


Faculty of Information Technology									
<p>I declare that I am familiar with, and will abide to the Examination rules of CTU</p>  <p>Signature</p>	<p>SUBJECT NAME: Advanced Java</p> <p>SUBJECT CODE: JD522</p>								
	<p>FORMATIVE ASSESSMENT</p> <p>Duration: Mar 15 – 01 Apr</p> <p>Date 01 April 2024</p> <p>Total Marks: 90</p> <p>Total pages:</p>					<p>Examiner: Junior Manganyi</p> <p>Moderator: Faith Muwishi</p>			
	<p>Student number</p>								
	2	0	2	3	2	7	5	9	
	<p>Surname: Poponi</p>				<p>Initials: M.P</p>			/	%

Table of Contents

Project Question(s)	3
Question 1	3
Project Description: Registration and login feature.....	3
Methods:	7
meetPasswordComplexity().....	7
regUser().....	7
login() and returnLogin().....	8

Project Question(s)

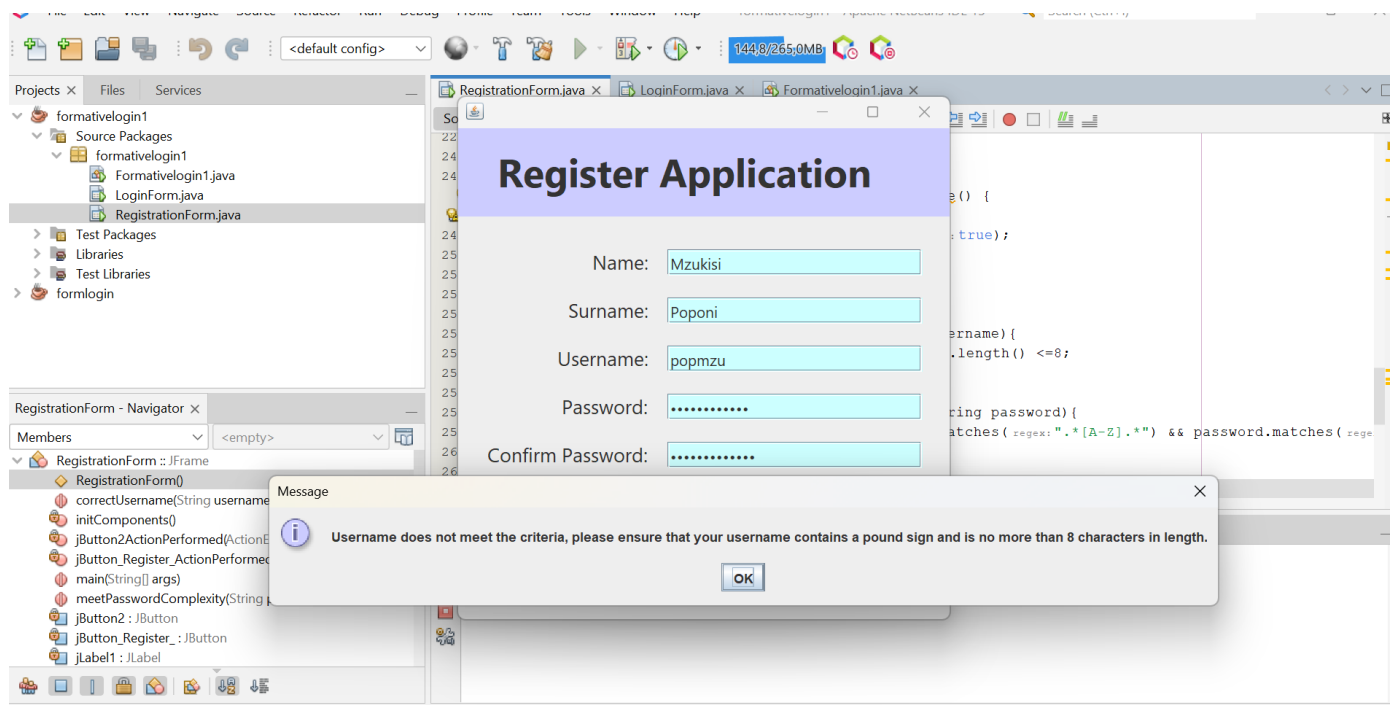
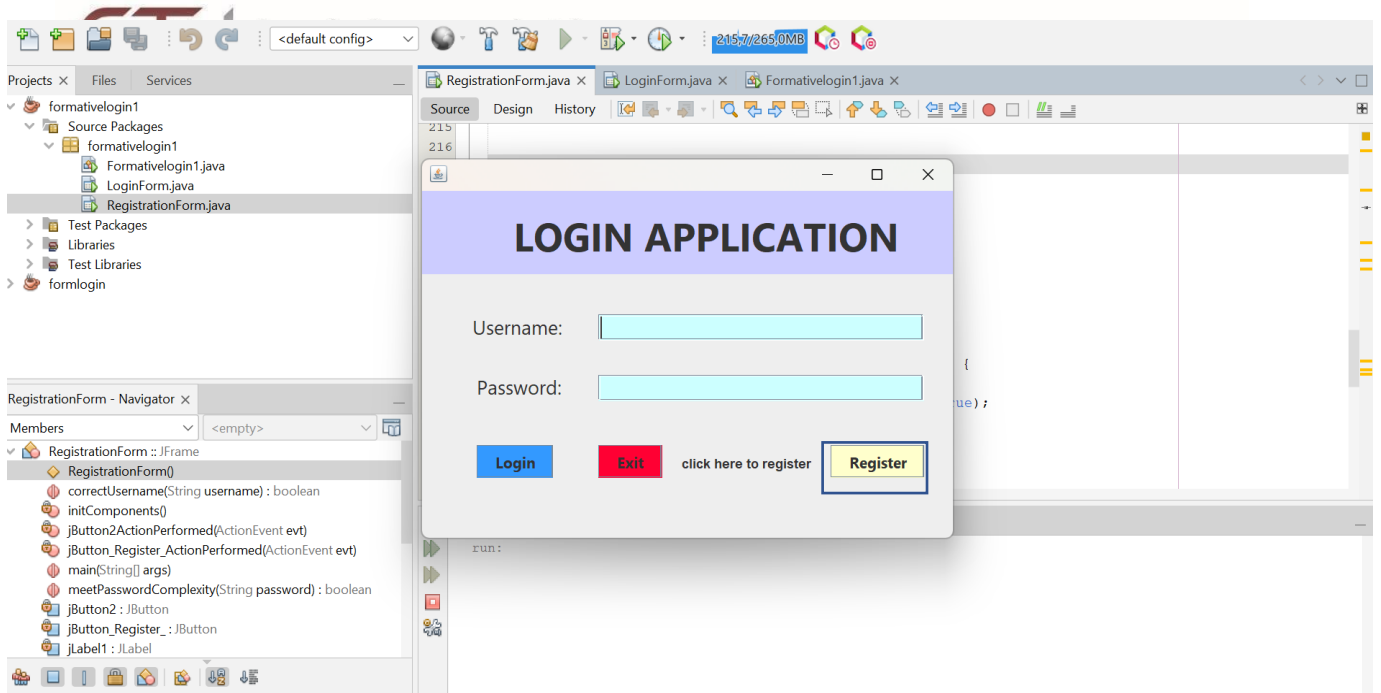
Question 1

