

## LAMPIRAN

### Source code Aplikasi

#### 1. Source code Impor Data Mahasiswa

```
import com.opencsv.CSVReader;
import java.awt.Dimension;
import java.awt.Toolkit;
import java.awt.event.KeyEvent;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import javax.swing.JFileChooser;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.JTable;
import javax.swing.filechooser.FileNameExtensionFilter;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableModel;

public void csvtoTable(String csvPath)
{
    try (CSVReader reader = new CSVReader(new FileReader(csvPath)))
    {
        model = new DefaultTableModel();
        String[] line;
        boolean first = true;
        while ((line = reader.readNext()) != null)
        {
            if(first == true)
            {
                String[] coloum = line[0].split(";");
                for(int x = 0; x < coloum.length; x++)
                {
                    model.addColumn(coloum[x]);
                }
                first = false;
            }
            else
            {
                String[] row = line[0].split(";");
                model.addRow(row);
            }
        }
    }
    jTable1.setModel(model);
}
```

```

    }
    catch(IOException e)
    {
        e.printStackTrace();
    }
}

private void btnImportActionPerformed(java.awt.event.ActionEvent evt) {
    File selectedFile;
    JFileChooser chooser = new JFileChooser();
    chooser.setDialogTitle("Pilih File CSV");
    FileNameExtensionFilter filter = new FileNameExtensionFilter("CSV FILES", "csv",
"csv");
    chooser.setFileFilter(filter);
    int returnValue = chooser.showOpenDialog(null);
    if (returnValue == JFileChooser.APPROVE_OPTION)
    {
        selectedFile = chooser.getSelectedFile();
        csvtoTable(selectedFile.getPath());
    }
}
}

```

## 2. Source code Ekspor Data Mahasiswa

```

import com.opencsv.CSVReader;
import java.awt.Dimension;
import java.awt.Toolkit;
import java.awt.event.KeyEvent;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import javax.swing.JFileChooser;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.JTable;
import javax.swing.filechooser.FileNameExtensionFilter;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableModel;

public void exportToExcel(JTable table, File file)
{
    try
    {
        TableModel tableModel = table.getModel();
        FileWriter fOut = new FileWriter(file);

        for(int i=0; i < tableModel.getColumnCount(); i++)
        {

```

```

        if(i ==tableModel.getColumnCount() - 1){
            fOut.write(tableModel.getColumnHeader(i));
        }
        else
        {
            fOut.write(tableModel.getColumnHeader(i)+";");
        }
    }

    fOut.write("\n");

    for(int i = 0; i < tableModel.getRowCount(); i++)
    {
        for(int j = 0 ; j < tableModel.getColumnCount(); j++)
        {
            if(j == tableModel.getColumnCount() - 1)
            {
                fOut.write(tableModel.getValueAt(i, j).toString());
            }
            else
            {
                fOut.write(tableModel.getValueAt(i, j).toString()+";");
            }
        }
        fOut.write("\n");
    }
    fOut.close();
}
catch(Exception e)
{
    e.printStackTrace();
}
}

private void btnEksportActionPerformed(java.awt.event.ActionEvent evt) {
    JFileChooser chooser = new JFileChooser();
    chooser.setDialogTitle("Simpan File CSV");
    FileNameExtensionFilter filter = new FileNameExtensionFilter("CSV FILES", "csv",
"csv");
    chooser.setFileFilter(filter);
    int returnValue = chooser.showSaveDialog(null);
    if (returnValue == JFileChooser.APPROVE_OPTION)
    {
        File fileName = new File (chooser.getSelectedFile( ) + ".csv");
        if(fileName == null)
            return;
        if(fileName.exists())
        {
            returnValue = JOptionPane.showConfirmDialog(rootPane,"File sudah ada.
Apakah Anda tetap ingin menyimpan ?");
            // jika memilih cancel //
            if(returnValue == JOptionPane.NO_OPTION)
                return;
        }
        exportToExcel(jTable1, fileName);
        JOptionPane.showMessageDialog(rootPane, "Expord data berhasil");
    }
}

