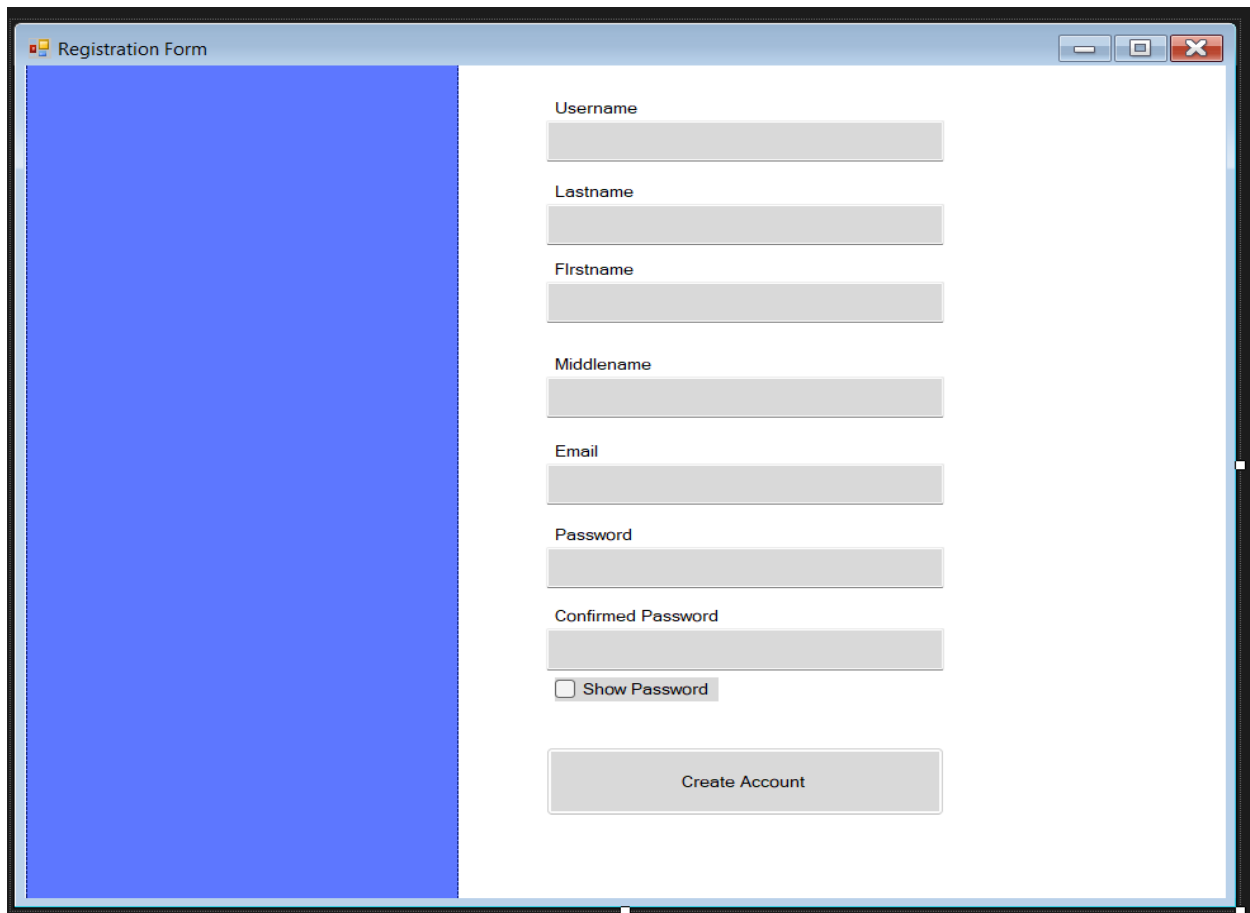


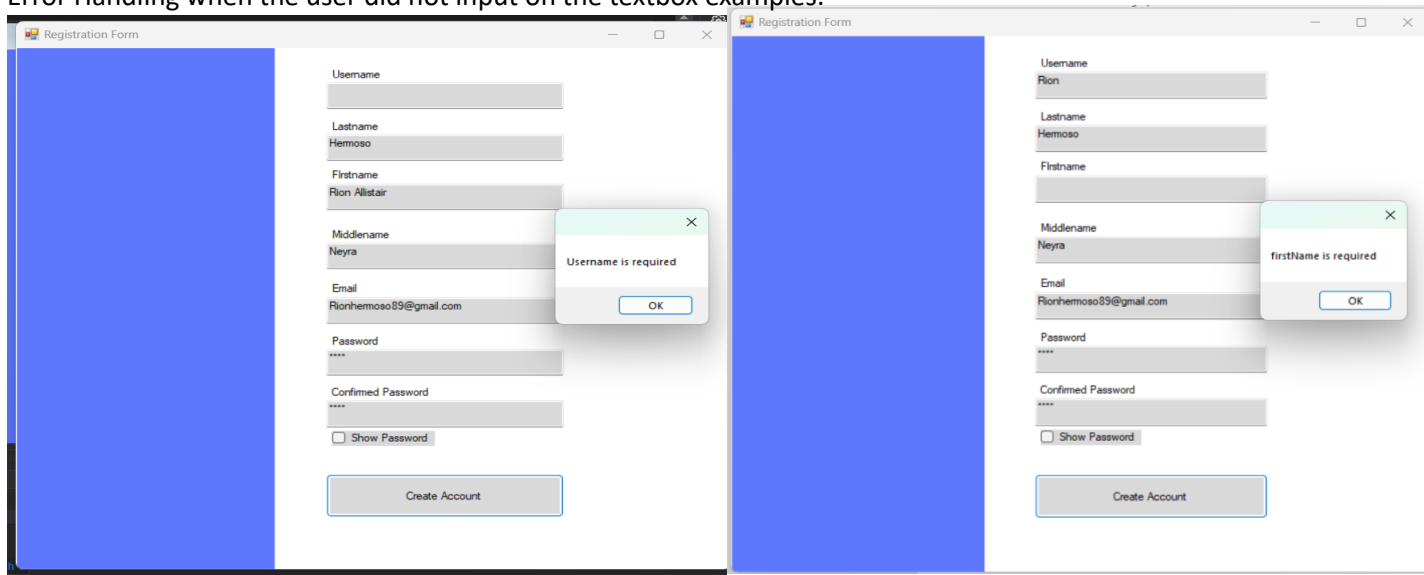
Registration Modules:

Registration form design :



A screenshot of a Windows-style application window titled "Registration Form". The window is divided into two main sections. On the left is a large, solid blue rectangular area. On the right is a white area containing a registration form. The form consists of several text input fields, each with a label above it: "Username", "Lastname", "Firstname", "Middlename", "Email", "Password", and "Confirmed Password". Below the "Password" field is a checkbox labeled "Show Password". At the bottom of the form is a wide, light gray button labeled "Create Account".

Error Handling when the user did not input on the textbox examples.



Two side-by-side screenshots of the "Registration Form" window illustrating error handling. Both windows have the same form layout as the first image, but with specific data entered in the text boxes. In the left window, the "Username" field is empty, and a small error dialog box is displayed over it with the text "Username is required" and an "OK" button. In the right window, the "Firstname" field is empty, and a similar error dialog box is displayed with the text "firstName is required" and an "OK" button. The other fields in both windows contain the same text as in the first image: Lastname: Hermoso, Email: Rionhermoso89@gmail.com, Middlename: Neyra, Password: \*\*\*\*, and Confirmed Password: \*\*\*\*.

