LAMPIRAN

Source Code Aplikasi

Form Login

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Data.SqlClient;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace KoprasiKu_Skripsi
{
    public partial class FormLogin : Form
    {
        bool isverify=false;

        public FormLogin()
        {
            InitializeComponent();
        }
        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        private void btn_masuk_Click(object sender, EventArgs e)
        {
            Openkoneksi();
```

```csharp
setCommand("select * from login where userName = '" + tb_nama.Text +  "'and
password = '" + tb_Password.Text + "'");
            reader = command.ExecuteReader();
            if(reader.Read())
            {
                if (reader.GetString(4) == "admin")
                {
                    if (reader.GetString(5) == "yes")
                    {
                        isverify = true;
                        this.Close();
                    }
                    else
                    {
                        isverify = false;
                        MessageBox.Show("User belum active");
                    }
                }
                else
                {
                    superadmin form =new  superadmin();
                    form.ShowDialog();
                }
            }
            else
            {
                isverify = false;
                MessageBox.Show("User Name atau Password Ada Yang Salah");
            }
            Refresh();
        }

        private void FormLogin_FormClosed(object sender,
FormClosedEventArgs e)
        {
        }

        private void FormLogin_FormClosing(object sender,
FormClosingEventArgs e)
        {
            if (!isverify)
            {
                e.Cancel = true;
            }

        }
        void Refresh()
        {

            btn_masuk.Enabled = true;
            tb_nama.Text = "";
            tb_Password.Text = "";


        }
        private void label1_Click(object sender, EventArgs e)
        {
```

```
        }

        private void Registrasi_LinkClicked(object sender,
LinkLabelLinkClickedEventArgs e)
        {
            Formregistrasi frm = new Formregistrasi();
            frm.Show();


        }

        private void FormLogin_Load(object sender, EventArgs e)
        {

        }
    }
}
```

Form Registrasi Admin

```
namespace KoprasiKu_Skripsi
{
    public partial class Formregistrasi : Form
    {
        public Formregistrasi()
        {
            InitializeComponent();
        }

        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
```

```csharp
void Simpan()
{
    if ((tb_pass.TextLength < 5))
    {
        MessageBox.Show("Password minimal 5 ", "Error",
MessageBoxButtons.OK, MessageBoxIcon.Error);
        tb_pass.Text = "";
        tb_pass.Focus();
        return;
    }
    Openkoneksi();
    setCommand("insert into login values
(@val1,@val2,@val3,@val4,@val5)");
    //command.Parameters.AddWithValue("@val1", tb_id.Text);
    command.Parameters.AddWithValue("@val1", tb_nama.Text);
    command.Parameters.AddWithValue("@val2", tb_uName.Text);
    command.Parameters.AddWithValue("@val3", tb_pass.Text);
    command.Parameters.AddWithValue("@val4","admin");
    command.Parameters.AddWithValue("@val5","no");

    command.ExecuteNonQuery();
    MessageBox.Show("Data Berhasil Disimpan");
    Closekoneksi();
    FormLogin frim = new FormLogin();
    this.Close();
}

void Refresh()
{

//this.lama_pinjamTableAdapter.Fill(this.koperasiSUTDataSet3.lama_pinjam);
    this.loginTableAdapter.Fill(this.koperasiSUTDataSet5.login);

    btn_ganti.Enabled = true;
    //tb_id.Text = "";
    tb_nama.Text = "";
    tb_uName.Text = "";
    tb_pass.Text = "";
}
private void btn_ganti_Click(object sender, EventArgs e)
{
    if (tb_nama.Text != "" && tb_uName.Text != "" && tb_pass.Text
!= "")
    {
        Simpan();
        Refresh();
    }
    else
    {
        MessageBox.Show("Isi semua data dengan benar");
    }

}
```

Form Superadmin

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class superadmin : Form
    {
        public superadmin()
        {
            InitializeComponent();
        }

        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }

        private void superadmin_Load(object sender, EventArgs e)
        {

            Refresh();
        }
        void Refresh()
        {
            this.loginTableAdapter.Fill(this.koperasiSUTDataSet6.login);
            btn_ganti.Enabled = true;
            tb_id.Text = "";
            tb_nama.Text = "";
            tb_uName.Text = "";
            tb_pass.Text = "";
            tb_status.Text = "";
            radioButton1.Checked = false;
            radioButton2.Checked=false;

        }

        void Update()
        {
            Openkoneksi();
```

```csharp
            setCommand("update login set
nama=@val2,userName=@val3,password=@val4,status=@val5,activ=@val6 where id=
@val1 ");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_nama.Text);
            command.Parameters.AddWithValue("@val3", tb_uName.Text);
            command.Parameters.AddWithValue("@val4", tb_pass.Text);
            command.Parameters.AddWithValue("@val5", tb_status.Text);


            String active="no";
            if(radioButton1.Checked)
            {
                active="yes";
            }
            else
            {
                active="no";
            }
            command.Parameters.AddWithValue("@val6",active );
            command.ExecuteNonQuery();
            MessageBox.Show("Data Berhasil Diubah");
            Closekoneksi();
        }
        private void btn_ganti_Click(object sender, EventArgs e)
        {
            if (tb_id.Text != "" && tb_nama.Text != "" && tb_pass.Text !=
"" && tb_status.Text != "" && tb_uName.Text != "")
            {
                Update();
                Refresh();

            }
            else
            {

            }
        }

        private void dataGridView1_CellClick(object sender,
DataGridViewCellEventArgs e)
        {
            if (e.RowIndex >= 0)
            {
                tb_id.Text =
dataGridView1.Rows[e.RowIndex].Cells[0].Value.ToString();
                tb_nama.Text =
dataGridView1.Rows[e.RowIndex].Cells[1].Value.ToString();
                tb_uName.Text =
dataGridView1.Rows[e.RowIndex].Cells[2].Value.ToString();
                tb_pass.Text =
dataGridView1.Rows[e.RowIndex].Cells[3].Value.ToString();
                tb_status.Text =
dataGridView1.Rows[e.RowIndex].Cells[4].Value.ToString();
                if
(dataGridView1.Rows[e.RowIndex].Cells[5].Value.ToString()=="yes")
                {
```

```csharp
                    radioButton1.Checked = true;
                    radioButton2.Checked = false;
                }
                else
                {
                    radioButton1.Checked = false;
                    radioButton2.Checked = true;

                }
                btn_ganti.Enabled = true;
            }
        }

        private void label1_Click(object sender, EventArgs e)
        {

        }

        private void button1_Click(object sender, EventArgs e)
        {
            Close();
        }
    }
}
```