```

```
}
```

### 3. Source code Simpan Data

```
DefaultTableModel model;

Connection con;
PreparedStatement stat;
Statement stmt;
ResultSet rs;

String koneksi = "jdbc:sqlserver://;databaseName=SkripsiAsik;user=sa;password=purworejo1995";

private void btnSimpanActionPerformed(java.awt.event.ActionEvent evt) {
    // simpan //
    try {

if(txtNim.getText().equals("")&&(txtNama.getText().equals(""))&&(txtKelas.getText().equals(""))&&(txt
Angkatan.getText().equals(""))
    {
        JOptionPane.showMessageDialog(rootPane, "Data masih kosong");
    }
    else {

        con = DriverManager.getConnection(koneksi);
        String str = "select * from Mahasiswa where Nim = '"+txtNim.getText()+" ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();

        if(txtNim.getText().length()==11)
        {

            if(rs.next())
            {
                JOptionPane.showMessageDialog(rootPane, "Data sudah ada");
            }
            else
            {
                String query = "insert into Mahasiswa values (?, ?, ?, ?)";
                stat = con.prepareStatement(query);
                stat.setString(1, txtNim.getText());
                stat.setString(2, txtNama.getText());
                stat.setString(3, txtKelas.getText());
                stat.setString(4, txtAngkatan.getText());
                stat.execute();
                JOptionPane.showMessageDialog(rootPane, "Simpan Data Berhasil");
                tampil();
                btnEkspor.setVisible(true);
                btnHapus.setVisible(true);
            }
        }
        else
        {
            JOptionPane.showMessageDialog(rootPane, "NIM harus 11 karakter!");
        }
    }
}
```

```

        con.close();
    }

    } catch (SQLException x) {
        System.out.println(x.toString());
        JOptionPane.showMessageDialog(rootPane, "Data Gagal Disimpan" + x.toString());
    }
}

```

#### 4. Source code Edit Data Mahasiswa

```

private void btnEditActionPerformed(java.awt.event.ActionEvent evt) {
    // edit //
    try {
        con = DriverManager.getConnection(koneksi);
        stat = con.prepareStatement("update Mahasiswa set Nama_Mhs = '"+
txtNama.getText() + "', Kelas = '"+ txtKelas.getText() + "', Angkatan = '"+
txtAngkatan.getText() + "' where Nim = '"+ txtNim.getText() +"'");
        stat.executeUpdate();
        JOptionPane.showMessageDialog(rootPane, "Edit Data Berhasil");
        tampil();
    }
    catch (SQLException x) {
        System.out.println(x.toString());
        JOptionPane.showMessageDialog(rootPane, "Data Gagal Diedit" + x.toString());
    }
}

```

#### 5. Source code Hapus Data Mahasiswa

```

private void btnHapusActionPerformed(java.awt.event.ActionEvent evt) {
    // hapus //
    try {
        con = DriverManager.getConnection(koneksi);
        stat = con.prepareStatement("delete from Mahasiswa where Nim = '" +
txtNim.getText() + "'");
        stat.executeUpdate();
        JOptionPane.showMessageDialog(rootPane, "Hapus Data Berhasil");
        tampil();

    } catch (SQLException x) {
        System.out.println(x.toString());
        JOptionPane.showMessageDialog(rootPane, "Data Gagal Dihapus" + x.toString());
    }

    txtNama.setText("");
    txtNim.setText("");
    txtKelas.setText("");
    txtAngkatan.setText("");
}

```

## 6. *Source code* Menampilkan Data Mahasiswa

```
void tampil() {
    try {
        Connection con = DriverManager.getConnection(koneksi);
        String str = "select * from Mahasiswa order by Angkatan ,Kelas , Nim";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();

        DefaultTableModel dtm = new DefaultTableModel(0, 0);

        Object col[] = {"NIM", "Nama", "Kelas", "Angkatan"};
        dtm.setColumnIdentifiers(col);

        while (rs.next()) {
            Object rowData[] = {rs.getString(1), rs.getString(2), rs.getString(3),
rs.getString(4)};
            dtm.addRow(rowData);
        }
        jTable1.setModel(dtm);

    } catch (Exception ex) {
        System.out.println(ex);
    }
}
```

