add(LaporanPembelian) LaporanPembelian.Show() End Sub Sub sembunyi() transaksi_pembelian.Hide() transaksi_penjualan.Hide() End Sub </pre>	
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		<pre> Private Sub LogoutToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles LogoutToolStripMenuItem.Click End End Sub End Class </pre>	
		<p>Transaksi Pembelian</p> <pre> Imports System.Data.SqlClient Public Class transaksi_pembelian Public connectionString As String = "Data Source=ADITYA-PC\ADITSQLESERVER; " & "user id=sa; password=123456; Integrated Security=True; " & "database=Apotek" Dim connection As SqlConnection Dim command As SqlCommand Dim adapter As SqlDataAdapter Dim dataTable As DataTable Sub TampilObat() Cbxjenisobat.Items.Add("Sirup") Cbxjenisobat.Items.Add("Tablet") Cbxjenisobat.Items.Add("Pil") Cbxjenisobat.Items.Add("Capsul") End Sub Private Sub transaksi_pembelian_Load(sender As Object, e As EventArgs) Handles MyBase.Load 'connection.Open() LoadData() TampilObat() start() End Sub Private Sub LoadData() Dim query As String = "SELECT * FROM DataPembelian" command = New SqlCommand(query, connection) adapter = New SqlDataAdapter(command) dataTable = New DataTable() 'adapter.Fill(dataTable) dgvpembelian.DataSource = dataTable End Sub Sub start() Try Using connection As New SqlConnection(connectionString) connection.Open() Dim query As String = "SELECT * FROM Tabel_Pembelian" </pre>	<p>Arina Hasanah</p>

		<pre> Dim command As New SqlCommand(query, connection) Dim reader As SqlDataReader = command.ExecuteReader() Dim dataTable As New DataTable() dataTable.Load(reader) dgvpembelian.DataSource = dataTable End Using Catch ex As Exception MessageBox.Show("Terjadi kesalahan: " & ex.Message) End Try End Sub Private Sub ClearFields() Txtidpembelian.Clear() Txtidobat.Clear() Txtidsupplier.Clear() Txtnamaobat.Clear() Txthargaobat.Clear() 'TextBoxJenisObat.Clear() 'TxtJumlah.Clear() 'DateTimePicker1.Clear() End Sub Private Sub Btnhapus_Click(sender As Object, e As EventArgs) Handles Btnhapus.Click ' Koneksi ke database Using conn As New SqlConnection(connString) conn.Open() ' Query SQL untuk menghapus data pembelian Dim query As String = "DELETE FROM Tabel_Pembelian WHERE IdPembelian = @IdPembelian" ' Membuat objek SqlCommand dengan parameter Using cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@IdPembelian", id_Pembelian) ' Eksekusi perintah SQL cmd.ExecuteNonQuery() ' Menampilkan pesan sukses MessageBox.Show("Data pembelian berhasil dihapus.") ' Mengosongkan input ClearInputFields() </pre>	
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		<pre> ' Refresh DataGridView RefreshDataGridView() End Using End Using End Sub Private Sub LoadDataPembelian() Try Using connection As New SqlConnection(connectionString) connection.Open() Dim query As String = "SELECT * FROM Tabel_Pembelian" Dim command As New SqlCommand(query, connection) Dim reader As SqlDataReader = command.ExecuteReader() Dim dataTable As New DataTable() dataTable.Load(reader) dgvpembelian.DataSource = dataTable End Using Catch ex As Exception MessageBox.Show("Terjadi kesalahan: " & ex.Message) End Try End Sub Private Sub RefreshDataGridView() Throw New NotImplementedException() End Sub Private Function id_Pembelian() As Object Throw New NotImplementedException() End Function Private Function connString() As String Throw New NotImplementedException() End Function Private Sub Btnubah_Click(sender As Object, e As EventArgs) Handles Btnubah.Click Dim idObat As Integer = Integer.Parse(Txtidobat.Text) Dim idSupplier As Integer = Integer.Parse(Txtidsupplier.Text) Dim namaObat As String = Txtnamaobat.Text Dim hargaObat As Decimal = Decimal.Parse(Txthargaobat.Text) Dim jenisObat As String = Cbxjenisobat.Text Dim jumlah As Integer = Integer.Parse(TxtJumlah.Text) Dim tanggalPembelian As Date = DateTimePicker1.Value </pre>	
