

# TUGAS PERTEMUAN 7 DAN 8

## PRAKTIKUM PBO

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## A. Latihan dan Tugas

### 1. User.java

```
package model;

public class User {
    String id, nama, username, password;

    public User(String uname, String pass) {
        this.username = uname;
        this.password = pass;
    }

    public User () {

    }

    public String getId() {
        return id;
    }
    public void setId(String id) {
        this.id = id;
    }
    public String getNama() {
        return nama;
    }
    public void setNama(String nama) {
        this.nama = nama;
    }
    public String getUsername() {
        return username;
    }
    public void setUsername(String username) {
        this.username = username;
    }
    public String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }

    public static boolean login(String username, String password) {
        boolean isLogin = false;
        /*User user = new User();
        user.setId("1");
        user.setNama("fulan");
        user.setUsername("fulan");
        user.setPassword("12345");*/
    }
}
```

```

        if(user.getUsername().equals(username) &&
user.getPassword().equals(password)) {
            isLogin = true;

        }else {
            isLogin = false;
        }*/
        return isLogin;
    }
}

```

## 2. ValidationException.java

```

package error;

public class ValidationException extends Throwable {

    public ValidationException(String message) {
        super(message);
    }
}

```

## 3. ValidationUtil.java

```

package util;

import error.ValidationException;
import model.User;

public class ValidationUtil {

    public static void validate(User user) throws ValidationException,
NullPointerException{
        if(user.getUsername() == null) {
            throw new NullPointerException("Username is null");
        }
        else if(user.getUsername().isBlank()) {
            throw new ValidationException("Username is blank");
        }
        else if(user.getPassword() == null) {
            throw new NullPointerException("Password is null");
        }
        else if(user.getPassword().isBlank()) {
            throw new ValidationException("Password is blank");
        }
    }
}

```

```
}  
  
}
```

#### 4. LoginService.java

```
package service;  
  
import java.sql.Connection;  
import java.sql.PreparedStatement;  
import java.sql.ResultSet;  
import java.sql.SQLException;  
  
import config.DatabaseHelper;  
import model.User;  
  
public class LoginService {  
  
    public boolean authenticate(User user) {  
        String query = "SELECT * FROM user WHERE username = ? AND password = ?";  
  
        try (Connection conn = DatabaseHelper.getConnection();  
             PreparedStatement statement = conn.prepareStatement(query)) {  
            statement.setString(1, user.getUsername());  
            statement.setString(2, user.getPassword());  
  
            ResultSet resultSet = statement.executeQuery();  
            return resultSet.next();  
        } catch (SQLException e) {  
            e.printStackTrace();  
        }  
        return false;  
    }  
}
```

#### 5. LoginFrame.java

```
package ui;  
  
import java.awt.EventQueue;  
  
import javax.swing.JFrame;  
import javax.swing.JPanel;  
import javax.swing.border.EmptyBorder;
```

```

import error.ValidationException;
import model.User;
import service.LoginService;
import util.ValidationUtil;

import javax.swing.JTextField;
import javax.swing.JLabel;
import javax.swing.JOptionPane;

import java.awt.Font;
import java.awt.Color;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class LoginFrame extends JFrame {

    private static final Long serialVersionUID = 1L;
    private JPanel contentPane;
    private JTextField txtUsername;
    private JTextField txtPassword;

    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    LoginFrame frame = new LoginFrame();
                    frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    /**
     * Create the frame.
     */
    public LoginFrame() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 450, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
        contentPane.setForeground(new Color(255, 255, 255));
        contentPane.setBackground(new Color(255, 255, 255));
    }