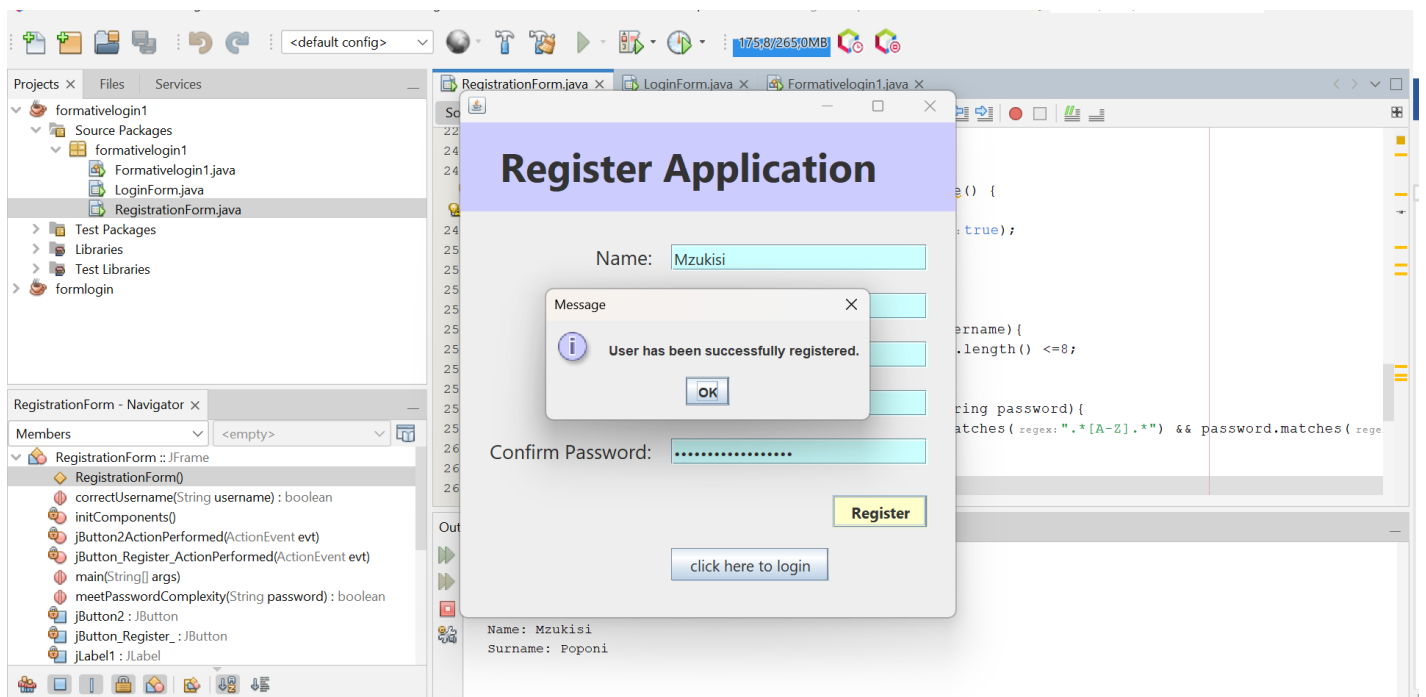
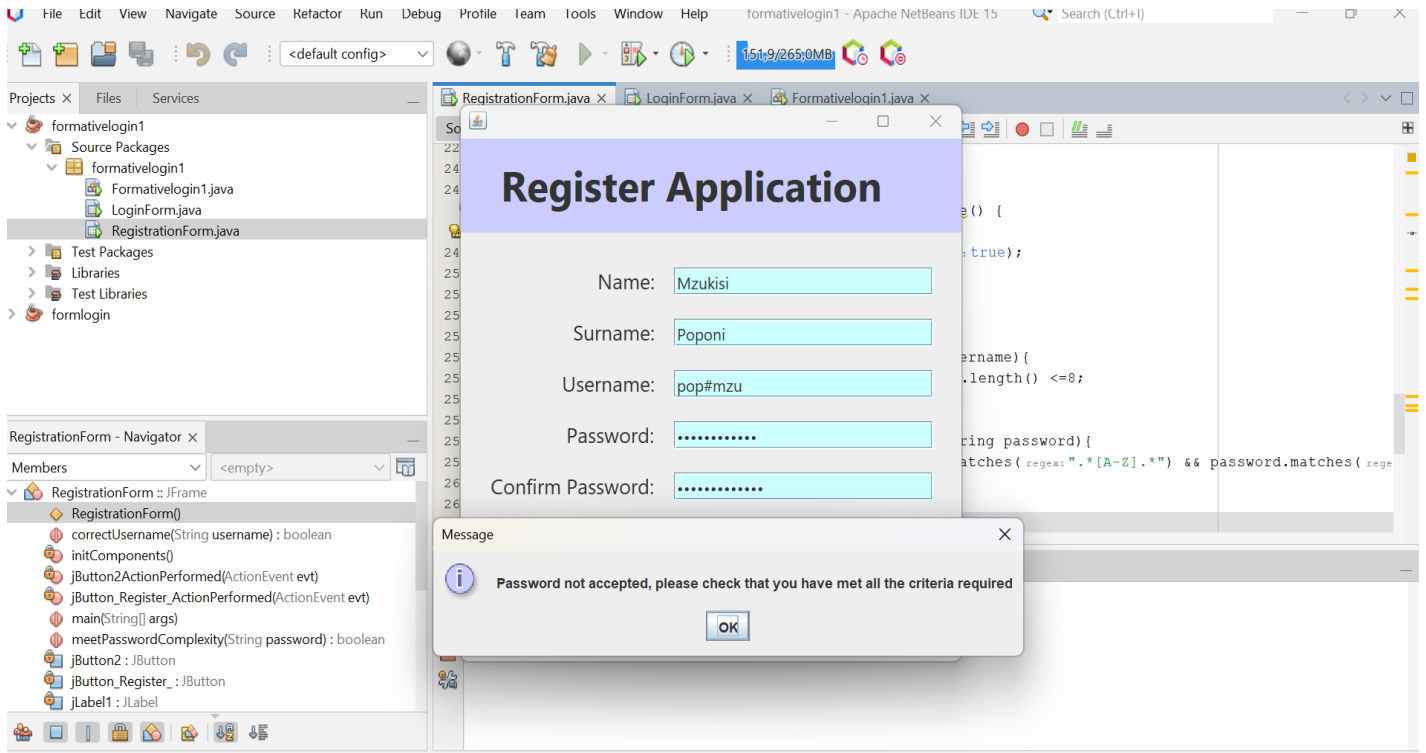
Project Description: Registration and login feature

