LAPORAN RESMI

PRAKTIKUM PEMROGRAMAN BERBASIS OBYEK

Studi Kasus 4

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Buatlah Class Diagram dan Program untuk Register dan Login

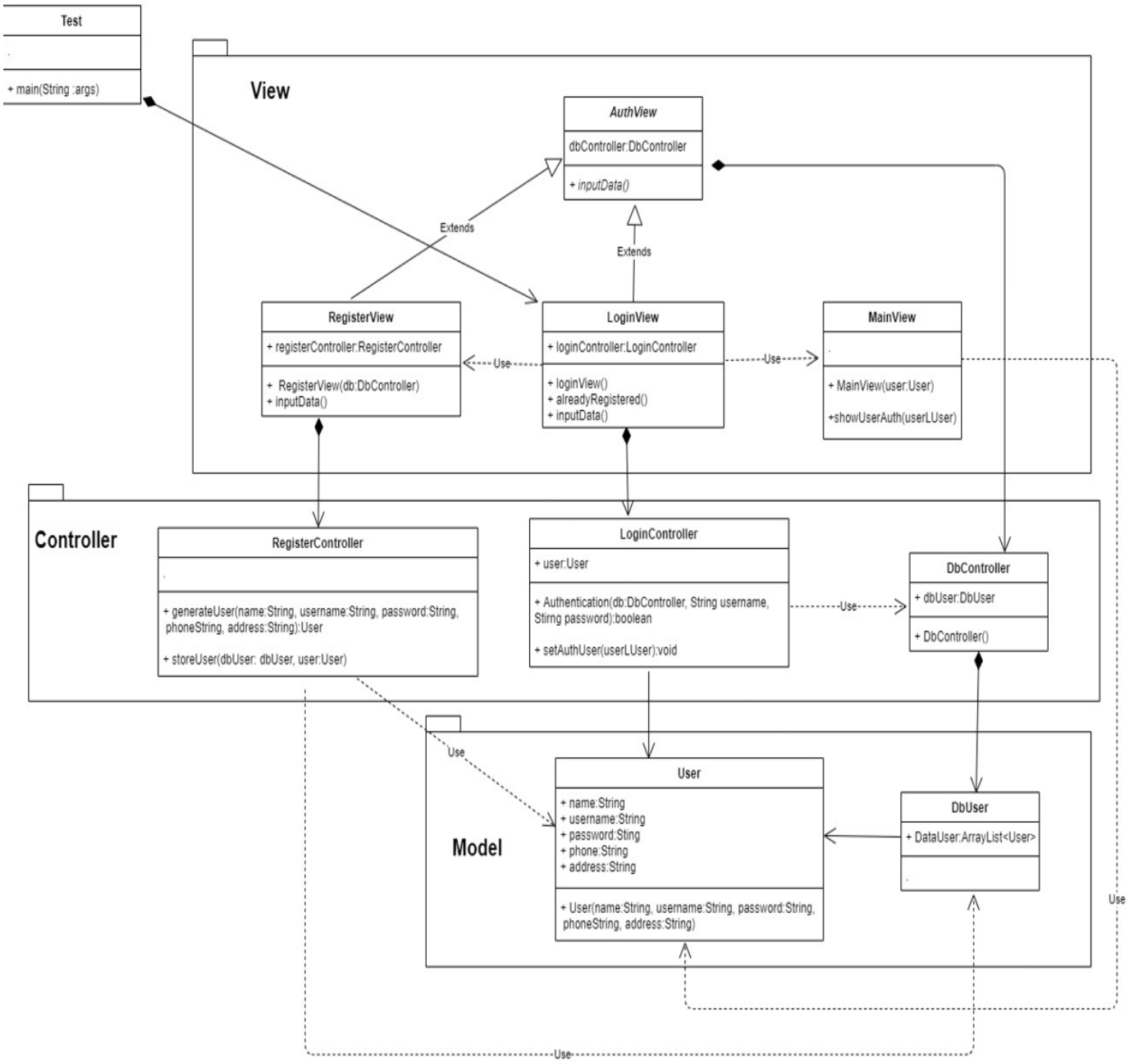
Data yang diminta saat Login:
- username
- password

Data yang disimpan saat Register:
- name
- username
- password
- phone
- address

Tampilan awal LoginView
Alur Register => LoginView -> RegisterView -> LoginView
Alur Login   => LoginView -> MainView

MainView menampilkan:
data user yang berhasil login
- name
- phone
- address

Class Diagram



Code Program

Package Model

Class User

```java
package Model;

public class User {
    public String name;
    public String username;
    public String password;
    public String phone;
    public String address;

    public User(String name, String username, String password, String phone, String address) {
        this.name = name;
        this.username = username;
        this.password = password;
        this.phone = phone;
        this.address = address;
    }
}
```

Class DbUser

```java
package Model;

import java.util.ArrayList;

public class DbUser {
    public ArrayList<User> DataUser = new ArrayList<>();

}
```