```

```

setContentPane(contentPane);
contentPane.setLayout(null);

JLabel lblNewLabel = new JLabel("Laundry Apps");
lblNewLabel.setBounds(171, 10, 94, 20);
lblNewLabel.setForeground(new Color(64, 128, 128));
lblNewLabel.setBackground(new Color(0, 0, 0));
lblNewLabel.setFont(new Font("Times New Roman", Font.BOLD, 16));
contentPane.add(lblNewLabel);

txtUsername = new JTextField();
txtUsername.setBounds(114, 94, 199, 28);
contentPane.add(txtUsername);
txtUsername.setColumns(10);

txtPassword = new JTextField();
txtPassword.setBounds(114, 132, 199, 28);
contentPane.add(txtPassword);
txtPassword.setColumns(10);

JLabel lblNewLabel_1 = new JLabel("Masukkan data Anda");
lblNewLabel_1.setFont(new Font("Tw Cen MT", Font.BOLD, 12));
lblNewLabel_1.setBounds(94, 40, 248, 28);
contentPane.add(lblNewLabel_1);

JButton btnNewButton = new JButton("Login");
btnNewButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {

        if(User.login(txtUsername.getText(), txtPassword.getText())) {
            JOptionPane.showMessageDialog(null, "Yeyy berhasil
login");
//            cara 1 : pindah dari login ke main frame
            MainFrame mf = new MainFrame();
            mf.setVisible(true);
            dispose();

//            cara 2 : pindah dari login ke main frame
            new MainFrame().setVisible(true);
            dispose();
        }else {
            JOptionPane.showMessageDialog(null, "Login Gagal");
        }
    }
});
btnNewButton.setFont(new Font("Tw Cen MT", Font.PLAIN, 12));
btnNewButton.setBounds(171, 178, 85, 21);

```

```

        contentPane.add(btnNewButton);
    }

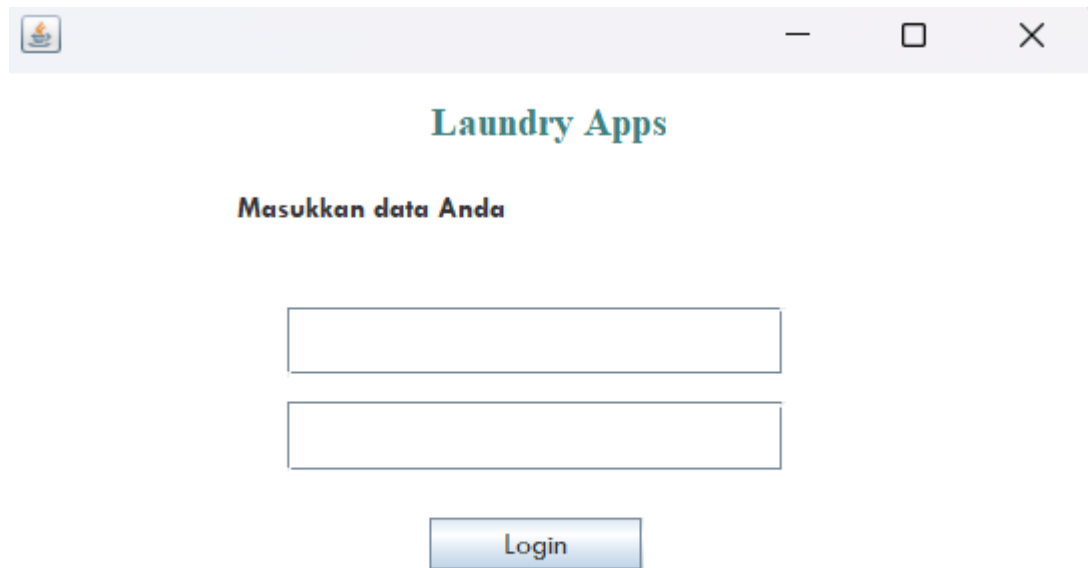
    public void actionPerformed(ActionEvent e) {
        String userValue = txtUsername.getText();
        String passValue = txtPassword.getText();

        // Create user object
        User user = new User(userValue, passValue);

        try {
            ValidationUtil.validate(user);
            LoginService loginService = new LoginService();
            if (loginService.authenticate(user)) {
                System.out.println("Login successful!");
                new MainFrame().setVisible(true);
                dispose();
            } else {
                System.out.println("Invalid username or password.");
                JOptionPane.showMessageDialog(null, "Login Gagal, Invalid
username or password.");
            }
        } catch (ValidationException | NullPointerException exception) {
            System.out.println("Data tidak valid : " +
exception.getMessage());
            JOptionPane.showMessageDialog(null, "Login Gagal: " +
exception.getMessage());
        } finally {
            System.out.println("Selalu di eksekusi");
        }
    }
}