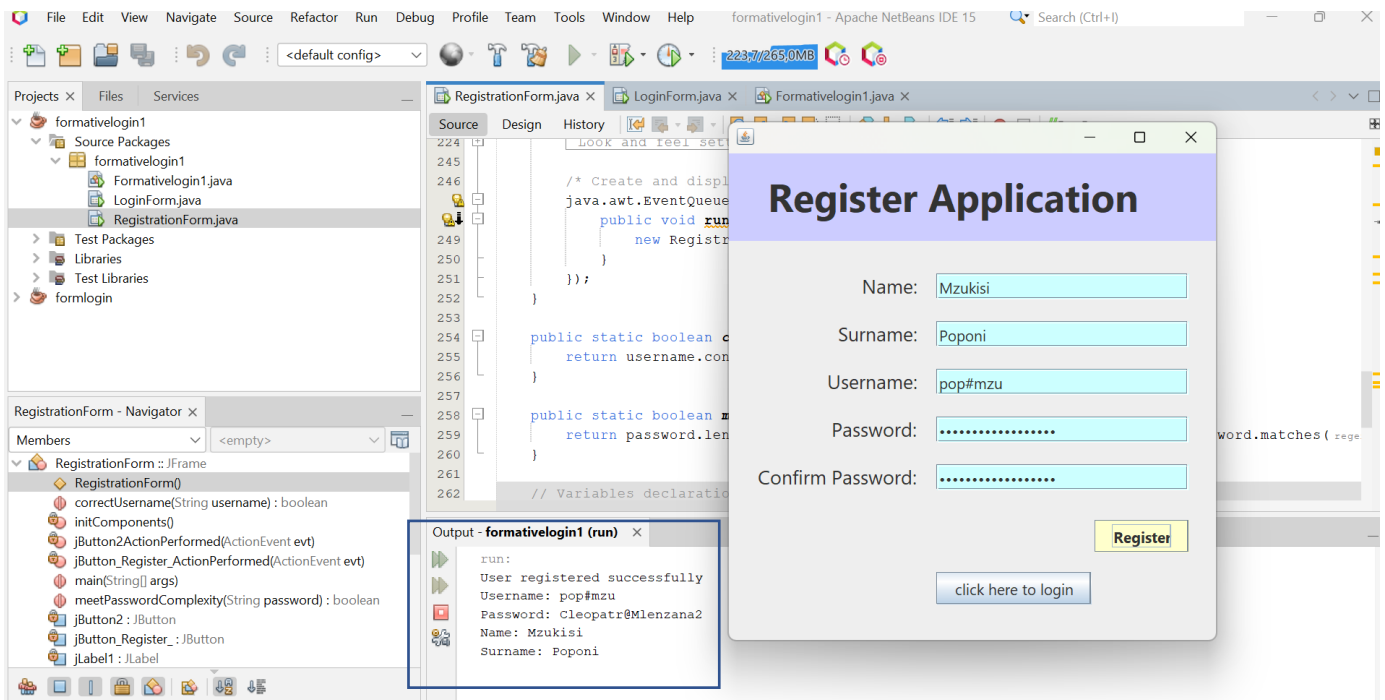
In this project, you will use GUI to create a registration and login feature. This feature needs to allow users to (Read through the entire task before you start any work): Failure to GUI will result in zero.