## 7. *Source code* Filtering Data

```
import java.awt.Dimension;
import java.awt.Toolkit;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.ArrayList;
import javax.swing.table.DefaultTableModel;

public Pencarian() {
    initComponents();

    LoadKuliah();

    Toolkit tool = Toolkit.getDefaultToolkit();
    Dimension dim = new Dimension(tool.getScreenSize());
    int height = (int) dim.getHeight();
    int width = (int) dim.getWidth();
    setSize(width, height);
    setLocation(width / 2 - getWidth() / 2, height / 2 - getHeight() / 2);
    tampilPertama();
}
ArrayList<String>kode_mk;
```

```

public void LoadKuliah()
{
    try {
        Connection con = DriverManager.getConnection(koneksi);
        String str = "select * from Kuliah order by Nama_Mk";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        kode_mk=new ArrayList<String>();
        while (rs.next()) {
            kode_mk.add(rs.getString("Kode_Mk"));
            cbMk.addItem(rs.getString("Nama_Mk"));
        }

    } catch (Exception ex) {
        System.out.println(ex);
    }
    // LoadTahunAjar();

}
public void LoadTahunAjar()
{
    try {
        Connection con = DriverManager.getConnection(koneksi);String tahun="";
        String str = "select * from Kuliah where
Kode_Mk='"+kode_mk.get(cbMk.getSelectedIndex())+"' order by Tahun_Ajaran ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        cbMkTahunAjar.removeAllItems();
        while (rs.next()) {
            if(!(rs.getString("Tahun_Ajaran").equals(tahun)))
            {
                tahun=rs.getString("Tahun_Ajaran");
                cbMkTahunAjar.addItem(rs.getString("Tahun_Ajaran"));
            }
        }

    } catch (Exception ex) {
        System.out.println(ex);
    }

}

// TAMPILIN JOIN NILAI //
void tampil() {
    try {
        Connection con = DriverManager.getConnection(koneksi);
        // mengurutkan berdasarkan Nim di tabel dengan order by//
        String str = "select
b.Nim,b>Nama_Mhs,b.Kelas,c>Nama_Mk,c.Semester,a.Kehadiran,a.Tugas,a.Ujian_mid,a.Ujian_smt,
a.Nilai_akhir,a.Id from PNilai a join Mahasiswa b on a.Nim=b.Nim join Kuliah c on a.Id_Mk=c.Id_Mk
where c.Tahun_Ajaran like '"+cbMkTahunAjar.getSelectedItem().toString()+"' and c>Nama_Mk like
'%" +cbMk.getSelectedItem().toString()+"%' and b.Nim like '%" +txNm.getText()+"%'";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();

        DefaultTableModel dtm = new DefaultTableModel(0, 0);

```

```

    Object col[] = {"NIM", "Nama", "Kelas", "Matakuliah", "Semester", "Kehadiran", "Tugas",
"Nilai Mid", "Nilai Semesteran", "Nilai Akhir"};
    dtm.setColumnIdentifiers(col);

    while (rs.next()) {
        Object rowData[] = {rs.getString(1),
rs.getString(2),rs.getString(3),rs.getString(4),rs.getString(5),rs.getString(6),rs.getString(7),rs.getStrin
g(8),rs.getString(9),rs.getString(10)};
        dtm.addRow(rowData);
    }
    jTable1.setModel(dtm);
} catch (Exception ex) {
    System.out.println(ex);
}
}
void tampilPertama() {
    try {
        Connection con = DriverManager.getConnection(koneksi);
        // mengurutkan berdasarkan Nim di tabel dengan order by//
        String str = "select
b.Nim,b>Nama_Mhs,b.Kelas,c>Nama_Mk,c.Semester,a.Kehadiran,a.Tugas,a.Ujian_mid,a.Ujian_smt,
a.Nilai_akhir,a.Id from PNilai a join Mahasiswa b on a.Nim=b.Nim join Kuliah c on a.Id_Mk=c.Id_Mk
";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();

        DefaultTableModel dtm = new DefaultTableModel(0, 0);

        Object col[] = {"NIM", "Nama", "Kelas", "Matakuliah", "Semester", "Kehadiran", "Tugas",
"Nilai Mid", "Nilai Semesteran", "Nilai Akhir"};
        dtm.setColumnIdentifiers(col);

        while (rs.next()) {
            Object rowData[] = {rs.getString(1),
rs.getString(2),rs.getString(3),rs.getString(4),rs.getString(5),rs.getString(6),rs.getString(7),rs.getStrin
g(8),rs.getString(9),rs.getString(10)};
            dtm.addRow(rowData);
        }
        jTable1.setModel(dtm);
    } catch (Exception ex) {
        System.out.println(ex);
    }
}
}

```

## 8. Source code Upload

```

import java.awt.Dimension;
import java.awt.Image;
import java.awt.Toolkit;
import java.awt.image.BufferedImage;
import java.io.ByteArrayInputStream;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.sql.Connection;