```

Maka akan tampil seperti ini,



**Laundry Apps**

**Masukkan data Anda**

#### 6. Costumer.java

```
package model;

public class Costumer {
    private String id, nama, email, alamat, hp;

    public Costumer(String id, String nama, String email, String alamat,
String hp) {
        this.id = id;
        this.nama = nama;
        this.email = email;
        this.alamat = alamat;
        this.hp = hp;
    }

    public String getId() {
        return id;
    }

    public String getNama() {
        return nama;
    }

    public String getEmail() {
        return email;
    }

    public String getAlamat() {
```



```

        return alamat;
    }

    public String getHP() {
        return hp;
    }
}

```

## 7. CustomerBuilder.java

```

package model;

public class CustomerBuilder {
    private String id;
    private String nama;
    private String email = "*";
    private String alamat;
    private String hp;

    public CustomerBuilder() {
        // TODO Auto-generated constructor stub
    }

    public CustomerBuilder setId(String id) {
        this.id = id;
        return this;
    }

    public CustomerBuilder setNama(String nama) {
        this.nama = nama;
        return this;
    }

    public CustomerBuilder setEmail(String email) {
        this.email = email;
        return this;
    }

    public CustomerBuilder setAlamat(String alamat) {
        this.alamat = alamat;
        return this;
    }

    public CustomerBuilder setHp(String hp) {
        this.hp = hp;
    }
}

```

```

        return this;
    }

    public Costumer build() {
        return new Costumer(id, nama, email, alamat, hp);
    }
}

```

## 8. CostumerFrame.java

```

package ui;

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;

import DAO.CostumerRepo;
import DAO.UserRepo;
import model.Costumer;
import model.CustomerBuilder;
import model.User;
import table.tableCostumer;
import table.TableUser;

import javax.swing.JScrollPane;
import java.awt.FlowLayout;
import javax.swing.JLabel;
import javax.swing.JOptionPane;

import java.awt.Font;
import java.util.List;

import javax.swing.JTextField;
import javax.swing.JButton;
import javax.swing.JTable;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;
import java.awt.event.MouseAdapter;
import java.awt.event.MouseEvent;

public class CostumerFrame extends JFrame {

    private static final Long serialVersionUID = 1L;
    private JPanel contentPane;
    private JTextField txtNama;

```

```

private TextField txtAlamat;
private TextField txtNohp;
private Table tableCostumer;

/**
 * Launch the application.
 */
public static void main(String[] args) {
    EventQueue.invokeLater(new Runnable() {
        public void run() {
            try {
                CostumerFrame frame = new CostumerFrame();
                frame.setVisible(true);
                frame.loadTable();
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    });
}

CostumerRepo cst = new CostumerRepo();
List<Costumer> ls;
public String id;

/**
 * Create the frame.
 */
public CostumerFrame() {

    setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
    setBounds(100, 100, 800, 600);
    contentPane = new JPanel();
    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

    setContentPane(contentPane);
    contentPane.setLayout(null);

    JPanel panel = new JPanel();
    panel.setBounds(10, 10, 766, 260);
    contentPane.add(panel);
    panel.setLayout(null);

    JLabel lblNama = new JLabel("Nama Pelanggan");
    lblNama.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
    lblNama.setBounds(26, 25, 121, 25);
    panel.add(lblNama);

```

```

txtNama = new JTextField();
txtNama.setBounds(165, 31, 505, 19);
panel.add(txtNama);
txtNama.setColumns(10);

JLabel lblAlamat = new JLabel("Alamat");
lblAlamat.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
lblAlamat.setBounds(89, 74, 58, 25);
panel.add(lblAlamat);

txtAlamat = new JTextField();
txtAlamat.setColumns(10);
txtAlamat.setBounds(165, 80, 505, 19);
panel.add(txtAlamat);

JLabel lblNohp = new JLabel("No. HP");
lblNohp.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
lblNohp.setBounds(89, 122, 51, 25);
panel.add(lblNohp);

txtNohp = new JTextField();
txtNohp.setColumns(10);
txtNohp.setBounds(165, 128, 505, 19);
panel.add(txtNohp);

JButton btnSave = new JButton("Save");
btnSave.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Costumer cs = new CustomerBuilder()
            .setNama(txtNama.getText())
            .setAlamat(txtAlamat.getText())
            .setHp(txtNohp.getText())
            .build();
        cst.save(cs);
        reset();
        loadTable();
    }
});
btnSave.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
btnSave.setBounds(165, 193, 85, 40);
panel.add(btnSave);

JButton btnUpdate = new JButton("Update");
btnUpdate.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        if(id != null) {

