# [LATIHAN PERTEMUAN KE 12]

## Identitas

- NPM                          : 223040033
- Nama                         : Muhammad Fauzan dwi putera
- Kelas                        : A
- URL Repository Github        :
  [https://github.com/Fauzan2617/pp2-2024_223040033_A/tree/main/Semua%20Latihan/latihan%20Pertemuan%20-%2012/jfc-mvc-pdf]

## Penjelasan Kode

Jika berkas **tidak memiliki output**, gunakan tabel ini.

**[UserController.java]**

```
[package controller;
 import model.*;
import view.UserPdf;
import
view.UserView;

import javax.swing.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.List;
 public class UserController
{     private UserView view;
private UserMapper mapper;
private UserPdf pdf;

    public UserController(UserView view, UserMapper mapper, UserPdf pdf)
{
        this.view = view;
this.mapper = mapper;
this.pdf = pdf;

        this.view.addAddUserListener(new
AddUserListener());
this.view.addRefreshListener(new RefreshListener());
this.view.addExportListener(new ExportListener());      }
class AddUserListener implements ActionListener {
        @Override
        public void actionPerformed(ActionEvent e) {
            String name = view.getNameInput();
            String email = view.getEmailInput();
if (!name.isEmpty() && !email.isEmpty()) {
                User user = new User();
user.setName(name);
user.setEmail(email);
mapper.insertUser(user);
                JOptionPane.showMessageDialog(view, "User added
```

```
successfully!");
} else {
                JOptionPane.showMessageDialog(view, "Please fill in all
fields.");
            }
        }
    }
    class RefreshListener implements ActionListener {
        @Override
        public void actionPerformed(ActionEvent e) {
List<User> users = mapper.getAllUsers();
            String[] userArray = users.stream()
                    .map(u -> u.getName() + " (" + u.getEmail() + ")")
                    .toArray(String[]::new);
view.setUserList(userArray);
        }
    }
    class ExportListener implements ActionListener {
        @Override
        public void actionPerformed(ActionEvent e) {
List<User> users = mapper.getAllUsers();
pdf.exportPdf(users);
        }
    }
}


]
```

**Penjelasan**

[Code bagian Controller]

**[MyBatisUtil.java]**

```
[package model;

import org.apache.ibatis.io.Resources;
import org.apache.ibatis.session.*;
import java.io.IOException;

public class MyBatisUtil {
    private static SqlSessionFactory sqlSessionFactory;

    static {
try {
            sqlSessionFactory = new SqlSessionFactoryBuilder()
.build(Resources.getResourceAsStream("mybatisconfig.xml"));
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
    public static SqlSession getSqlSession() {
return sqlSessionFactory.openSession();        }
```

```
}
]
```

**Penjelasan**

[Code bagian model]

**[User.java]**

```
[package model;
 public class User {
private int id;
private String name;
private String email;

    // Getters dan Setters
    public int getId() { return id; }
public void setId(int id) { this.id = id; }
public String getName() { return name; }
    public void setName(String name) { this.name = name; }
public String getEmail() { return email; }
    public void setEmail(String email) { this.email = email; }
}
]
```

**Penjelasan**

[Code bagian model]

**[UserMapper.java]**

```
[package model;

import java.util.List;
import org.apache.ibatis.annotations.*;
 public interface UserMapper {
@Select("SELECT * FROM users")
    List<User> getAllUsers();

    @Insert("INSERT INTO users (name, email) VALUES (#{name}, #{email})")
void insertUser(User user);
}


]
```

**Penjelasan**

[Code bagian model]