Registration Form

Username

Rion

Lastname

Hemoso

Firstname

Rion Alistair

Middlename

Neyra

Email

Password

\*\*\*\*

Confirmed Password

\*\*\*\*

Show Password

Create Account

Email is required

OK

Registration Form

Username

Rion

Lastname

Hemoso

Firstname

Rion Alistair

Middlename

Email

Rionhemoso89@gmail.com

Password

\*\*\*\*

Confirmed Password

\*\*\*\*

Show Password

Create Account

middleName is required

OK

Registration Form

Username

Rion

Lastname

Firstname

Rion Alistair

Middlename

Neyra

Email

Rionhemoso89@gmail.com

Password

\*\*\*\*

Confirmed Password

\*\*\*\*

Show Password

Create Account

lastName is required

OK

Registration Form

Username

Rion

Lastname

Hemoso

Firstname

Rion Alistair

Middlename

Neyra

Email

Rionhemoso89@gmail.com

Password

\*\*\*\*

Confirmed Password

Show Password

Create Account

Password Confirmation is required

OK

Registration Form

Username

Rion

Lastname

Hemoso

Firstname

Rion Alistair

Middlename

Neyra

Email

Rionhemoso89@gmail.com

Password

\*\*\*\*

Confirmed Password

Show Password

Create Account

Password is required

OK

Show password feature and censored the password also

Registration Form

Username  
Rion

Firstname  
Rion Alistair

Middlename  
Neyra

Email  
Rionhemoso89@gmail.com

Password  
\*\*\*\*\*

Confirmed Password  
\*\*\*\*\*

☐ Show Password

Create Account

Registration Form

Username  
Rion

Firstname  
Rion Alistair

Middlename  
Neyra

Email  
Rionhemoso89@gmail.com

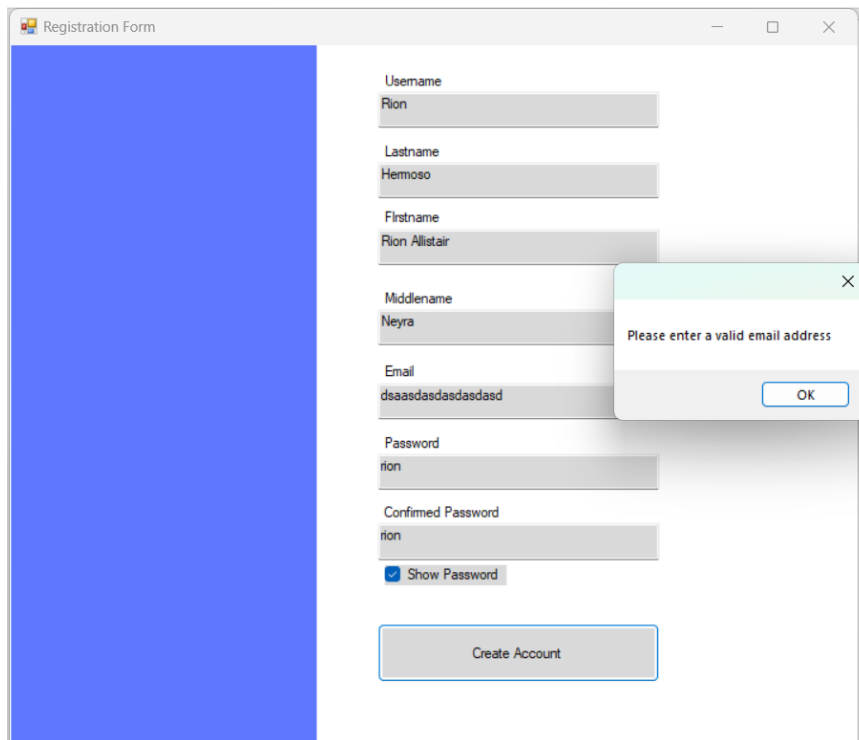
Password  
rion

Confirmed Password  
rion