Form Mainform

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class MainForm : Form
    {
        public MainForm()
        {
            InitializeComponent();
        }

        private void MainForm_Load(object sender, EventArgs e)
        {
            FormLogin form = new FormLogin();
          form.ShowDialog();
        }

        private void rekapToolStripMenuItem_Click(object sender, EventArgs e)
        {

        }

        private void menuStrip_ItemClicked(object sender, ToolStripItemClickedEventArgs e)
        {

        }
```

```csharp
        private void angsuranToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormAngsuran form = new FormAngsuran();
            form.MdiParent=this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }
        void closeMdi()
        {
            foreach(Form form in this.MdiChildren)
            {
                form.Dispose();
              form.Close();

            }

        }

        private void pinjamanToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormPinjaman form = new FormPinjaman();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void registrasiToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormAnggota form = new FormAnggota();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void simpananToolStripMenuItem_Click(object sender,
EventArgs e)
        {

        }

        private void simpananWajibToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormSimpananWajib form = new FormSimpananWajib();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
```

```csharp
            form.Show();
        }

        private void simpananSukarelaToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormSimpananSukaRela form = new FormSimpananSukaRela();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void aboutToolStripMenuItem_Click(object sender, EventArgs
e)
        {
            closeMdi();
            FormAbout form = new FormAbout();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void settingToolStripMenuItem_Click(object sender,
EventArgs e)
        {

        }

        private void gantiPassowrdToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormSetting form = new FormSetting();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void logoutToolStripMenuItem_Click(object sender, EventArgs
e)
        {
            this.Hide();
            FormLogin form = new FormLogin();
            form.ShowDialog();
            this.Show();

        }

        private void transaksiSimpananWajibToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            closeMdi();
            FormLaporan form = new FormLaporan();
```

```csharp
            form.laopran = "simpanan_wajib";
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void
transaksiSimpananSukaRelaToolStripMenuItem_Click(object sender, EventArgs
e)
        {
            closeMdi();
            FormLaporan form = new FormLaporan();
            form.laopran = "simpanan_sukarela";
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void transaksiPinjamanToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            closeMdi();
            FormLaporan form = new FormLaporan();
            form.laopran = "pinjaman";
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void transaksiAngsuranToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            closeMdi();
            FormLaporan form = new FormLaporan();
            form.laopran = "angsuran";
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void anggotaToolStripMenuItem1_Click(object sender,
EventArgs e)
        {
            closeMdi();
            FormLaporan form = new FormLaporan();
            form.laopran = "anggota";
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }
```

```
        private void settingJabatanToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            Formjabatan form = new Formjabatan();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void settingTindakanToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            closeMdi();
            Formtindakan form = new Formtindakan();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void settingLamaPinjamToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            closeMdi();
            FormLamaPinjam form = new FormLamaPinjam();
            form.MdiParent = this;
            form.StartPosition = FormStartPosition.CenterParent;
            form.WindowState = FormWindowState.Maximized;
            form.Show();
        }

        private void pictureBox1_Click(object sender, EventArgs e)
        {

        }
    }
}
```

Form Anggota

```
namespace KoprasiKu_Skripsi
{
    public partial class FormAnggota : Form
    {
        public FormAnggota()
        {
            InitializeComponent();
            InitializeComboBox();
        }

        private void textBox2_TextChanged(object sender, EventArgs e)
        {
```

```csharp
        }

        private void textBox11_TextChanged(object sender, EventArgs e)
        {
            showData();
        }

        private void FormAnggota_Load(object sender, EventArgs e)
        {
            tgl_lahir.CustomFormat = "dd-MM-yyyy";
            tgl_masuk.CustomFormat = "dd-MM-yyyy";
            Refresh();
        }


        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Close();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        void showData()
        {

            table_anggota.DataSource=null;
            Openkoneksi();
            setCommand("Select
anggota.kode,anggota.ktp,anggota.nama,anggota.alamat,anggota.pekerjaan,angg
ota.hp,anggota.tempat_lahir,anggota.tgl_lahir,anggota.tgl_masuk,jbtn.Jabata
n,anggota.photo, anggota.simpanan_pokok from anggota join jbtn on
anggota.jabatan=jbtn.idJabatan where nama like  '%" + tb_cari.Text + "%' or
kode  like '%" + tb_cari.Text + "%'");
            using (SqlConnection kon = koneksi)
            {
                using(SqlDataAdapter adpt=new SqlDataAdapter(command))
                {
                    DataSet ds = new DataSet();
                    adpt.Fill(ds);
                    table_anggota.DataSource = ds.Tables[0];
                    if (ds.Tables[0].Rows.Count > 0)
```

```csharp
                {
                    label1 = null;
                }
                else
                {
                    MessageBox.Show("Data Tidak Ditemukan");
                    tb_cari.Clear();

                }
            }
        }
        Closekoneksi();