```

```

        Costumer cs = new CustomerBuilder()
            .setNama(txtNama.getText())
            .setAlamat(txtAlamat.getText())
            .setHp(txtNohp.getText())
            .setId(id)
            .build();
        cst.update(cs);
        reset();
        loadTable();
    }
    else {
        JOptionPane.showMessageDialog(null, "Silahkan pilih data
yang akan dihapus");
    }
}
});
btnUpdate.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnUpdate.setBounds(271, 193, 85, 40);
panel.add(btnUpdate);

JButton btnDelete = new JButton("Delete");
btnDelete.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        if(id != null) {
            cst.delete(id);
            reset();
            loadTable();
        }else {
            JOptionPane.showMessageDialog(null, "Silahkan pilih data
yang akan dihapus");
        }
    }
});
btnDelete.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnDelete.setBounds(383, 193, 85, 40);
panel.add(btnDelete);

JButton btnCancel = new JButton("Cancel");
btnCancel.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        reset();
    }
});
btnCancel.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnCancel.setBounds(585, 193, 85, 40);

```

```

        panel.add(btnCancel);

        JScrollPane scrollPane = new JScrollPane();
        scrollPane.setBounds(10, 280, 766, 273);
        contentPane.add(scrollPane);

        tableCostumer = new JTable();
        tableCostumer.addMouseListener(new MouseAdapter() {
            @Override
            public void mouseClicked(MouseEvent e) {
                id = tableCostumer.getValueAt(tableCostumer.getSelectedRow(),
0).toString();
                txtNama.setText(tableCostumer.getValueAt(tableCostumer.getSelec
ctedRow(), 1).toString());
                txtAlamat.setText(tableCostumer.getValueAt(tableCostumer.getSe
lectedRow(), 2).toString());
                txtNohp.setText(tableCostumer.getValueAt(tableCostumer.getSele
ctedRow(), 3).toString());
            }
        });
        scrollPane.setViewportView(tableCostumer);

    }

    public void loadTable() {
        ls = cst.show();
        tableCostumer tc = new tableCostumer(ls);
        tableCostumer.setModel(tc);
        tableCostumer.getTableHeader().setVisible(true);
    }

    public void reset() {
        txtNama.setText("");
        txtAlamat.setText("");
        txtNohp.setText("");
    }

}

```

Maka akan tampil seperti ini,

Nama Pelanggan

Alamat

No. HP

ID	Nama	Alamat	Nohp
----	------	--------	------

## 9. CostumerDAO.java

```
package DAO;

import java.util.List;
import model.Costumer;

public interface CostumerDAO {
    public void save(Costumer cs);
    public void delete(String id);
    public void update(Costumer cs);
    public List<Costumer> show();
}
```

## 10. CostumerRepo.java

```
package DAO;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
import java.util.List;
import java.util.logging.Level;
```

```

import java.util.logging.Logger;

import config.DatabaseHelper;
import model.Costumer;
import model.CustomerBuilder;

public class CostumerRepo implements CostumerDAO{
    private Connection connection;
    final String insert = "INSERT INTO costumer (nama, alamat, nohp) VALUES
(?,?,?);";
    final String select = "SELECT * FROM costumer;" ;
    final String delete = "DELETE FROM costumer WHERE id = ?;";
    final String update = "UPDATE costumer SET nama=?, alamat=?, nohp=? WHERE
id=?;";

    public CostumerRepo() {
        connection = DatabaseHelper.getConnection();
    }

    @Override
    public void save(Costumer costumer) {
        PreparedStatement st = null;
        try {
            st = connection.prepareStatement(insert);
            st.setString(1, costumer.getNama());
            st.setString(2, costumer.getAlamat());
            st.setString(3, costumer.getHP());
            st.executeUpdate();

        }catch(SQLException e) {
            e.printStackTrace();
        }finally {
            try {
                st.close();
            }catch(SQLException e) {
                e.printStackTrace();
            }
        }
    }

    public List<Costumer> show(){
        List<Costumer> ls = null;
        try {
            ls = new ArrayList<Costumer>();
            Statement st = connection.createStatement();
            ResultSet rs = st.executeQuery(select);
            while(rs.next()) {
                Costumer cs = new CustomerBuilder()