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		<pre> ' Koneksi ke database Using conn As New SqlConnection(connString) End Using conn.Open() ' Query SQL untuk mengubah data pembelian Dim query As String = "UPDATE Tabel_Pembelian SET IdObat = @IdObat, IdSupplier = @IdSupplier, NamaObat = @NamaObat, HargaObat = @HargaObat, JenisObat = @JenisObat, Jumlah = @Jumlah, TanggalPembelian = @TanggalPembelian WHERE IdPembelian = @IdPembelian" ' Membuat objek SqlCommand dengan parameter Using cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@IdPembelian", Integer.Parse(Txtidpembelian.Text)) cmd.Parameters.AddWithValue("@IdObat", idObat) cmd.Parameters.AddWithValue("@IdSupplier", idSupplier) cmd.Parameters.AddWithValue("@NamaObat", namaObat) cmd.Parameters.AddWithValue("@HargaObat", hargaObat) cmd.Parameters.AddWithValue("@JenisObat", jenisObat) cmd.Parameters.AddWithValue("@Jumlah", jumlah) cmd.Parameters.AddWithValue("@TanggalPembeli an", tanggalPembelian) cmd.ExecuteNonQuery() End Using ' Eksekusi perintah SQL ' Menampilkan pesan sukses MessageBox.Show("Data pembelian berhasil diubah.") End Sub Private Function conn() As SqlConnection Throw New NotImplementedException() End Function </pre>	
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		<pre> Private Sub Bnttambah_Click(sender As Object, e As EventArgs) Handles Bnttambah.Click Dim idPembelian As String = (Txtidpembelian.Text) Dim idObat As String = (Txtidobat.Text) Dim idsupplier As String = (Txtidobat.Text) Dim namaObat As String = Txtnamaobat.Text Dim HargaObat As String = (Txthargaobat.Text) Dim jenisObat As String = Cbxjenisobat.Text Dim jumlah As String = (TxtJumlah.Text) Dim tanggalPembelian As Date = DateTimePicker1.Value ' Koneksi ke database Using conn As New SqlConnection(connectionString) conn.Open() ' Query SQL untuk menyimpan data pembelian Dim query As String = "INSERT INTO Tabel_Pembelian (ID_Pembelian, ID_Obat, ID_Supplier, Nama_Obat, Harga_Obat, Jenis_Obat, Jumlah, Tanggal_Pembelian) " & "VALUES (@ID_Pembelian, @ID_Obat, @ID_Supplier, @Nama_Obat, @Harga_Obat, @Jenis_Obat, @Jumlah, @Tanggal_Pembelian)" ' Membuat objek SqlCommand dengan parameter Using cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@ID_Pembelian", idPembelian) cmd.Parameters.AddWithValue("@ID_Obat", idObat) cmd.Parameters.AddWithValue("@ID_Supplier", idsupplier) cmd.Parameters.AddWithValue("@Nama_Obat", namaObat) cmd.Parameters.AddWithValue("@Harga_Obat", HargaObat) cmd.Parameters.AddWithValue("@Jenis_Obat", jenisObat) </pre>	
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		<pre> cmd.Parameters.AddWithValue("@Jumlah", jumlah) cmd.Parameters.AddWithValue("@Tanggal_Pembelian", tanggalpembelian) ' Eksekusi perintah SQL cmd.ExecuteNonQuery() ' Menampilkan pesan sukses MessageBox.Show("Data pembelian berhasil disimpan.") ' Mengosongkan input ClearInputFields() End Using conn.Close() End Using End Sub Private Sub ClearInputFields() Txtidpembelian.Text = "" Txtidobat.Text = "" DateTimePicker1.Value = DateTime.Now Txtnamaobat.Text = "" Cbxjenisobat.Text = "" End Sub End Class </pre>	