    }

    private void btn_cari_foto_Click(object sender, EventArgs e)
    {
        DialogResult rs= openFileDialog1.ShowDialog();
        if (rs == DialogResult.OK)
        {
            tb_photo.Text = openFileDialog1.FileName;
            show_foto.ImageLocation = tb_photo.Text;
        }
    }

    private void btn_simpan_Click(object sender, EventArgs e)
    {

        if (tb_ktp.Text.Length == 16 && tb_nama.Text != "" &&
tb_alamat.Text != "" && tb_pekerjaan.Text != "" && tb_tempat_lahir.Text !=
"" && cmb_jbatan.Text != "" && tb_photo.Text != "" &&
tb_simpanan_pokok.Text != "")
        {
            Simpan();
            Refresh();

        }
        else
        {
            MessageBox.Show("Isi Semua Data dengan benar");

        }

    }
    String convertImageToString(Image img)
    {
        using (Image image = img)
        {
            using (MemoryStream m = new MemoryStream())
            {
                image.Save(m, image.RawFormat);
                byte[] imageBytes = m.ToArray();
                string base64String =
Convert.ToBase64String(imageBytes);
                return base64String;
            }
```

```
            }
        }
        Image convertStringToImage(String image)
        {
            var imageBytes = Convert.FromBase64String(image);
            using (var ms = new MemoryStream(imageBytes, 0,
imageBytes.Length))
            {
                Image img = Image.FromStream(ms, true);
                return img;
            }
        }

        void Simpan()
        {

            {

                Openkoneksi();
                setCommand("insert into anggota values
(@val1,@val2,@val3,@val4,@val5,@val6,@val7,@val8,@val9,@val10,@val11,@val12
)");
                command.Parameters.AddWithValue("@val1", tb_kode.Text);
                command.Parameters.AddWithValue("@val2", tb_ktp.Text);
                command.Parameters.AddWithValue("@val3", tb_nama.Text);
                command.Parameters.AddWithValue("@val4", tb_alamat.Text);
                command.Parameters.AddWithValue("@val5",
tb_pekerjaan.Text);
                command.Parameters.AddWithValue("@val6", tb_hp.Text);
                command.Parameters.AddWithValue("@val7",
tb_tempat_lahir.Text);
                command.Parameters.AddWithValue("@val8", tgl_lahir.Text);
                command.Parameters.AddWithValue("@val9", tgl_masuk.Text);
                command.Parameters.AddWithValue("@val10",
(cmb_jbatan.SelectedIndex+1));
                command.Parameters.AddWithValue("@val11",
convertImageToString(show_foto.Image));
                command.Parameters.AddWithValue("@val12",
tb_simpanan_pokok.Text);
                command.ExecuteNonQuery();
                MessageBox.Show("Data Anggota Berhasil Disimpan");

                Closekoneksi();
            }
        }
        void Update()
        {
            Openkoneksi();
            setCommand("update anggota set ktp=
@val2,nama=@val3,alamat=@val4,pekerjaan=@val5,hp=@val6,tempat_lahir=@val7,t
gl_lahir=@val8,tgl_masuk=@val9,jabatan=@val10,photo=@val11,simpanan_pokok=@
val12 where kode=@val1");
            command.Parameters.AddWithValue("@val1", tb_kode.Text);
            command.Parameters.AddWithValue("@val2", tb_ktp.Text);
            command.Parameters.AddWithValue("@val3", tb_nama.Text);
            command.Parameters.AddWithValue("@val4", tb_alamat.Text);
            command.Parameters.AddWithValue("@val5", tb_pekerjaan.Text);
```

```csharp
            command.Parameters.AddWithValue("@val6", tb_hp.Text);
            command.Parameters.AddWithValue("@val7", tb_tempat_lahir.Text);
            command.Parameters.AddWithValue("@val8", tgl_lahir.Text);
            command.Parameters.AddWithValue("@val9", tgl_masuk.Text);
            command.Parameters.AddWithValue("@val10",
(cmb_jbatan.SelectedIndex + 1));
            command.Parameters.AddWithValue("@val11",
convertImageToString(show_foto.Image));
            command.Parameters.AddWithValue("@val12",
tb_simpanan_pokok.Text);
            command.ExecuteNonQuery();
            MessageBox.Show("Data Anggota Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from anggota where kode=
'"+tb_kode.Text+"'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }
        void Refresh()
        {
            showData();
            tb_kode.Text=generateKode();
            btn_simpan.Enabled = true;
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            tb_ktp.Text = "";
            tb_nama.Text = "";
            tb_pekerjaan.Text = "";
            tb_photo.Text = "";
            tb_simpanan_pokok.Text = "";
            tb_tempat_lahir.Text = "";
            cmb_jbatan.SelectedIndex = -1;
            tb_alamat.Text = "";
            tb_hp.Text = "";
            tgl_lahir.Text = System.DateTime.Now.ToString();
            tgl_masuk.Text = System.DateTime.Now.ToString();
            show_foto.Image = null;

        }

        private void table_anggota_CellContentClick(object sender,
DataGridViewCellEventArgs e)
```

```csharp
        {

        }

        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }


        private void btn_hapus_Click(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }

        private void btn_edit_Click(object sender, EventArgs e)
        {

            if (tb_ktp.Text.Length == 16 && tb_nama.Text != "" &&
tb_alamat.Text != "" && tb_pekerjaan.Text != "" && tb_tempat_lahir.Text !=
"" && cmb_jbatan.Text != "" && tb_simpanan_pokok.Text != "")
            {
                Update();
                Refresh();

            }
            else
            {
                MessageBox.Show("Isi Semua Data dengan benar");