```



```

        .setId(rs.getString("id"))
        .setNama(rs.getString("nama"))
        .setAlamat(rs.getString("alamat"))
        .setHp(rs.getString("nohp"))
        .build();
        ls.add(cs);
    }
} catch (SQLException e) {
    Logger.getLogger(CostumerDAO.class.getName()).log(Level.SEVERE,
null, e);
}
return ls;
}

@Override
public void update (Costumer costumer) {
    PreparedStatement st = null;
    try {
        st = connection.prepareStatement(update);
        st.setString(1, costumer.getNama());
        st.setString(2, costumer.getAlamat());
        st.setString(3, costumer.getHP());
        st.setString(4, costumer.getId());
        st.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        try {
            st.close();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}

public void delete(String id) {
    PreparedStatement st = null;
    try {
        st = connection.prepareStatement(delete);
        st.setString(1, id);
        st.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        try {
            st.close();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}

```

```

    }
}
}
}
}

```

## 11. tableCostumer.java

```

package table;

import java.util.List;
import javax.swing.table.AbstractTableModel;
import model.Costumer;

public class tableCostumer extends AbstractTableModel {
    List<Costumer> ls;
    private String[] columnNames = {"ID", "Nama", "Alamat", "Nohp"};

    public tableCostumer(List<Costumer> ls) {
        this.ls = ls;
    }

    public int getRowCount() {
        return ls.size();
    }

    public int getColumnCount() {
        return 4;
    }

    public String getColumnName(int column) {
        return columnNames[column];
    }

    public Object getValueAt(int rowIndex, int columnIndex) {
        switch (columnIndex) {
            case 0:
                return ls.get(rowIndex).getId();
            case 1:
                return ls.get(rowIndex).getNama();
            case 2:
                return ls.get(rowIndex).getAlamat();
            case 3:
                return ls.get(rowIndex).getHP();
            default:
                return null;
        }
    }
}

```

```
}  
}
```

## 12. CostumerFrame.java

```
package ui;  
  
import java.awt.EventQueue;  
  
import javax.swing.JFrame;  
import javax.swing.JPanel;  
import javax.swing.border.EmptyBorder;  
  
import DAO.CostumerRepo;  
import DAO.UserRepo;  
import model.Costumer;  
import model.CustomerBuilder;  
import model.User;  
import table.tableCostumer;  
import table.TableUser;  
  
import javax.swing.JScrollPane;  
import java.awt.FlowLayout;  
import javax.swing.JLabel;  
import javax.swing.JOptionPane;  
  
import java.awt.Font;  
import java.util.List;  
  
import javax.swing.JTextField;  
import javax.swing.JButton;  
import javax.swing.JTable;  
import java.awt.event.ActionListener;  
import java.awt.event.ActionEvent;  
import java.awt.event.MouseAdapter;  
import java.awt.event.MouseEvent;  
  
public class CostumerFrame extends JFrame {  
  
    private static final Long serialVersionUID = 1L;  
    private JPanel contentPane;  
    private JTextField txtNama;  
    private JTextField txtAlamat;  
    private JTextField txtNohp;  
    private JTable tableCostumer;  
  
    /**  
     * Launch the application.  
     */  
}
```

```

    */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    CostumerFrame frame = new CostumerFrame();
                    frame.setVisible(true);
                    frame.loadTable();
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    CostumerRepo cst = new CostumerRepo();
    List<Costumer> ls;
    public String id;

    /**
     * Create the frame.
     */
    public CostumerFrame() {

        setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        setBounds(100, 100, 800, 600);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

        setContentPane(contentPane);
        contentPane.setLayout(null);

        JPanel panel = new JPanel();
        panel.setBounds(10, 10, 766, 260);
        contentPane.add(panel);
        panel.setLayout(null);

        JLabel lblNama = new JLabel("Nama Pelanggan");
        lblNama.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
        lblNama.setBounds(26, 25, 121, 25);
        panel.add(lblNama);

        txtNama = new JTextField();
        txtNama.setBounds(165, 31, 505, 19);
        panel.add(txtNama);
        txtNama.setColumns(10);
    }