1. Create an account by entering a username, password, first name, and last name. (15 Marks) a. The system needs to check that the following conditions are met and reply with the appropriate output message

Criteria	Boolean Output	If Criteria is false
	If Criteria is True	If Criteria is False
The username contains a pound(#) and is no more than 8 characters long	"Username Accepted, Proceed"	"Username does not meet the criteria, please ensure that your username contains a pound sign and is no more than 8 characters in length."
Password meets the following password complexity rules, the password must be: <ul style="list-style-type: none"> • At least 8 characters long • Contain at least one capital letter • Contain a number • Contain a special character 	"Password Accepted"	"Password not Accepted, please check that you have met all the criteria required"



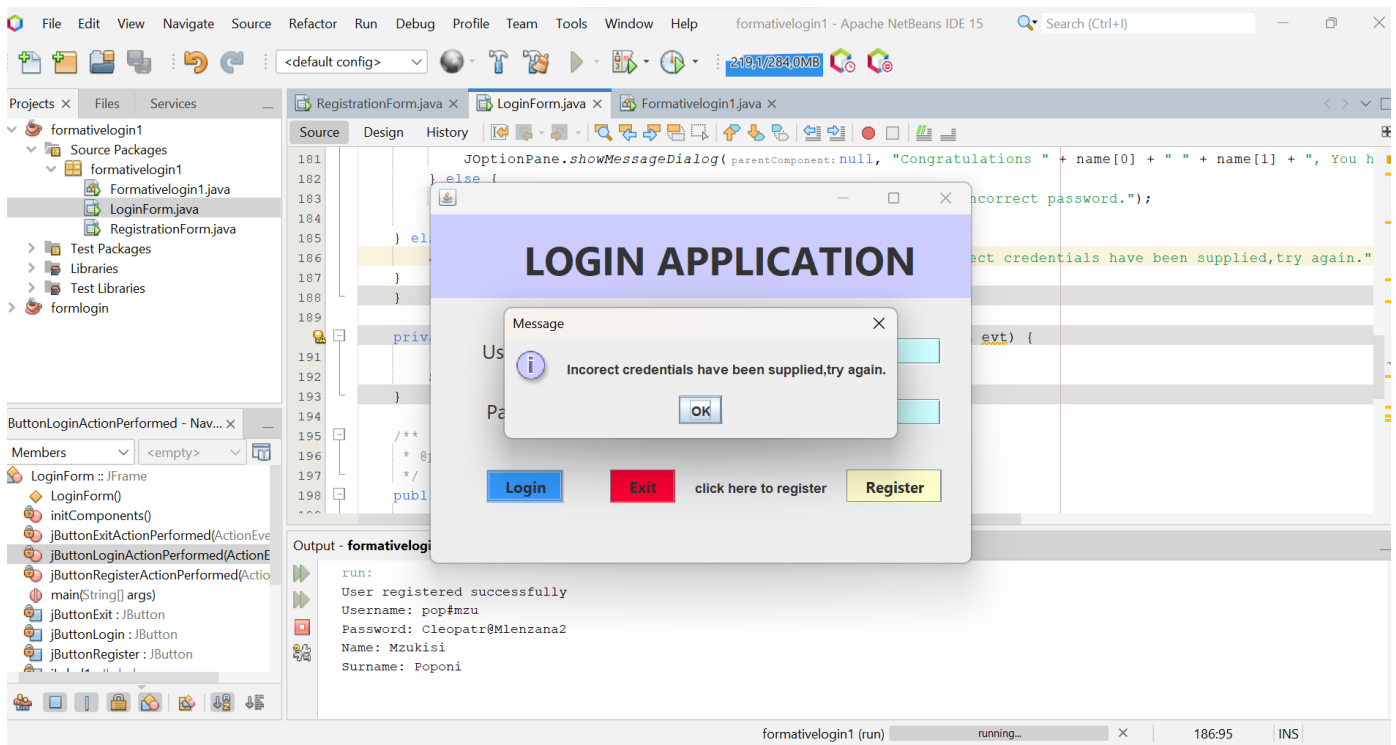




2. Once Username and password are successfully created, Login to the account using the same username and password.

a. The system should provide the following messages to verify the user's authentication state:

- If the username, and password entered to log in are correct, the system must output the following message: "Congratulations<your name, surname>, you have made it to the second year. Wishing you all the best".
- Please note must be pulled by the system automatically, DON'T write it yourself
- If the username, and password entered to log is not correct, Display to the user "Incorrect credentials have been supplied, try again"



Methods:

meetPasswordComplexity()

```
public static boolean meetPasswordComplexity(String password){
    return password.length() >= 8 && password.matches(".*[A-Z].*") &&
password.matches(".*[0-9].*") && password.matches(".*[!@#$%^&*.]*");
}
```

regUser()

```
private void jButton_Register_ActionPerformed(java.awt.event.ActionEvent
evt) {

    String name,surname,username,password,confirmpassword;
    name = jTextFieldName.getText();
    surname = jTextFieldSurname.getText();
    username = jTextFieldUsername.getText();