Package Controller

Class DbController

```java
package Controller;

import Model.DbUser;

public class DbController {
    public DbUser dbUser;

    public DbController() {
        dbUser = new DbUser();
    }
}
```

Class RegisterController

```java
package Controller;

import Model.DbUser;
import Model.User;

public class RegisterController {
    public User generateUser(String name, String username, String password, String phone, String address) {
        return new User(name, username, password, phone, address);
    }

    public void storeUser(DbUser db, User user) {
        db.DataUser.add(user);
    }

}
```

Class LoginController

```java
package Controller;

import Model.DbUser;
import Model.User;

import java.util.Objects;

public class LoginController {
    public User user;

    public boolean Authentication(DbUser db, String username, String password) {
        for (User user : db.DataUser) {

            if (Objects.equals(user.username, username) && Objects.equals(user.password, password)) {
                setAuthUser(user);
                return true;
            }
        }
        return false;
    }

    public void setAuthUser(User user) {
        this.user = user;
    }
}
```

PackageView
AuthView

```java
package View;

import Controller.DbController;

import java.util.Scanner;

public abstract class AuthView {
    public DbController dbController;
    public Scanner input = new Scanner(System.in);

    public abstract void inputData();
}
```

LoginView

```java
package View;

import Controller.DbController;
import Controller.LoginController;

public class LoginView extends AuthView {
    public LoginController loginController;

    public LoginView() {
        dbController = new DbController();
        loginController = new LoginController();
    }

    public void alreadyRegistered() {
        char jawaban;

        do {
            System.out.println("====================");
            System.out.println("System Login Register sederhana");
            System.out.println("====================");
            System.out.print("Apakah Kamu Sudah Memiliki Akun ? (y/t) :");
            jawaban = input.next().charAt(0);
            input.nextLine();

            switch (jawaban) {
                case 'y' -> this.inputData();
                case 't' -> {
                    new RegisterView(dbController);
                    this.inputData();
                }
                default -> System.out.println("Invalid Input");
            }

            System.out.print("\nIngin login kembali ? (y / t) : ");
            jawaban = input.next().charAt(0);
            input.nextLine();
        } while (jawaban == 'y');

    }
```

```
    public void inputData() {
        boolean authCheck;
        String username;
        String password;

        System.out.println("====================");
        System.out.println("Login Form");
        System.out.println("====================");

        System.out.print("Masukkan Username : ");
        username = input.nextLine();
        System.out.print("Masukkan Password : ");
        password = input.nextLine();

        authCheck = this.loginController.Authentication(dbController.dbUser, username, password);
        if (authCheck) {
            new MainView(loginController.user);
        } else
            System.out.println("Data not match in out record !!");
    }
}
```

RegisterView

```java
package View;

import Controller.DbController;
import Controller.RegisterController;
import Model.User;

public class RegisterView extends AuthView {
    public RegisterController registerController;

    public RegisterView(DbController db) {
        registerController = new RegisterController();
        this.dbController = db;
        this.inputData();
    }

    public void inputData() {
        String name;
        String username;
        String password;
        String phone;
        String address;
        User user;

        System.out.println("====================");
        System.out.println("Register Form");
        System.out.println("====================");

        System.out.print("Masukkan Name : ");
        name = input.nextLine();
        System.out.print("Masukkan Username : ");
        username = input.nextLine();
        System.out.print("Masukkan Password : ");
        password = input.nextLine();
        System.out.print("Masukkan Phone : ");
        phone = input.nextLine();
        System.out.print("Masukkan Address : ");
        address = input.nextLine();

        user = registerController.generateUser(name, username, password, phone, address);
        registerController.storeUser(dbController.dbUser,user);
    }
}
```

MainView

```java
package View;

import Model.User;

public class MainView {

    public MainView(User user) {
        showData(user);
    }

    public void showData(User user) {
        System.out.println("====================");
        System.out.println("Main View");
        System.out.println("====================");
        System.out.println("Nama : " + user.name);
        System.out.println("Phone : " + user.phone);
        System.out.println("Address : " + user.address);
    }

}
```

Test

```java
import View.LoginView;

public class Test {
    public static void main(String[] args) {
        LoginView login = new LoginView();

        login.alreadyRegistered();
    }
}
```

Output

```
====================
System Login Register sederhana
====================
Apakah Kamu Sudah Memiliki Akun ? (y/t) : t
====================
Register Form
====================
Masukkan Name : 1
Masukkan Username : 1
Masukkan Password : 1
Masukkan Phone : 1
Masukkan Address : 1
```

Jikat user belum punya akun akan diarahkan ke form register

```
====================
Login Form
====================
Masukkan Username : 1
Masukkan Password : 1
```

Kemudian setelah mengisi register form akan diarahkan kembali ke login form

```
====================
Main View
====================
Nama : 1
Phone : 1
Address : 1
```

Jika berhasil login akan diarahkan ke main view

```
Ingin login kembali ? (y / t) : y
```

Jika login dengan input username dan password salah

```
====================
Login Form
====================
Masukkan Username : 1
Masukkan Password : 1
Data not match in out record !!
```