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SCREENSHOOT PROGRAM POSTTEST 4

Package gui:

1. LoginFrame

```
1  package gui;
2
3  import user.User;
4  import user.UserManager;
5  import main.ToDoList;
6  import javax.swing.*;
7  import java.awt.*;
8  import java.awt.event.ActionEvent;
9  import java.awt.event.ActionListener;
10
11 // GUI untuk login pengguna
12 public class LoginFrame extends JFrame {
13     private JTextField usernameField;
14     private JPasswordField passwordField;
15     private JButton loginButton;
16
17     public LoginFrame() {
18         setTitle("Login");
19         setSize(300, 200);
20         setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21         setLayout(new GridLayout(3, 2));
22
23         add(new JLabel("Username:"));
24         usernameField = new JTextField();
25         add(usernameField);
26
27         add(new JLabel("Password:"));
28         passwordField = new JPasswordField();
29         add(passwordField);
30
31         loginButton = new JButton("Login");
32         add(loginButton);
33
34         loginButton.addActionListener(new ActionListener() {
35             @Override
36             public void actionPerformed(ActionEvent e) {
37                 String username = usernameField.getText();
38                 String password = new String(passwordField.getPassword());
39                 User user = UserManager.loginUser(username, password);
40                 if (user != null) {
41                     new ToDoFrame(user);
42                     dispose();
43                 } else {
44                     JOptionPane.showMessageDialog(null, "Invalid login.");
45                 }
46             }
47         });
48     }
49 }
```

2. ToDoFrame

```

1 package org;
2
3 import javax.swing.*;
4 import javax.swing.event.*;
5 import javax.swing.text.*;
6 import java.awt.*;
7 import java.awt.event.*;
8
9
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11
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16 import javax.swing.*;
17 import javax.swing.event.*;
18 import javax.swing.text.*;
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```

Package Main:

1. Main.Java

```
1 package main;
2
3 import gui.LoginFrame; // Ensure that the LoginFrame class exists in the gui package
4 import user.UserManager;
5
6 // Class utama untuk menjalankan program
7 public class Main {
8     public static void main(String[] args) {
9         UserManager.registerUser("user", "123");
10        new LoginFrame().setVisible(true); // Ensure that the LoginFrame class is correctly defined and imported
11    }
12 }
```

2. PersonalTask.java

```
1 package main;
2
3 public class PersonalTask extends Task {
4     public PersonalTask(String description) {
5         super(description);
6     }
7
8     @Override
9     public void displayTask() {
10        System.out.println("Personal Task: " + description);
11    }
12 }
```

3. Task.Java

```
1  package main;
2
3  public abstract class Task {
4      protected String description;
5
6      public Task(final String description) { // Parameter tidak boleh diubah
7          this.description = description;
8      }
9
10     public final String getDescription() { // Method ini tidak boleh dioverride
11         return description;
12     }
13
14     public abstract void displayTask();
15
16     // Overloading displayTask: menerima parameter tambahan
17     final public void displayTask(boolean showDetails) { // Parameter tidak boleh diubah
18         if (showDetails) {
19             System.out.println("Task: " + description + " [Details: Additional information]");
20         } else {
21             System.out.println("Task: " + description);
22         }
23     }
24 }
```

4. ToDoList.java

```
1  package main;
2
3  import java.util.ArrayList;
4  import java.util.List;
5
6  public class ToDoList {
7      private List<Task> tasks;
8
9      public ToDoList(String owner) {
10         this.tasks = new ArrayList<>();
11     }
12
13     // Overloading addTask: menerima objek Task
14     public void addTask(Task task) {
15         tasks.add(task);
16     }
17
18     // Overloading addTask: menerima deskripsi tugas sebagai String
19     public void addTask(String description) {
20         tasks.add(new PersonalTask(description)); // Default ke PersonalTask
21     }
22
23     // Overloading addTask: menerima deskripsi dan prioritas
24     public void addTask(String description, String priority) {
25         switch (priority.toLowerCase()) {
26             case "work":
27                 tasks.add(new WorkTask(description));
28                 break;
29             case "urgent":
30                 tasks.add(new UrgentTask(description));
31                 break;
32             default:
33                 tasks.add(new PersonalTask(description));
34                 break;
35         }
36     }
37
38     public void removeTask(int index) {
39         if (index >= 0 && index < tasks.size()) {
40             tasks.remove(index);
41         }
42     }
43
44     public List<Task> getTasks() {
45         return tasks;
46     }
47 }
```

5. ToDoOperation.java



```
1  package main;
2
3  interface ToDoOperations {
4      void addTask(String task);
5      void removeTask(int index);
6      void displayTasks();
7  }
8
```

6. ToDoTask.java



```
1  package main;
2
3  public class ToDoTask {
4      private String description;
5      private boolean isCompleted;
6
7      public ToDoTask(String description) {
8          this.description = description;
9          this.isCompleted = false;
10     }
11
12     public String getDescription() {
13         return description;
14     }
15
16     public boolean isCompleted() {
17         return isCompleted;
18     }
19
20     public void setCompleted(boolean completed) {
21         isCompleted = completed;
22     }
23
24     @Override
25     public String toString() {
26         return description;
27     }
28 }
29
```

7. UrgentTask.java



```
1 package main;
2
3 public class UrgentTask extends Task {
4     public UrgentTask(String description) {
5         super(description);
6     }
7
8     @Override
9     public void displayTask() {
10         System.out.println("Urgent Task: " + description + " (This task is urgent!)");
11     }
12 }
```

8. WorkTask.java



```
1 package main;
2
3 public class WorkTask extends Task {
4     public WorkTask(String description) {
5         super(description);
6     }
7
8     @Override
9     public void displayTask() {
10         System.out.println("Work Task: " + description);
11     }
12 }
```

Package user:

1. User.java



```
1  package user;
2
3  // import java.util.Map;
4
5  // Class untuk merepresentasikan pengguna
6  public class User {
7      private String username;
8      private String password;
9
10     public User(String username, String password) {
11         this.username = username;
12         this.password = password;
13     }
14
15     public String getUsername() {
16         return username;
17     }
18
19     public boolean validatePassword(String password) {
20         return this.password.equals(password);
21     }
22 }
23
```


2. UserManager.java



```
1  package user;
2
3  import java.util.HashMap;
4  import java.util.Map;
5
6  public class UserManager {
7      private static Map<String, User> users = new HashMap<>();
8
9      public static void registerUser(String username, String password) {
10         users.put(username, new User(username, password));
11     }
12
13     public static User loginUser(String username, String password) {
14         User user = users.get(username);
15         if (user != null && user.validatePassword(password)) {
16             return user;
17         }
18         return null;
19     }
20 }
21
```