    password = jPasswordFieldPassword.getText();

    if(!correctUsername(username)){
        JOptionPane.showMessageDialog(null, "Username does not meet the
criteria, please ensure that your username contains a pound sign and is no
more than 8 characters in length.");
    }else if (!meetPasswordComplexity(password)){
```

```
JOptionPane.showMessageDialog(null, "Password not accepted,  
please check that you have met all the criteria required");  
    }else{  
  
        registeredUsers.put(username, password);  
  
        System.out.println("User registered successfully");  
        System.out.println("Username: " + username);  
        System.out.println("Password: " + password );  
        System.out.println("Name: " + name);  
        System.out.println("Surname: " + surname);  
  
        JOptionPane.showMessageDialog(null, "User has been successfully  
registered.");  
    }  
    confirmpassword = jPasswordFieldConfirmPassword.getText();  
  
}
```

login() and returnLogin()

```
private void jButtonLoginActionPerformed(java.awt.event.ActionEvent evt)  
{  
  
    String username,password;  
    username = jTextFieldUsername.getText();  
    password = jPasswordFieldPassword.getText();  
  
    // Check if the username exists in the registered users map  
    if (registeredUsers.containsKey(username)) {  
        // Check if the provided password matches the stored password for  
the username  
        if (registeredUsers.get(username).equals(password)) {  
            // Get the user's first name and last name  
            String[] name = registeredUsers.get(username).split(" ");  
            // Display a congratulatory message  
            JOptionPane.showMessageDialog(null, "Congratulations " +  
name[0] + " " + name[1] + ", You have made it to the second year. Wishing  
you all the best.");  
        } else {  
            JOptionPane.showMessageDialog(null, "Incorrect password.");  
        }  
    } else {  
        JOptionPane.showMessageDialog(null, "Incorect credentials have been  
supplied,try again.");  
    }  
}
```