		<p>Transaksi Penjualan</p> <pre> Imports System.Data.SqlClient Public Class transaksi_penjualan Sub TampilObat() Cbxjenisobat.Items.Add("Sirup") Cbxjenisobat.Items.Add("Tablet") Cbxjenisobat.Items.Add("Pil") Cbxjenisobat.Items.Add("Capsul") End Sub Public connectionString As String = "Data Source=ADITYA-PC\ADITSQLESERVER; " & "user id=sa; password=123456; Integrated Security=True; " & "database=Apotek" Dim dataTable As New DataTable() Private Sub Label2_Click(sender As Object, e As EventArgs) Handles LblIDPenjualan.Click End Sub Private Sub transaksi_penjualan_Load(sender As Object, e As EventArgs) Handles MyBase.Load LoadDataPenjualan() TampilObat() </pre>	<p>Arina Hasanah</p>

		<pre> End Sub Private Sub LoadDataPenjualan() Try Using connection As New SqlConnection(connectionString) connection.Open() Dim query As String = "SELECT * FROM Tabel_Penjualan" Dim command As New SqlCommand(query, connection) Dim reader As SqlDataReader = command.ExecuteReader() Dim dataTable As New DataTable() dataTable.Load(reader) dgvPenjualan.DataSource = dataTable End Using Catch ex As Exception MessageBox.Show("Terjadi kesalahan: " & ex.Message) End Try End Sub Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click Dim idPenjualan As Integer = Integer.Parse(Txtidpenjualan.Text) Dim idObat As String = (Txtidobat.Text) Dim tanggalPenjualan As Date = DateTimePicker1.Value Dim namaObat As String = Txtnamaobat.Text Dim jenisObat As String = Cbxjenisobat.Text Dim jumlahTotalPembelanjaan As Decimal = Decimal.Parse(NumericUpDown1.Text) Dim totalPembayaran As Decimal = Decimal.Parse(s:=Ttxttotalpembayaran.Text) Dim totalKembalian As Decimal = Decimal.Parse(Txttotalkembalian.Text) ' Koneksi ke database Using conn As New SqlConnection(connectionString) conn.Open() ' Query SQL untuk menyimpan data penjualan Dim query As String = "INSERT INTO Tabel_Penjualan (ID_Penjualan, ID_Obat, Tanggal_Penjualan, Nama_Obat, Jenis_Obat, Total_Pembelanjaan, Total_Pembayaran, Total_Kembalian) " & "VALUES (@ID_Penjualan, @ID_Obat, @Tanggal_Penjualan, @Nama_Obat, </pre>	
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		<pre> @Jenis_Obat, @Total_Pembelanjaan, @Total_Pembayaran, @Total_Kembalian)" ' Membuat objek SqlCommand dengan parameter Using cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@ID_Penjualan", idPenjualan) cmd.Parameters.AddWithValue("@ID_Obat", idObat) cmd.Parameters.AddWithValue("@Tanggal_Penjual lan", tanggalPenjualan) cmd.Parameters.AddWithValue("@Nama_Obat", namaObat) cmd.Parameters.AddWithValue("@Jenis_Obat", jenisObat) cmd.Parameters.AddWithValue("@Total_Pembelan jaan", jumlahTotalPembelanjaan) cmd.Parameters.AddWithValue("@Total_Pembayar an", totalPembayaran) cmd.Parameters.AddWithValue("@Total_Kembalia n", totalKembalian) ' Eksekusi perintah SQL cmd.ExecuteNonQuery() ' Menampilkan pesan sukses MessageBox.Show("Data penjualan berhasil disimpan.") ' Mengosongkan input ClearInputFields() End Using conn.Close() End Using End Sub Private Sub ClearInputFields() Txtidpenjualan.Text = "" Txtidobat.Text = "" DateTimePicker1.Value = DateTime.Now Txtnamaobat.Text = "" Cbxjenisobat.Text = "" NumericUpDown1.Text = "" Txttotalpembayaran.Text = "" Txttotalkembalian.Text = "" End Sub Private Sub Button2_Click(sender As Object, e As EventArgs) Handles Button2.Click </pre>	