            }

        }
        String generateKode()
        {
            Openkoneksi();
            setCommand("select * from anggota");
            reader = command.ExecuteReader();
            String kode = "AGT0000";
            while(reader.Read())
            {
                kode = reader.GetString(0);
            }
            int kd = Convert.ToInt32(kode.Substring(3))+1;
            if(kd<10)
            {
                kode = "AGT000" + kd.ToString();
            }
            else if (kd < 100)
            {
                kode = "AGT00" + kd.ToString();
            }
            else if (kd < 1000)
            {
                kode = "AGT0" + kd.ToString();
```

```csharp
        }
        else if (kd < 10000)
        {
            kode = "AGT" + kd.ToString();
        }
        Closekoneksi();
        return kode;
    }

    private void tb_ktp_KeyUp(object sender, KeyEventArgs e)
    {

    }

    private void tb_ktp_KeyPress(object sender, KeyPressEventArgs e)
    {

        if (!char.IsControl(e.KeyChar) && !char.IsDigit(e.KeyChar))
        {
            e.Handled = true;
        }
    }

    private void tb_hp_KeyPress(object sender, KeyPressEventArgs e)
    {

        if (!char.IsControl(e.KeyChar) && !char.IsDigit(e.KeyChar))
        {
            e.Handled = true;
        }
    }

    private void tb_simpanan_pokok_KeyPress(object sender,
KeyPressEventArgs e)
    {

        if (!char.IsControl(e.KeyChar) && !char.IsDigit(e.KeyChar))
        {
            e.Handled = true;
        }
    }

    private void tgl_lahir_ValueChanged(object sender, EventArgs e)
    {
        if (tgl_lahir.Value > DateTime.Now)
        {
            MessageBox.Show("tanggal tidak boleh besok");
            tgl_lahir.Value = DateTime.Now;
        }
    }

    private void tgl_masuk_ValueChanged(object sender, EventArgs e)
    {
        if (tgl_masuk.Value > DateTime.Now)
        {
            MessageBox.Show("tanggal tidak boleh besok");
            tgl_masuk.Value = DateTime.Now;
```

```csharp
            }
        }

        private void tb_nama_KeyPress(object sender, KeyPressEventArgs e)
        {
            if (!char.IsControl(e.KeyChar) && !char.IsLetter(e.KeyChar) &&
!char.IsWhiteSpace(e.KeyChar))
            {
                e.Handled = true;
            }
        }

        private void tb_pekerjaan_KeyPress(object sender, KeyPressEventArgs
e)
        {
            if (!char.IsControl(e.KeyChar) && !char.IsLetter(e.KeyChar) &&
!char.IsWhiteSpace(e.KeyChar))
            {
                e.Handled = true;
            }
        }

        private void tb_tempat_lahir_KeyPress(object sender,
KeyPressEventArgs e)
        {
            if (!char.IsControl(e.KeyChar) && !char.IsLetter(e.KeyChar) &&
!char.IsWhiteSpace(e.KeyChar))
            {
                e.Handled = true;
            }
        }
        //List<int> ListId_Jabatan;
        private void InitializeComboBox()
        {
            // siapkan koneksi database
            Openkoneksi();
            SqlConnection cn = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            // siapkan data adapter untuk data retrieval
            SqlDataAdapter da = new SqlDataAdapter("select Jabatan from
dbo.jbtn", cn);
            // siapkan datatable untuk menampung data dari database
            DataTable dt = new DataTable();
            try
            {
                // ambil data dari database
                da.Fill(dt);
                // bind data ke combobox
                cmb_jbatan.DataSource = dt;
                cmb_jbatan.ValueMember = "Jabatan";

                    // DONE!!!
            }

            catch (Exception ex)
            {
```

```csharp
                    // tampilkan pesan error
                    MessageBox.Show(ex.Message);
                }

        }
        private void cmb_jbatan_SelectedIndexChanged(object sender,
EventArgs e)
        {

        }

        private void show_foto_Click(object sender, EventArgs e)
        {

        }
    }
}
```

Form Simpanan Wajib

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class FormSimpananWajib : Form
    {
        public FormSimpananWajib()
        {
            InitializeComponent();
            InitializeComboBox();
        }

        private void FormSimpananWajib_Load(object sender, EventArgs e)
        {
            tgl_catat.CustomFormat = "MM-dd-yyyy";
            Refresh();

        }
        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
```

```csharp
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        void showData()
        {
            Openkoneksi();
            setCommand("Select
simpanan_wajib.kode_simpanan,simpanan_wajib.tgl_catat,tindakan.Tindakan,sim
panan_wajib.jumlah,simpanan_wajib.keterangan,simpanan_wajib.kode_anggota
from simpanan_wajib join tindakan on
simpanan_wajib.tindakan=tindakan.idtindakan where kode_anggota  like '%" +
tb_cari.Text + "%'");
            adp = new SqlDataAdapter(command);
            adp.Fill(dataset);
            using (SqlConnection kon = koneksi)
            {
                using (SqlDataAdapter adpt = adp)
                {
                    DataSet ds = new DataSet();
                    adpt.Fill(ds);
                    table_simpanan_wajib.DataSource = ds.Tables[0];
                    if (ds.Tables[0].Rows.Count > 0)
                    {
                        label1 = null;
                    }
                    else
                    {
                        MessageBox.Show("Data Tidak Ditemukan");
                        tb_cari.Clear();

                    }
                }

            }
        }
        void Simpan()
        {

            Openkoneksi();
            setCommand("insert into simpanan_wajib values
(@val1,@val2,@val3,@val4,@val5,@val6)");
            command.Parameters.AddWithValue("@val1", tb_no_simpanan.Text);
            command.Parameters.AddWithValue("@val2", tgl_catat.Text);
            command.Parameters.AddWithValue("@val3",
(cb_tindakan.SelectedIndex + 1));
            command.Parameters.AddWithValue("@val4", tb_jumlah.Text);
            command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
            command.Parameters.AddWithValue("@val6", cb_anggota.Text);
            command.ExecuteNonQuery();
            MessageBox.Show("Data Simpanan Wajib Berhasil Disimpan","Data
Simpanan", MessageBoxButtons.OK) ;
            Closekoneksi();
        }
        void Update()
        {
            Openkoneksi();
```

```csharp
            setCommand("update simpanan_wajib set tgl_catat=
@val2,tindakan=@val3,jumlah=@val4,keterangan=@val5,kode_anggota=@val6 where
kode_simpanan=@val1");
            command.Parameters.AddWithValue("@val1", tb_no_simpanan.Text);
            command.Parameters.AddWithValue("@val2", tgl_catat.Text);
            command.Parameters.AddWithValue("@val3",
(cb_tindakan.SelectedIndex + 1));
            command.Parameters.AddWithValue("@val4", tb_jumlah.Text);
            command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
            command.Parameters.AddWithValue("@val6", cb_anggota.Text);
            command.ExecuteNonQuery();
            MessageBox.Show("Data Simpanan Wajib Berhasil Diubah", "Data
Simpanan", MessageBoxButtons.OK);
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from simpanan_wajib where kode_simpanan='" +
tb_no_simpanan.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }
        void Refresh()
        {
            showData();
            tb_no_simpanan.Text = generateKode();
            show_cb();
            cb_tindakan.SelectedIndex = -1;
            tgl_catat.Text = System.DateTime.Now.ToString();
            btn_simpan.Enabled = true;
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            tb_jumlah.Text = "";
            tb_keterangan.Text = "";
            tb_saldo.Text = "";
            tb_nama.Text = "";
        }


        private void btn_simpan_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && cb_anggota.Text != "" &&
cb_tindakan.Text != "")
            {
```

```
                Simpan();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_edit_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && cb_anggota.Text != "" &&
cb_tindakan.Text != "")
            {
                Update();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }

        }

        private void btn_hapus_Click(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }

        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }
```