```

```

        JLabel lblAlamat = new JLabel("Alamat");
        lblAlamat.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
        lblAlamat.setBounds(89, 74, 58, 25);
        panel.add(lblAlamat);

        txtAlamat = new JTextField();
        txtAlamat.setColumns(10);
        txtAlamat.setBounds(165, 80, 505, 19);
        panel.add(txtAlamat);

        JLabel lblNohp = new JLabel("No. HP");
        lblNohp.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
        lblNohp.setBounds(89, 122, 51, 25);
        panel.add(lblNohp);

        txtNohp = new JTextField();
        txtNohp.setColumns(10);
        txtNohp.setBounds(165, 128, 505, 19);
        panel.add(txtNohp);

        JButton btnSave = new JButton("Save");
        btnSave.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                Costumer cs = new CustomerBuilder()
                    .setNama(txtNama.getText())
                    .setAlamat(txtAlamat.getText())
                    .setHp(txtNohp.getText())
                    .build();
                cst.save(cs);
                reset();
                loadTable();
            }
        });
        btnSave.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN, 16));
        btnSave.setBounds(165, 193, 85, 40);
        panel.add(btnSave);

        JButton btnUpdate = new JButton("Update");
        btnUpdate.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                if(id != null) {
                    Costumer cs = new CustomerBuilder()
                        .setNama(txtNama.getText())
                        .setAlamat(txtAlamat.getText())
                        .setHp(txtNohp.getText())
                        .setId(id)
                        .build();

```

```

        cst.update(cs);
        reset();
        loadTable();
    }
    else {
        JOptionPane.showMessageDialog(null, "Silahkan pilih data
yang akan dihapus");
    }
}

});
btnUpdate.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnUpdate.setBounds(271, 193, 85, 40);
panel.add(btnUpdate);

JButton btnDelete = new JButton("Delete");
btnDelete.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        if(id != null) {
            cst.delete(id);
            reset();
            loadTable();
        }else {
            JOptionPane.showMessageDialog(null, "Silahkan pilih data
yang akan dihapus");
        }
    }
});
btnDelete.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnDelete.setBounds(383, 193, 85, 40);
panel.add(btnDelete);

JButton btnCancel = new JButton("Cancel");
btnCancel.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        reset();
    }
});
btnCancel.setFont(new Font("HP Simplified Jpan Light", Font.PLAIN,
16));
btnCancel.setBounds(585, 193, 85, 40);
panel.add(btnCancel);

JScrollPane scrollPane = new JScrollPane();
scrollPane.setBounds(10, 280, 766, 273);
contentPane.add(scrollPane);

```

```

        tableCostumer = new JTable();
        tableCostumer.addMouseListener(new MouseAdapter() {
            @Override
            public void mouseClicked(MouseEvent e) {
                id = tableCostumer.getValueAt(tableCostumer.getSelectedRow(),
0).toString();
                txtNama.setText(tableCostumer.getValueAt(tableCostumer.getSelec
ctedRow(), 1).toString());
                txtAlamat.setText(tableCostumer.getValueAt(tableCostumer.getSe
lectedRow(), 2).toString());
                txtNohp.setText(tableCostumer.getValueAt(tableCostumer.getSele
ctedRow(), 3).toString());
            }
        });
        scrollPane.setViewportView(tableCostumer);

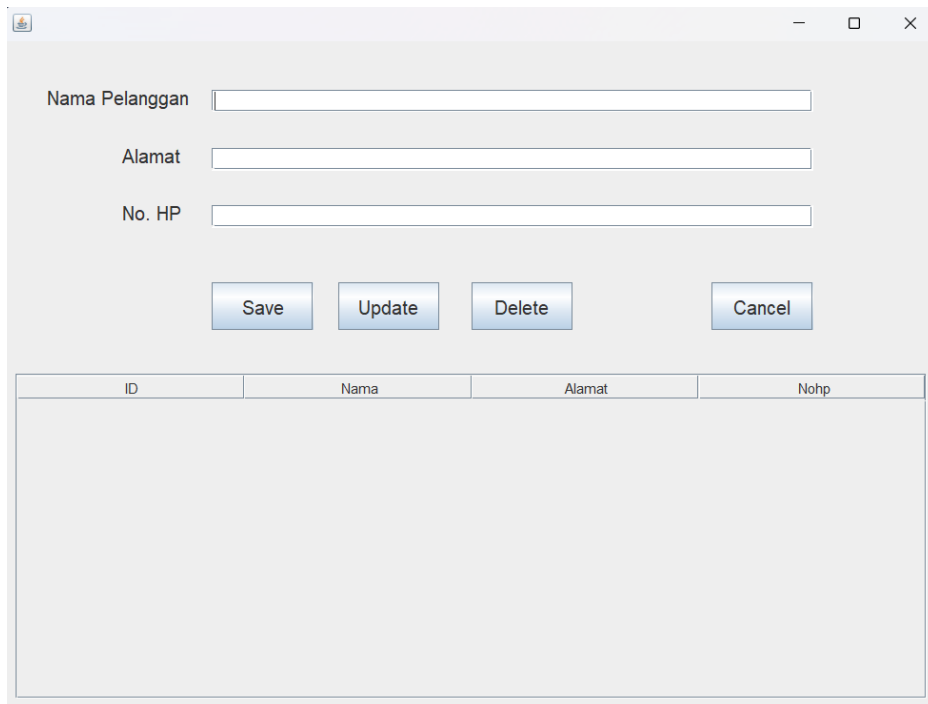
    }

    public void loadTable() {
        ls = cst.show();
        tableCostumer tc = new tableCostumer(ls);
        tableCostumer.setModel(tc);
        tableCostumer.getTableHeader().setVisible(true);
    }

    public void reset() {
        txtNama.setText("");
        txtAlamat.setText("");
        txtNohp.setText("");
    }
}