☒ Show Password

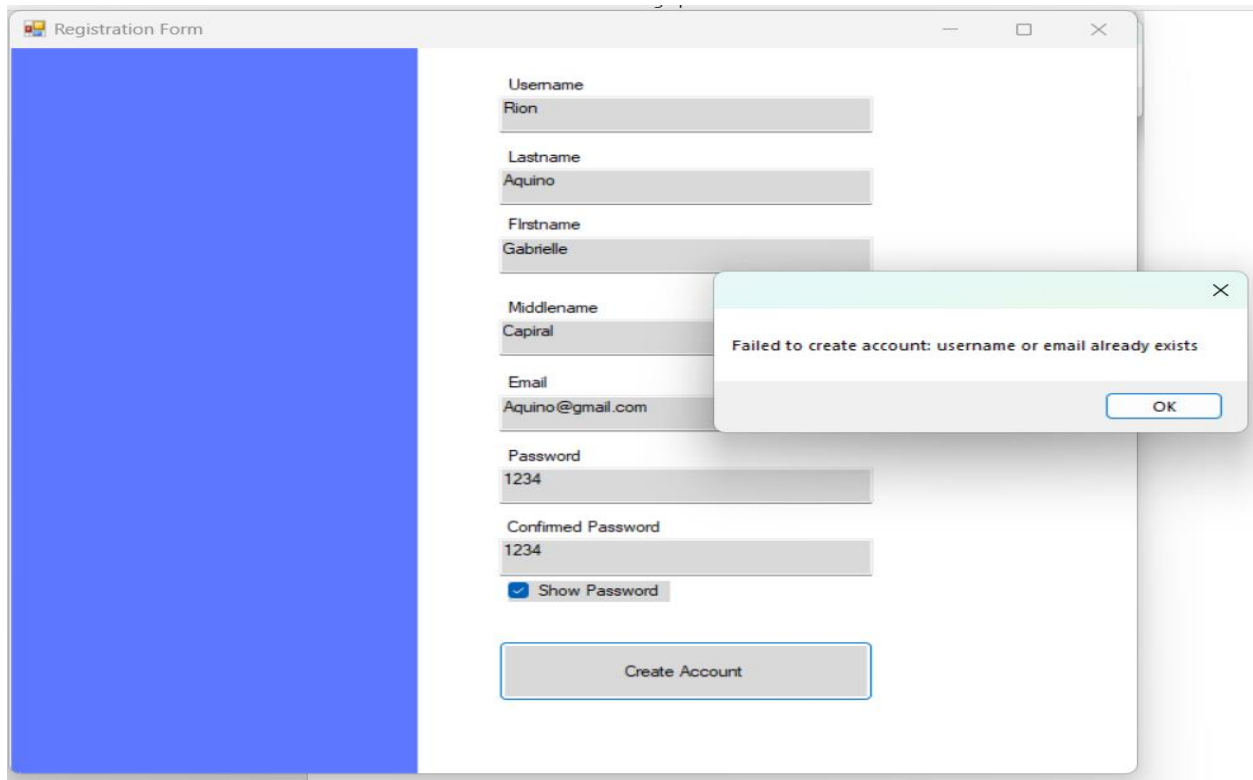
Create Account

Invalid Email is detected

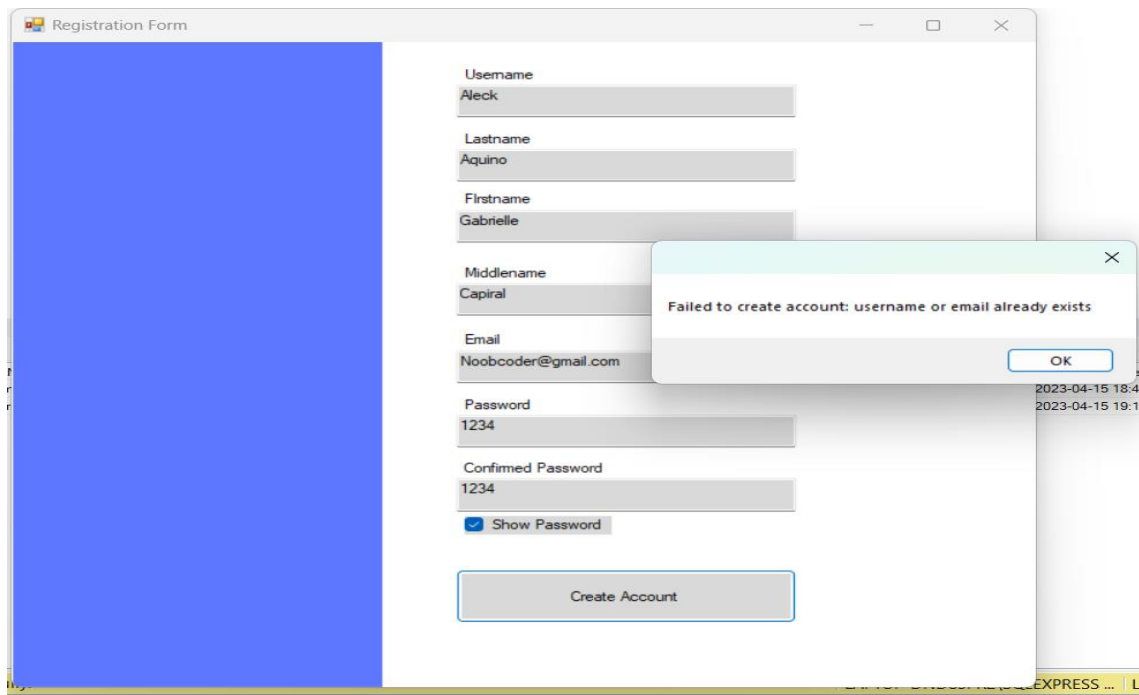


The image shows a 'Registration Form' window. On the left is a large blue rectangular area. The form fields on the right are: Username (Rion), Lastname (Hemoso), Firstname (Rion Allstair), Middlename (Neyra), Email (dsaaasdasdasdasdaad), Password (rion), and Confirmed Password (rion). There is a 'Show Password' checkbox which is checked. At the bottom is a 'Create Account' button. An error dialog box is overlaid on the form, displaying the message 'Please enter a valid email address' with an 'OK' button.

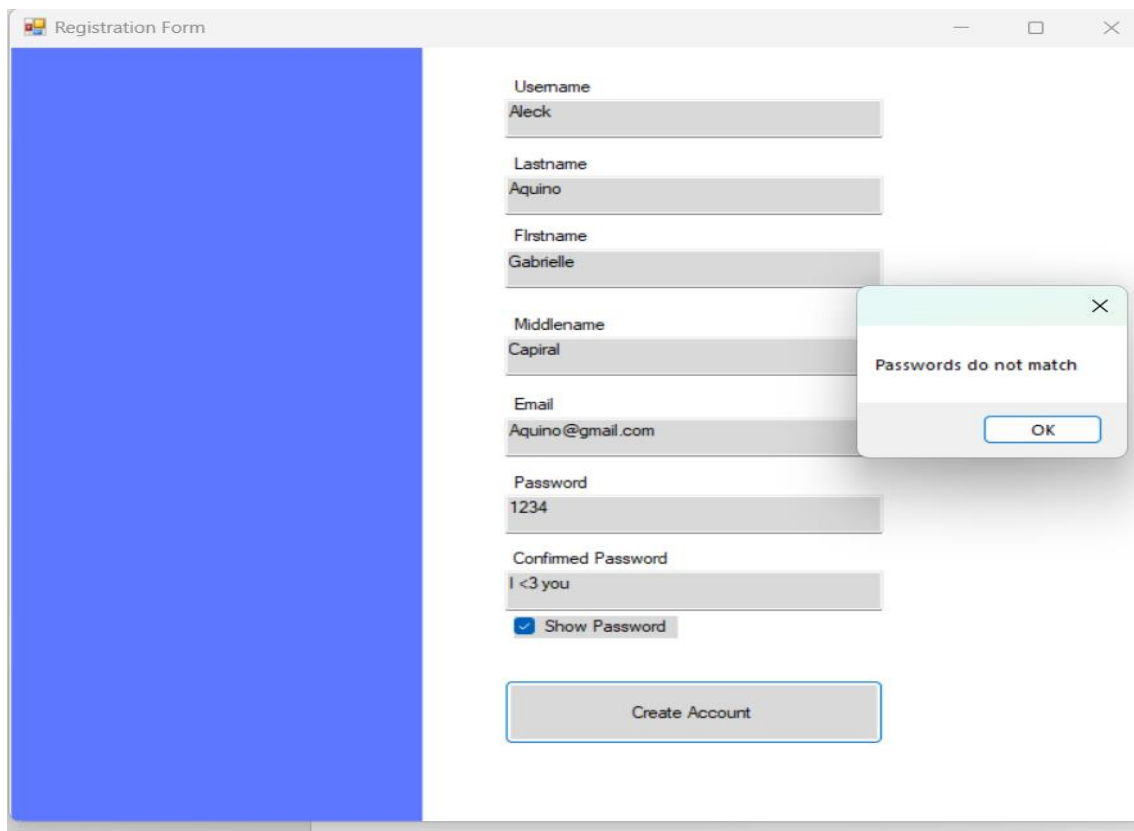
When the username or email has been taken by another user you cannot use it and would display error