**[UserPdf.java]**

```java
[package view;

import model.User;

import com.lowagie.text.Document; import
com.lowagie.text.DocumentException; import
com.lowagie.text.Font; import
com.lowagie.text.FontFactory; import
com.lowagie.text.PageSize; import
com.lowagie.text.Phrase; import
com.lowagie.text.pdf.PdfPCell; import
com.lowagie.text.pdf.PdfPTable; import
com.lowagie.text.pdf.PdfWriter;

import java.io.File;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.List;

public class UserPdf {
    public void exportPdf(List<User> users) {
        System.out.println(users.size());
        Document document = new Document(PageSize.A4);

        try {
            PdfWriter writer = PdfWriter.getInstance(document,
new FileOutputStream(System.getProperty("user.dir") +
File.separator + "users.pdf")
            );
             float width = document.getPageSize().getWidth();
float height = document.getPageSize().getHeight();

            document.open();

            float[] columnDefinitionSize = {33.33F, 33.33F, 33.33F};

            float pos = height / 2;
PdfPTable table = null;
            PdfPCell cell = null;

            table = new PdfPTable(columnDefinitionSize);
table.getDefaultCell().setBorder(1);
table.setHorizontalAlignment(0);
table.setTotalWidth(width - 72);
table.setLockedWidth(true);

            table.addCell(new Phrase("No"));
table.addCell(new Phrase("Name"));
table.addCell(new Phrase("Email"));

            int no = 1;
            for (User user : users) {
                table.addCell(new
Phrase(String.valueOf(no++)));
table.addCell(new Phrase(user.getName()));
table.addCell(new Phrase(user.getEmail()));            }
```

```
                document.add(table);
            } catch (DocumentException | IOException ex) {
                System.err.println(ex.getMessage());
            }

            // step 5
            document.close();

        }
    }

]
```

**Penjelasan**

[Code bagian view]

[UserView.java]

```
[package view;
 import
javax.swing.*;
import java.awt.*;
import java.awt.event.ActionListener;

public class UserView extends JFrame {
    private JTextField txtName = new JTextField(20);
private JTextField txtEmail = new JTextField(20);
private JButton btnAdd = new JButton("Add User");
private JButton btnRefresh = new JButton("Refresh");
private JButton btnExport = new JButton("Export");
private JList<String> userList = new JList<>();
private DefaultListModel<String> listModel = new
DefaultListModel<>();

    public UserView() {
        setTitle("User Management");
setSize(400, 300);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JPanel panel = new JPanel(new GridLayout(5, 1));
panel.add(new JLabel("Name:"));
panel.add(txtName);
        panel.add(new JLabel("Email:"));
panel.add(txtEmail);

        JPanel buttonPanel = new JPanel();
buttonPanel.add(btnAdd);
buttonPanel.add(btnRefresh);
buttonPanel.add(btnExport);
panel.add(buttonPanel);
         userList.setModel(listModel);
add(panel, BorderLayout.NORTH);
        add(new JScrollPane(userList),
BorderLayout.CENTER);        }
    public String getNameInput() {
```

```
        return txtName.getText();
    }
    public String getEmailInput() {
return txtEmail.getText();
    }
    public void setUserList(String[] users) {
listModel.clear();         for (String user :
users) {
listModel.addElement(user);
        }
    }
    public void addAddUserListener(ActionListener listener) {
btnAdd.addActionListener(listener);
    }
    public void addRefreshListener(ActionListener listener) {
btnRefresh.addActionListener(listener);
    }
    public void addExportListener(ActionListener listener) {
btnExport.addActionListener(listener);
    }
}


]
```

**Penjelasan**

[Code bagian view]

**Penjelasan Kode**

Jika **berkas memiliki output**, gunakan tabel ini.