```

Maka akan tampil seperti ini,



Nama Pelanggan

Alamat

No. HP

Save

Update

Delete

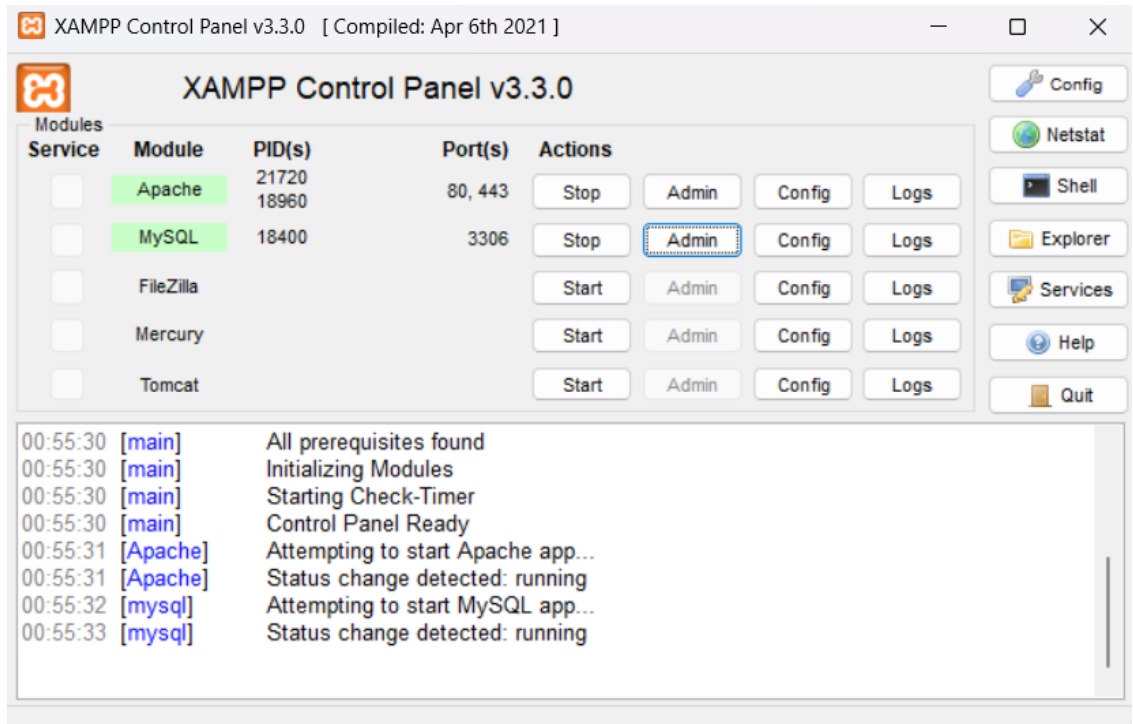
Cancel

ID	Nama	Alamat	Nohp
----	------	--------	------



## B. Database

1. Tampilan database beserta table-tabelnya  
Buka dan jalankan aplikasi XAMPP



Masuk phpMyAdmin, lalu pergi ke database laundry\_apps