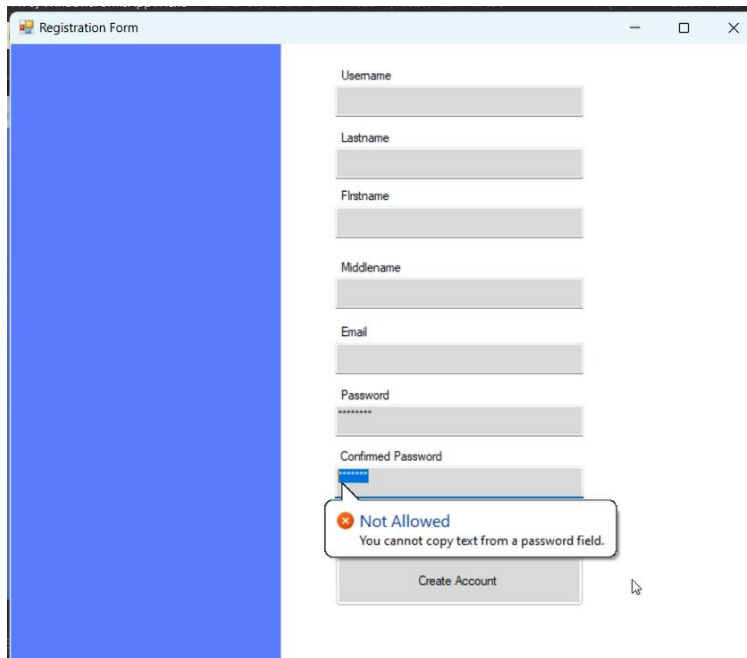
The image shows a 'Registration Form' window. On the left is a large blue rectangular area. The form fields on the right are: Username (Rion), Lastname (Aquino), Firstname (Gabrielle), Middlename (Capiral), Email (Aquino@gmail.com), Password (1234), and Confirmed Password (1234). There is a 'Show Password' checkbox which is checked. At the bottom is a 'Create Account' button. An error dialog box is overlaid on the form, displaying the message 'Failed to create account: username or email already exists' with an 'OK' button.