Form Simpanan Sukarela

```
namespace KoprasiKu_Skripsi
{
    public partial class FormSimpananSukaRela : Form
    {
        public FormSimpananSukaRela()
        {
            InitializeComponent();

            InitializeComboBox();
        }

        private void FormSimpananSukaRela_Load(object sender, EventArgs e)
        {
            Refresh();
        }
        SqlConnection koneksi;
```

```csharp
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        void showData()
        {
            Openkoneksi();
            setCommand("Select
simpanan_sukarela.kode_simpanan,simpanan_sukarela.tgl_catat,tindakan.Tindak
an,simpanan_sukarela.jumlah,simpanan_sukarela.keterangan,simpanan_sukarela.
kode_anggota from simpanan_sukarela join tindakan on
simpanan_sukarela.tindakan=tindakan.idtindakan where kode_anggota  like '%"
+ tb_cari.Text + "%'");
            adp = new SqlDataAdapter(command);
            adp.Fill(dataset);
            using (SqlConnection kon = koneksi)
            {
                using (SqlDataAdapter adpt = adp)
                {
                    DataSet ds = new DataSet();
                    adpt.Fill(ds);
                    table_simpanan_sukarela.DataSource = ds.Tables[0];
                    if (ds.Tables[0].Rows.Count > 0)
                    {
                        label1 = null;
                    }
                    else
                    {
                        MessageBox.Show("Data Tidak Ditemukan");
                        tb_cari.Clear();

                    }
                }
            }

        }
        void Simpan()
        {

            Openkoneksi();
```

```csharp
            setCommand("insert into simpanan_sukarela values
(@val1,@val2,@val3,@val4,@val5,@val6)");
            command.Parameters.AddWithValue("@val1", tb_no_simpanan.Text);
            command.Parameters.AddWithValue("@val2", tgl_catat.Text);
            command.Parameters.AddWithValue("@val3",
(cb_tindakan.SelectedIndex + 1));
            command.Parameters.AddWithValue("@val4", tb_jumlah.Text);
            command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
            command.Parameters.AddWithValue("@val6", cb_anggota.Text);
            command.ExecuteNonQuery();
            MessageBox.Show("Data Simpanan Suka Rela Berhasil Disimpan");
            Closekoneksi();
        }
        void Update()
        {
            Openkoneksi();
            setCommand("update simpanan_sukarela set tgl_catat=
@val2,tindakan=@val3,jumlah=@val4,keterangan=@val5,kode_anggota=@val6 where
kode_simpanan=@val1");
            command.Parameters.AddWithValue("@val1", tb_no_simpanan.Text);
            command.Parameters.AddWithValue("@val2", tgl_catat.Text);
            command.Parameters.AddWithValue("@val3",
(cb_tindakan.SelectedIndex + 1));
            command.Parameters.AddWithValue("@val4", tb_jumlah.Text);
            command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
            command.Parameters.AddWithValue("@val6", cb_anggota.Text);
            command.ExecuteNonQuery();
            MessageBox.Show("Data Simpanan Suka Rela Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from simpanan_sukarela where
kode_simpanan='" + tb_no_simpanan.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }
        void Refresh()
        {
            showData();
            tb_no_simpanan.Text = generateKode();
            show_cb();
            cb_tindakan.SelectedIndex =-1;
            tgl_catat.Text = System.DateTime.Now.ToString();
            btn_simpan.Enabled = true;
```

```csharp
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            tb_jumlah.Text = "";
            tb_keterangan.Text = "";
            tb_saldo.Text = "";
            cb_anggota.Text = "";
            //cb_tindakan.Text = "";
            tb_nama.Text = "";

        }


        private void btn_hapus_Click(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }

        private void btn_edit_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && cb_anggota.Text != "" &&
cb_tindakan.Text != "")
            {
                Update();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_simpan_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && cb_anggota.Text != "" &&
cb_tindakan.Text != "")
            {
                Simpan();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }
```