```



```

import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.imageio.ImageIO;
import javax.swing.ImageIcon;
import javax.swing.JFileChooser;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.filechooser.FileNameExtensionFilter;
import javax.swing.table.DefaultTableModel;
import sun.misc.BASE64Decoder;

private File f;
private FileInputStream fis;
public void loadMatakuliah()
{
    try {
        Connection con = DriverManager.getConnection(koneksi);
        String str = "select * from Kuliah where Tahun_Ajaran =
"+cbTahunAjar.getSelectedItemAt().toString()+" ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        cbMatkul.removeAllItems();
        id_mk = new ArrayList<Integer>();
        while (rs.next()) {
            id_mk.add(rs.getInt("Id_Mk"));
            cbMatkul.addItem(rs.getString("Nama_Mk"));
        }

    } catch (Exception ex) {
        System.out.println(ex);
    }

}
ArrayList<String>kod_dosen=new ArrayList<String>();
public void LoadDosen()
{
    try {
        Connection con = DriverManager.getConnection(koneksi);
        String str = "select * from Dosen";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        cbDosen.removeAllItems();
        kod_dosen = new ArrayList<String>();
        while (rs.next()) {
            kod_dosen.add(rs.getString("NIK"));
            cbDosen.addItem(rs.getString("Nama_Dosen"));
        }

    } catch (Exception ex) {
        System.out.println(ex);
    }
}

```

```

}
public void loadTahunAjar()
{
    try {
        Connection con = DriverManager.getConnection(koneksi);String tahun="";
        String str = "select * from Kuliah where
NIK="+kod_dosen.get(cbDosen.getSelectedIndex())+" order by Tahun_Ajaran ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        cbTahunAjar.removeAllItems();
        while (rs.next())
        {
            if(!(rs.getString("Tahun_Ajaran").equals(tahun)))
            {
                tahun=rs.getString("Tahun_Ajaran");
                cbTahunAjar.addItem(rs.getString("Tahun_Ajaran"));
            }
        }
    } catch (Exception ex) {
        //System.out.println(ex);
    }
}

public Upload() {
    initComponents();
    //dataFromDatabaseToCombobox();

    Toolkit tool = Toolkit.getDefaultToolkit();
    Dimension dim = new Dimension(tool.getScreenSize());
    int height = (int) dim.getHeight();
    int width = (int) dim.getWidth();
    setSize(width, height);
    setLocation(width / 2 - getWidth() / 2, height / 2 - getHeight() / 2);
    LoadDosen();
}

private void btnSimpanActionPerformed(java.awt.event.ActionEvent evt) {
    // menyimpan //
    try{
        con = DriverManager.getConnection(koneksi);
        String str = "select * from Upload where Title = '"+txtNama.getText()+"' ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();

        if(rs.next())
        {
            JOptionPane.showMessageDialog(rootPane, "Data sudah ada");
        }
        else{
            stat = con.prepareStatement("INSERT INTO
Upload([Title],[Image],[Id_Mk],[Tahun_Ajaran],[NIK]) VALUES(?,?,?,?,?)");

            stat.setString(1, txtNama.getText());
            fis = new FileInputStream(f);
            stat.setBinaryStream(2, fis, (int) f.length());
            stat.setString(3, id_mk.get(cbMatkul.getSelectedIndex()).toString());

```

```

        stat.setString(4, cbTahunAjar.getSelectedItem().toString());
        stat.setString(5, kod_dosen.get(cbDosen.getSelectedIndex()));
        stat.executeUpdate();
        JOptionPane.showMessageDialog(rootPane, "Simpan Gambar Berhasil");

    }

    con.close();

} catch (SQLException ex) {
    Logger.getLogger(Upload.class.getName()).log(Level.SEVERE, null, ex);
}
catch (FileNotFoundException ex)
{
    Logger.getLogger(Upload.class.getName()).log(Level.SEVERE, null, ex);
}

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // mencari gambar //
    JFileChooser j = new JFileChooser();
    j.showOpenDialog(null);
    f = j.getSelectedFile();
    String lokasi=f.getAbsolutePath();
    jTextField1.setText(lokasi);
    Toolkit toolkit = Toolkit.getDefaultToolkit();
    Image image = toolkit.getImage(lokasi);
    Image scaledImage = image.getScaledInstance(570, 390, Image.SCALE_DEFAULT);
    ImageIcon icon=new ImageIcon(scaledImage);
    jLabelGbr.setIcon(icon);
    txtNama.setText(f.getName());

}

