



[Judul Laporan]

Identitas

- NPM : 223040032
- Nama : Bintang Arya
- Kelas : A
- URL Repository Github :
[https://github.com/Bintang0/pp2_223040032_A/tree/main/Pertemuan%2011/jfc-mvc]

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("mybatis-
config.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]

```
[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);
    }
}
```

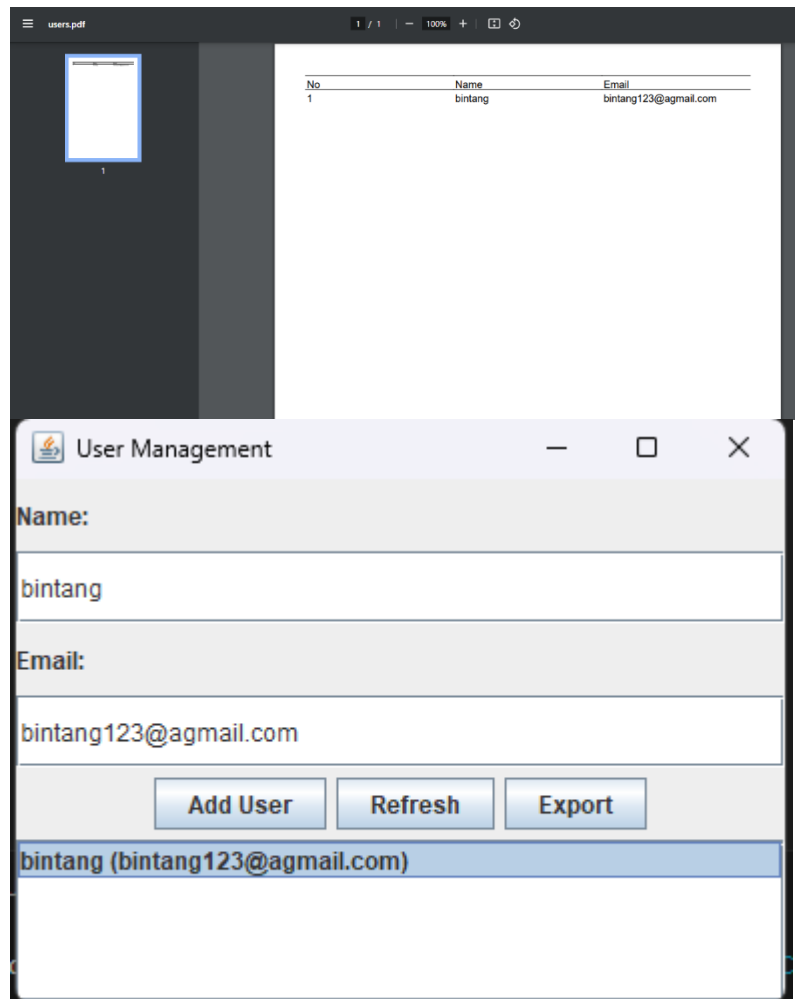


```
}  
}  
]
```

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