Form Pinjaman

```csharp
public partial class FormPinjaman : Form
```

```csharp
    {
        public FormPinjaman()
        {
            InitializeComponent();
        }

        private void FormPinjaman_Load(object sender, EventArgs e)
        {

this.lama_pinjamTableAdapter.Fill(this.koperasiSUTDataSet1.lama_pinjam);
            tgl_pinjam.CustomFormat = "MM-dd-yyyy";
            Refresh();
        }
        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Close();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        void showData()
        {
            Openkoneksi();
            setCommand("Select
pinjam.kode_pinjam,pinjam.tgl_pinjam,pinjam.jumlah_pinjam,pinjam.jaminan,la
ma_pinjam.Lama_Pinjam,pinjam.bunga,pinjam.angsuran,pinjam.kode_anggota,pinj
am.Status from pinjam join lama_pinjam on
pinjam.lama_pinjaman=lama_pinjam.IdlamaPjm where kode_pinjam  like '%" +
tb_cari.Text + "%'");
            adp = new SqlDataAdapter(command);
            adp.Fill(dataset);
            using (SqlConnection kon = koneksi)
            {
                using (SqlDataAdapter adpt = adp)
                {
                    DataSet ds = new DataSet();
                    adpt.Fill(ds);
                    table_pinjaman.DataSource = ds.Tables[0];
                    if (ds.Tables[0].Rows.Count > 0)
                    {
                        label1 = null;
                    }
```

```csharp
                    else
                    {
                        MessageBox.Show("Data Tidak Ditemukan");
                        tb_cari.Clear();

                    }
                }
            }


        }
        bool cekLunas()
        {
            Openkoneksi();
            setCommand(" select kode_anggota from pinjam where Status=
'belum lunas' and kode_anggota='"+cb_anggota.Text+"'");
            reader = command.ExecuteReader();
            if (reader.Read())
            {
                return false;
            }
            return true;

            Closekoneksi();
        }

        void Simpan()

        {
            if (cekLunas())
            {
                Openkoneksi();
                setCommand("insert into
pinjam(kode_pinjam,tgl_pinjam,jumlah_pinjam,jaminan,lama_pinjaman,bunga,ang
suran,kode_anggota,Status) values
(@val1,@val2,@val3,@val4,@val5,@val6,@val7,@val8,@val9)");
                command.Parameters.AddWithValue("@val1",
tb_no_pinjaman.Text);
                command.Parameters.AddWithValue("@val2", tgl_pinjam.Text);
                command.Parameters.AddWithValue("@val3", tb_jumlah.Text);
                command.Parameters.AddWithValue("@val4", tb_jaminan.Text);
                command.Parameters.AddWithValue("@val5",
(cb_lama_pinjam.SelectedIndex + 1));
                command.Parameters.AddWithValue("@val6", tb_bunga.Text);
                command.Parameters.AddWithValue("@val7", tb_cicilan.Text);
                command.Parameters.AddWithValue("@val8", cb_anggota.Text);
                command.Parameters.AddWithValue("@val9", "belum lunas");
                command.ExecuteNonQuery();
                MessageBox.Show("Data Pinjaman Berhasil Disimpan");
                Closekoneksi();
            }
            else
            {
                MessageBox.Show("anggota masih memiliki pinjaman");
            }
        }
        void Update()
```

```csharp
        {
            Openkoneksi();
            setCommand("update pinjam set tgl_pinjam=
@val2,jumlah_pinjam=@val3,jaminan=@val4,lama_pinjaman=@val5,bunga=@val6,ang
suran=@val7,kode_anggota=@val8 where kode_pinjam=@val1");
            command.Parameters.AddWithValue("@val1", tb_no_pinjaman.Text);
            command.Parameters.AddWithValue("@val2", tgl_pinjam.Text);
            command.Parameters.AddWithValue("@val3", tb_jumlah.Text);
            command.Parameters.AddWithValue("@val4", tb_jaminan.Text);
            command.Parameters.AddWithValue("@val5",
(cb_lama_pinjam.SelectedIndex+1));
            command.Parameters.AddWithValue("@val6", tb_bunga.Text);
            command.Parameters.AddWithValue("@val7", tb_cicilan.Text);
            command.Parameters.AddWithValue("@val8",
cb_anggota.SelectedItem.ToString());
            command.ExecuteNonQuery();
            MessageBox.Show("Data Pinjaman Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from pinjam where kode_pinjam='" +
tb_no_pinjaman.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }
        void Refresh()
        {
            showData();
            show_cb();
            tb_no_pinjaman.Text = generateKode();
            btn_simpan.Enabled = true;
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            tb_bunga.Text = "";
            tb_cicilan.Text = "";
            tb_jaminan.Text = "";
            tb_jumlah.Text = "";
            tb_nama.Text = "";
            tb_pekerjaan.Text = "";
            tb_simpanan_suka_rela.Text = "";
            tb_simpanan_wajib.Text = "";
            cb_anggota.Text = "";
            cb_lama_pinjam.SelectedIndex =-1;
            tgl_pinjam.Text = System.DateTime.Now.ToString();
```

```csharp
            InitializeComboBox();
        }


    private void btn_simpan_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && tb_jaminan.Text != "" &&
cb_lama_pinjam.Text != "" && cb_anggota.Text !="")
            {
                Simpan();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_edit_Click(object sender, EventArgs e)
        {
            if (tb_jumlah.Text != "" && tb_jaminan.Text != "" &&
cb_anggota.Text != "")
            {
                Update();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_hapus_Click(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }

        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }


    private void tb_jumlah_KeyPress(object sender, KeyPressEventArgs e)
        {

            if (!char.IsControl(e.KeyChar) && !char.IsDigit(e.KeyChar))
            {
                e.Handled = true;
            }
        }

        private void tb_cari_TextChanged(object sender, EventArgs e)
        {
            showData();
        }
```

```
}
```