```

## 9. *Source code* Menampilkan Grafik

```

import java.awt.Dimension;
import java.awt.Toolkit;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.ArrayList;
import javax.swing.JOptionPane;
import net.sf.jasperreports.engine.JasperCompileManager;
import net.sf.jasperreports.engine.JasperFillManager;
import net.sf.jasperreports.engine.JasperPrint;
import net.sf.jasperreports.engine.JasperReport;
import net.sf.jasperreports.engine.design.JRDesignQuery;
import net.sf.jasperreports.engine.design.JasperDesign;
import net.sf.jasperreports.engine.xml.JRXmlLoader;
import net.sf.jasperreports.view.JasperViewer;

ArrayList<String>kd_mk=new ArrayList<>();

```

```

public void loadMatakuliah()
{
    String mk="";
    try {
        Connection con = DriverManager.getConnection(koneksi);
        String str = "select * from Kuliah ";
        stat = con.prepareStatement(str);
        rs = stat.executeQuery();
        kd_mk = new ArrayList<String>();
        cbMatkul.removeAll();
        while (rs.next()) {

            if(!(mk.equals(rs.getString("Nama_Mk"))))
            {
                kd_mk.add(rs.getString("Kode_Mk"));
                cbMatkul.addItem(rs.getString("Nama_Mk"));
                mk=rs.getString("Nama_Mk");
            }
        }

    } catch (Exception ex) {
        System.out.println(ex);
    }

}

public Chart() {
    initComponents();

    Toolkit tool = Toolkit.getDefaultToolkit();
    Dimension dim = new Dimension(tool.getScreenSize());
    int height = (int) dim.getHeight();
    int width = (int) dim.getWidth();
    setSize(width, height);
    setLocation(width / 2 - getWidth() / 2, height / 2 - getHeight() / 2);
    loadMatakuliah();
}

```

## 10. Source code Login

```

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import javax.swing.JOptionPane;
import menus.FormMenuAdmin;

Connection con;
PreparedStatement stat;
Statement stmt;
ResultSet rs;

String koneksi =
"jdbc:sqlserver://;databaseName=SkripsiAsik;user=sa;password=purworejo1995";

```

```

public Login() {
    initComponents();
    // untuk proses login //
    try
    {
        con = DriverManager.getConnection("jdbc:sqlserver://;databaseName=SkripsiAsik;
user=sa;password=purworejo1995");
        stmt = con.createStatement();
    }
    catch (SQLException x)
    {
        System.out.println(x.toString());
    }
}

private void btnLoginActionPerformed(java.awt.event.ActionEvent evt) {
    if(txtUsername.getText().equals("") || (txtPass.getText().equals("")))
    {
        JOptionPane.showMessageDialog(rootPane, "Isi Username dan Password dulu!");
        txtWarning.setText("");
    }
    else{

        log();
        boolean a = log();

        if (a == true)
        {
            FormMenuAdmin mu = new FormMenuAdmin();
            mu.setVisible(true);
            dispose();
        }
        else
        {
            txtWarning.setText("Username dan Password salah!");
        }
    }
}

public boolean log()
{
    String username = txtUsername.getText();
    String pass = txtPass.getText();
    String sql = "select * from Admin where Username = '" + username + "'";
    try
    {
        stmt = con.createStatement();
        rs = stmt.executeQuery(sql);

        if (rs.next())
        {
            if(pass.equals(rs.getString("Password")))
            {
                return true;
            }
            else
            {

```

```
        return false;
    }
}
catch(Exception e)
{
    return false;
}
return false;
}
```

## 11. Source Code Download

```
import java.awt.Dimension;
import java.awt.Image;
import java.awt.Toolkit;
import java.awt.image.BufferedImage;
import java.io.ByteArrayInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.imageio.ImageIO;
import javax.swing.ImageIcon;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import sun.misc.BASE64Decoder;

public class download extends javax.swing.JPanel {

    Connection con;
    PreparedStatement stat;
    Statement stmt;
    ResultSet rs;
```

```
String koneksi =
"jdbc:sqlserver://;databaseName=SkripsiAsik;user=sa;password=purworejo1995";

public download() {
    initComponents();
private void jButtonDownloadActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        FileOutputStream imageOutFile = new FileOutputStream("D:\\a\\"+nama);
        imageOutFile.write(decodeImage(img));
        imageOutFile.close();
    } catch (FileNotFoundException ex) {
        Logger.getLogger(download.class.getName()).log(Level.SEVERE, null, ex);
    } catch (IOException ex) {
        Logger.getLogger(download.class.getName()).log(Level.SEVERE, null, ex);
    }
    JOptionPane.showMessageDialog(this, "Disimpan di directory:D:/a/"+nama);
}
```