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		<pre> Dim jumlahTotalPembelanjaan As Decimal = Decimal.Parse(Txttotalpembelanjaan.Text) Dim totalPembayaran As Decimal = Decimal.Parse(Txttotalpembayaran.Text) Dim totalKembalian As Decimal = totalPembayaran - jumlahTotalPembelanjaan Txttotalkembalian.Text = totalKembalian.ToString("N2") End Sub Private Sub Cbxjenisobat_SelectedIndexChanged(sender As Object, e As EventArgs) Handles Cbxjenisobat.SelectedIndexChanged ' Mengisi ComboBox dengan jenis obat End Sub End Class </pre>	
		<p>Laporan Pembelian</p> <pre> Imports System.Data.SqlClient Public Class LaporanPembelian Dim connString As String = "Data Source=ADITYA-PC\ADITSQSERVER; " & "user id=sa; password=123456; Integrated Security=True; " & "database=Apotek" Dim conn As SqlConnection Private Sub LaporanPembelian_Load(sender As Object, e As EventArgs) Handles MyBase.Load ' Mengatur tanggal awal dan akhir default pada komponen DateTimePicker DateTimePickerTanggalAwal.Value = New DateTime(DateTime.Now.Year, DateTime.Now.Month, 1) DateTimePickerTanggalAkhir.Value = DateTime.Now End Sub Private Sub ButtonBuatLaporan_Click(sender As Object, e As EventArgs) Handles ButtonBuatLaporan.Click ' Menghubungkan ke database conn = New SqlConnection(connString) conn.Open() ' Membuat perintah SQL untuk mengambil data pembelian Dim query As String = "SELECT * FROM Tabel_Pembelian WHERE Tanggal_Pembelian >= </pre>	Hilal Al Hamdi

		<pre> @TanggalAwal AND Tanggal_Pembelian <= @TanggalAkhir" Dim cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@TanggalAwal", DateTimePickerTanggalAwal.Value) cmd.Parameters.AddWithValue("@TanggalAkhir", DateTimePickerTanggalAkhir.Value) ' Membuat adapter dan dataset Dim adapter As New SqlDataAdapter(cmd) Dim dataset As New DataSet() ' Mengisi dataset dengan data dari database adapter.Fill(dataset, "Tabel_Pembelian") ' Menutup koneksi ke database conn.Close() ' Menampilkan data pada DataGridView DataGridViewLaporan.DataSource = dataset.Tables("Tabel_Pembelian") End Sub End Class </pre>	
		<p>Laporan Penjualan</p> <pre> Imports System.Data.SqlClient Public Class LaporanPenjualan Dim connString As String = "Data Source=ADITYA-PC\ADITSQSERVER; " & "user id=sa; password=123456; Integrated Security=True; " & "database=Apotek" Dim conn As SqlConnection Private Sub LaporanPenjualan_Load(sender As Object, e As EventArgs) Handles MyBase.Load ' Mengatur tanggal awal dan akhir default pada komponen DateTimePicker DateTimePickerTanggalAwal.Value = New DateTime(DateTime.Now.Year, DateTime.Now.Month, 1) DateTimePickerTanggalAkhir.Value = DateTime.Now End Sub Private Sub ButtonBuatLaporan_Click(sender As Object, e As EventArgs) Handles ButtonBuatLaporan.Click ' Menghubungkan ke database </pre>	<p>Hilal Al Hamdi</p>

		<pre> conn = New SqlConnection(connString) conn.Open() ' Membuat perintah SQL untuk mengambil data penjualan Dim query As String = "SELECT * FROM Tabel_Penjualan WHERE Tanggal_Penjualan >= @TanggalAwal AND Tanggal_Penjualan <= @TanggalAkhir" Dim cmd As New SqlCommand(query, conn) cmd.Parameters.AddWithValue("@TanggalAwal", DateTimePickerTanggalAwal.Value) cmd.Parameters.AddWithValue("@TanggalAkhir", DateTimePickerTanggalAkhir.Value) ' Membuat adapter dan dataset Dim adapter As New SqlDataAdapter(cmd) Dim dataset As New DataSet() ' Mengisi dataset dengan data dari database adapter.Fill(dataset, "Tabel_Penjualan") ' Menutup koneksi ke database conn.Close() ' Menampilkan data pada DataGridView DataGridViewLaporan.DataSource = dataset.Tables("Tabel_Penjualan") End Sub End Class </pre>	
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Link Deployment GitHub :

<https://github.com/01AdityaKurniawan/APOTEK>