Form Angsuran

```
namespace KoprasiKu_Skripsi
{
    public partial class FormAngsuran : Form
    {
        public FormAngsuran()
        {
            InitializeComponent();
        }

        private void FormAngsuran_Load(object sender, EventArgs e)
        {

            Refresh();
        }
        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        void showData()
        {
            Openkoneksi();
            setCommand("Select * from angsuran where kode_pinjam  like '%"
+ tb_cari.Text + "%'");
            adp = new SqlDataAdapter(command);
            adp.Fill(dataset);
            using (SqlConnection kon = koneksi)
            {
                using (SqlDataAdapter adpt = adp)
                {
                    DataSet ds = new DataSet();
                    adpt.Fill(ds);
                    table_angsuran.DataSource = ds.Tables[0];
```

```csharp
                if (ds.Tables[0].Rows.Count > 0)
                {
                    label1 = null;
                }
                else
                {
                    MessageBox.Show("Data Tidak Ditemukan");
                    tb_cari.Clear();

                }


            }

        }
    }



    void Simpan()
    {
        Openkoneksi();
        setCommand("insert into angsuran values
(@val1,@val2,@val3,@val4,@val5,@val6)");
        command.Parameters.AddWithValue("@val1", tb_no_angsuran.Text);
        command.Parameters.AddWithValue("@val2", tgl_angsuran.Text);
        command.Parameters.AddWithValue("@val3", cb_no_pinjaman.Text);
        command.Parameters.AddWithValue("@val4", tb_setoran.Text);
        command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
        command.Parameters.AddWithValue("@val6", tb_sisa.Text);
        command.ExecuteNonQuery();
        MessageBox.Show("Data Angsuran Berhasil Disimpan");
        Closekoneksi();
    }
    void Update()
    {
        Openkoneksi();
        setCommand("update angsuran set tgl_angsuran=
@val2,kode_pinjam=@val3,setoran=@val4,keterangan=@val5, sisaAng=@val6 where
kode=@val1");
        command.Parameters.AddWithValue("@val1", tb_no_angsuran.Text);
        command.Parameters.AddWithValue("@val2", tgl_angsuran.Text);
        command.Parameters.AddWithValue("@val3", cb_no_pinjaman.Text);
        command.Parameters.AddWithValue("@val4", tb_setoran.Text);
        command.Parameters.AddWithValue("@val5", tb_keterangan.Text);
        command.Parameters.AddWithValue("@val6", tb_sisa.Text);
        command.ExecuteNonQuery();
        MessageBox.Show("Data Angsuran Berhasil Diubah");
        Closekoneksi();
    }
    void UpdateLunas()
    {
        Openkoneksi();
```

```csharp
            setCommand("update pinjam set Status= @val2 where
kode_pinjam=@val1");
            command.Parameters.AddWithValue("@val1", cb_no_pinjaman.Text);
            command.Parameters.AddWithValue("@val2", tb_status.Text);

            command.ExecuteNonQuery();
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from angsuran where kode='" +
tb_no_angsuran.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            command.ExecuteNonQuery();

            Closekoneksi();
        }
        void Refresh()
        {
            UpdateLunas();
            showData();
            show_cb();
            tb_no_angsuran.Text = generateKode();
            btn_simpan.Enabled = true;
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            tb_status.Text = "";
            tb_kode_anggota.Text = "";
            tb_bunga.Text = "";
            tb_jml_pinjam.Text = "";
            tb_keterangan.Text = "";
            tb_lama_pinjam.Text = "";
            tb_setoran.Text = "";
            tb_sisa.Text = "";
            cb_no_pinjaman.Text = "";
            tb_setoran_per_bulan.Text = "";
        }

        void show_cb()
        {
            Openkoneksi();
            setCommand("select * from pinjam");
            cb_no_pinjaman.Items.Clear();
            reader = command.ExecuteReader();
            while (reader.Read())
```

```csharp
            {
                cb_no_pinjaman.Items.Add(reader.GetString(0));
            }
            Closekoneksi();
        }

        private void btn_simpan_Click(object sender, EventArgs e)
        {
            if (tb_setoran.Text != "" && cb_no_pinjaman.Text != "")
            {
                Simpan();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }


    private void btn_edit_Click(object sender, EventArgs e)
        {
            if (tb_setoran.Text != "" && cb_no_pinjaman.Text != "")
            {
                Update();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data dengan benar");
            }
        }

        private void btn_hapus_Click(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }

        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }

        private void tb_setoran_KeyUp(object sender, KeyEventArgs e)
        {

            if ((e.KeyCode >= Keys.D0 && e.KeyCode <= Keys.D9) ||
(e.KeyCode == Keys.Back))
            {
                if (tb_setoran.Text != "")
                {
                    cek_lunas();
                }

            }
```

Form Jabatan

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class Formjabatan : Form
    {
        public Formjabatan()
        {
            InitializeComponent();
        }

        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        private void Formjabatan_Load(object sender, EventArgs e)
        {
            Refresh();

        }
        void Simpan()
        {

            Openkoneksi();
            setCommand("insert into jbtn values (@val1,@val2)");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_jab.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Jabatan Berhasil Disimpan");
            Closekoneksi();
        }

        void Update()
```

```csharp
        {
            Openkoneksi();
            setCommand("update jbtn set Jabatan = @val2 where idJabatan =
@val1" );
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_jab.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Jabatan Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from jbtn where idJabatan ='" + tb_id.Text +
"'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }

        void Refresh()
        {
            this.jbtnTableAdapter.Fill(this.koperasiSUTDataSet2.jbtn);
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            btn_simpan.Enabled = true;
            tb_id.Text = "";
            tb_jab.Text = "";
        }
        private void btn_simpan_Click(object sender, EventArgs e)
        {
            {
                if (tb_id.Text != "" && tb_jab.Text != "")
                {
                    Simpan();
                    Refresh();
                }
                else
                {
                    MessageBox.Show("Isi semua data");
                }
            }
        }

        private void button2_Click(object sender, EventArgs e)
```

```csharp
        {
            {
                if (tb_id.Text != "" && tb_jab.Text != "")
                {
                    Update();
                    Refresh();
                }
                else
                {
                    MessageBox.Show("Isi semua data");
                }
            }
        }