**[Main.java]**

```
[import model.MyBatisUtil; import
model.UserMapper;
import org.apache.ibatis.session.SqlSession;
 import view.UserPdf;
import view.UserView;
import controller.UserController;

public class Main {
    public static void main(String[] args) {
        SqlSession session = MyBatisUtil.getSqlSession();
        UserMapper mapper = session.getMapper(UserMapper.class);
        UserPdf pdf = new UserPdf();
        UserView view = new UserView();
new UserController(view, mapper, pdf);

        view.setVisible(true);
```
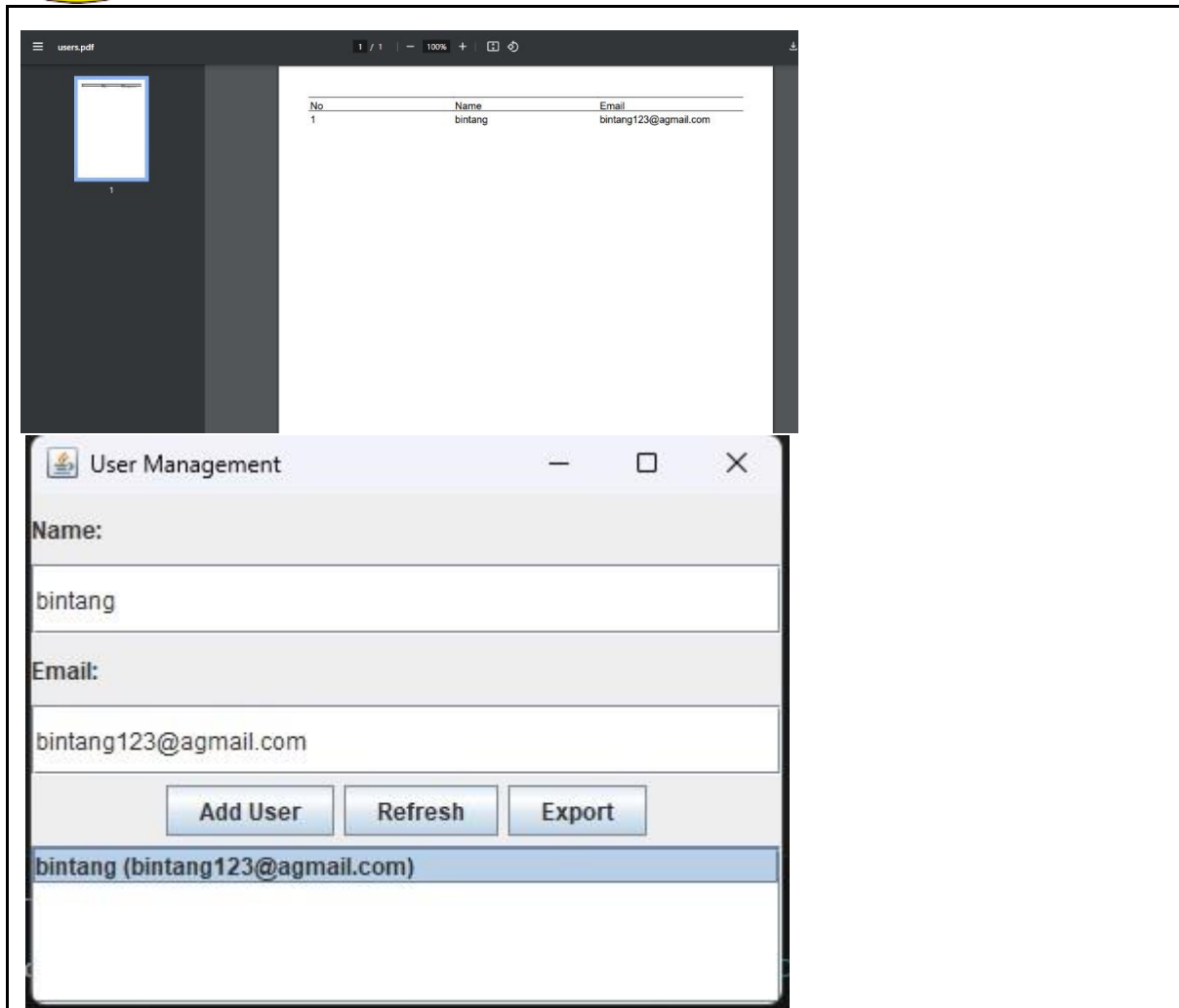
```
    }
}

]
```

**Penjelasan**

[Code bagian main program]

**Output**

Catatan:
- Silakan modifikasi dan tambahkan informasi sesuai dengan proyek yang Anda kerjakan baik pada tanda [kalimat].
- Sesuaikan nama file laporan dengan format **Tugas[Pertemuan ke-X]_PP1_NPM** Contoh: Tugas[P10]_PP1_203040104
- Sesuaikan judul laporan dengan format **Laporan Tugas Pertemuan ke-X** Contoh: Laporan Tugas Pertemuan ke-10