        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }

        private void tabel_jabatan_CellContentClick(object sender,
DataGridViewCellEventArgs e)
        {
            if (e.RowIndex >= 0)
            {
                tb_id.Text =
tabel_jabatan.Rows[e.RowIndex].Cells[0].Value.ToString();
                tb_jab.Text =
tabel_jabatan.Rows[e.RowIndex].Cells[1].Value.ToString();
                btn_simpan.Enabled = false;
                btn_hapus.Enabled = true;
                btn_edit.Enabled = true;
            }
        }


        private void btn_hapus_Click_1(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }
    }
}
```

Form Tindakan

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class Formtindakan : Form
    {
        public Formtindakan()
        {
            InitializeComponent();
```

```csharp
        }

        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
        private void Formtindakan_Load(object sender, EventArgs e)
        {
            Refresh();

        }
        void Simpan()
        {

            Openkoneksi();
            setCommand("insert into tindakan values (@val1,@val2)");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_tindakan.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Berhasil Disimpan");
            Closekoneksi();
        }

        void Update()
        {

            Openkoneksi();
            setCommand("update tindakan set Tindakan = @val2 where
idtindakan = @val1");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_tindakan.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
```

```csharp
            Openkoneksi();
            setCommand("delete from tindakan where idtindakan ='" +
tb_id.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");


            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }

        void Refresh()
        {

this.tindakanTableAdapter.Fill(this.koperasiSUTDataSet4.tindakan);
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            btn_simpan.Enabled = true;
            tb_id.Text = "";
            tb_tindakan.Text = "";
        }




  private void btn_simpan_Click(object sender, EventArgs e)
        {

            {
                if (tb_id.Text != "" && tb_tindakan.Text != "")
                {
                    Simpan();
                    Refresh();
                }
                else
                {
                    MessageBox.Show("Isi semua data");
                }
            }
        }

        private void btn_edit_Click(object sender, EventArgs e)
        {
            {
                if (tb_id.Text != "" && tb_tindakan.Text != "")
                {
                    Update();
                    Refresh();
                }
                else
```

```csharp
                {
                    MessageBox.Show("Isi semua data");
                }
            }
        }


        private void btn_refresh_Click(object sender, EventArgs e)
        {
            Refresh();
        }

        private void btn_hapus_Click_1(object sender, EventArgs e)
        {
            Delete();
            Refresh();
        }
    }
}
```

Form Lama Pinjam

```csharp
namespace KoprasiKu_Skripsi
{
    public partial class FormLamaPinjam : Form
    {
        public FormLamaPinjam()
        {
            InitializeComponent();
        }

        SqlConnection koneksi;
        SqlCommand command; SqlDataReader reader; DataSet dataset = new
DataSet();
        SqlDataAdapter adp;
        void Openkoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void Closekoneksi()
        {
            koneksi = new SqlConnection("Data Source=DESKTOP-
OIP8ST1\\UMIMARKHAMAH;Initial Catalog=koperasiSUT;Integrated Security=True;
User=sa; Password=123");
            koneksi.Open();
        }
        void setCommand(String query)
        {
            command = new SqlCommand(query, koneksi);
        }
```

```csharp
        private void FormLamaPinjam_Load(object sender, EventArgs e)
        {

Refresh();

        }

        void Simpan()
        {

            Openkoneksi();
            setCommand("insert into lama_pinjam values (@val1,@val2)");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_lamapjm.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Lama Pinjaman Berhasil Disimpan");
            Closekoneksi();
        }

        void Update()
        {

            Openkoneksi();
            setCommand("update lama_pinjam set Lama_Pinjam = @val2 where
IdlamaPjm = @val1");
            command.Parameters.AddWithValue("@val1", tb_id.Text);
            command.Parameters.AddWithValue("@val2", tb_lamapjm.Text);

            command.ExecuteNonQuery();
            MessageBox.Show("Data Lama Pinjaman Berhasil Diubah");
            Closekoneksi();
        }
        void Delete()
        {
            Openkoneksi();
            setCommand("delete from lama_pinjam where IdlamaPjm ='" +
tb_id.Text + "'");
            DialogResult dialogResult = MessageBox.Show("Apakah Anda Yakin
?", "Data Yang Anda Pilih Akan Dihapus.", MessageBoxButtons.YesNo);
            if (dialogResult == DialogResult.Yes)
            {
                command.ExecuteNonQuery();
                MessageBox.Show("Data Telah Di Hapus");

            }
            else if (dialogResult == DialogResult.No)
            {
                MessageBox.Show("Data Tidak Di Hapus");
            }
            Closekoneksi();
        }

        void Refresh()
        {

this.lama_pinjamTableAdapter.Fill(this.koperasiSUTDataSet3.lama_pinjam);
```

```csharp
            btn_hapus.Enabled = false;
            btn_edit.Enabled = false;
            btn_simpan.Enabled = true;
            tb_id.Text = "";
            tb_lamapjm.Text = "";
        }


        private void btn_simpan_Click(object sender, EventArgs e)
        {
            if (tb_id.Text != "" && tb_lamapjm.Text != "")
            {
                Simpan();
                Refresh();
            }
            else
            {
                MessageBox.Show("Isi semua data");
            }
        }
```