When password do not match

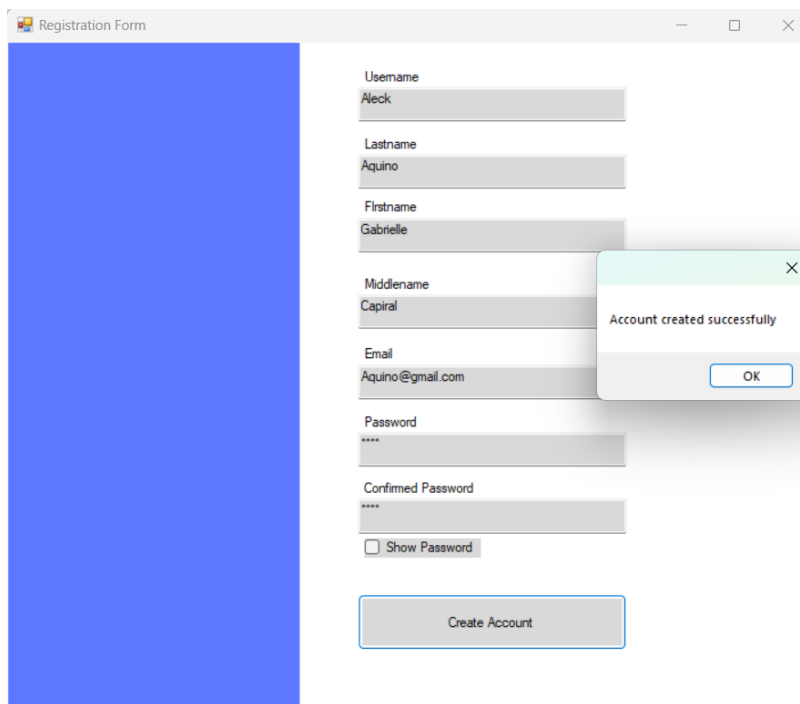


You also cannot copy from the password field and it would show error message and also when you experience other errors it would show what error you are getting



A screenshot of a web application window titled "Registration Form". The form contains several input fields: Username, Lastname, Firstname, Middlename, Email, Password, and Confirmed Password. The Password field is currently selected, and a blue tooltip with a red 'x' icon is displayed over it, containing the text "Not Allowed" and "You cannot copy text from a password field." Below the form is a "Create Account" button. The left side of the window is a solid blue vertical bar.

If all field is completed and filled click Create account



A screenshot of the same "Registration Form" window, now with all fields filled out. The Username field contains "Aleck", Lastname "Aquino", Firstname "Gabrielle", Middlename "Capiral", Email "Aquino@gmail.com", Password "\*\*\*\*", and Confirmed Password "\*\*\*\*". A "Show Password" checkbox is visible below the Confirmed Password field. A green success message dialog box is overlaid on the form, stating "Account created successfully" with an "OK" button. The "Create Account" button is at the bottom of the form. The left side of the window is a solid blue vertical bar.

And the form would also be cleared incase you want to create another account

Registration Form

Username

Lastname

Firstname

Middlename

Email

Password

Confirmed Password

☐ Show Password

Create Account

The account will be added to the database with the password being filtered for security and this also has the date created.

SQL Server Scripts1 - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

dbRMS Execute

SQLQuery2.sql - L...ND85PR2\Rion (52))\* X

```
SELECT * FROM tblAcc
```

100 %

Results Messages

|   | userID | username  | lastName   | firstName      | middleName | email                   | accPassword                  | salt                                 | registration_Date       |
|---|--------|-----------|------------|----------------|------------|-------------------------|------------------------------|--------------------------------------|-------------------------|
| 1 | 1      | JOrdIG0ds | DImaunahan | jordans        | Carlos     | Noobcoder@gmail.com     | Tk5uktHnQSmsejfaLcUfB8Glybo= | B5894A6B-E34A-3F7E-1877-5F093549DECF | 2023-04-15 18:49:46.467 |
| 2 | 2      | Rion      | Hermoso    | Rion Allistair | Neyra      | Rionhermoso89@gmail.com | 9TijprZ7lvPKGc46vUVOZyN7cxg= | D287E7BF-C6DE-CF32-9F7D-B6C9526F80B3 | 2023-04-15 19:13:27.407 |
| 3 | 3      | Aleck     | Aquino     | Gabrielle      | Capiral    | Aquino@gmail.com        | NE6c1ZsTf7wAdUb5uduBM7bs8Vg= | 0785D5BE-BDFD-72E3-864F-018F8EBB2A7  | 2023-04-15 19:22:05.787 |

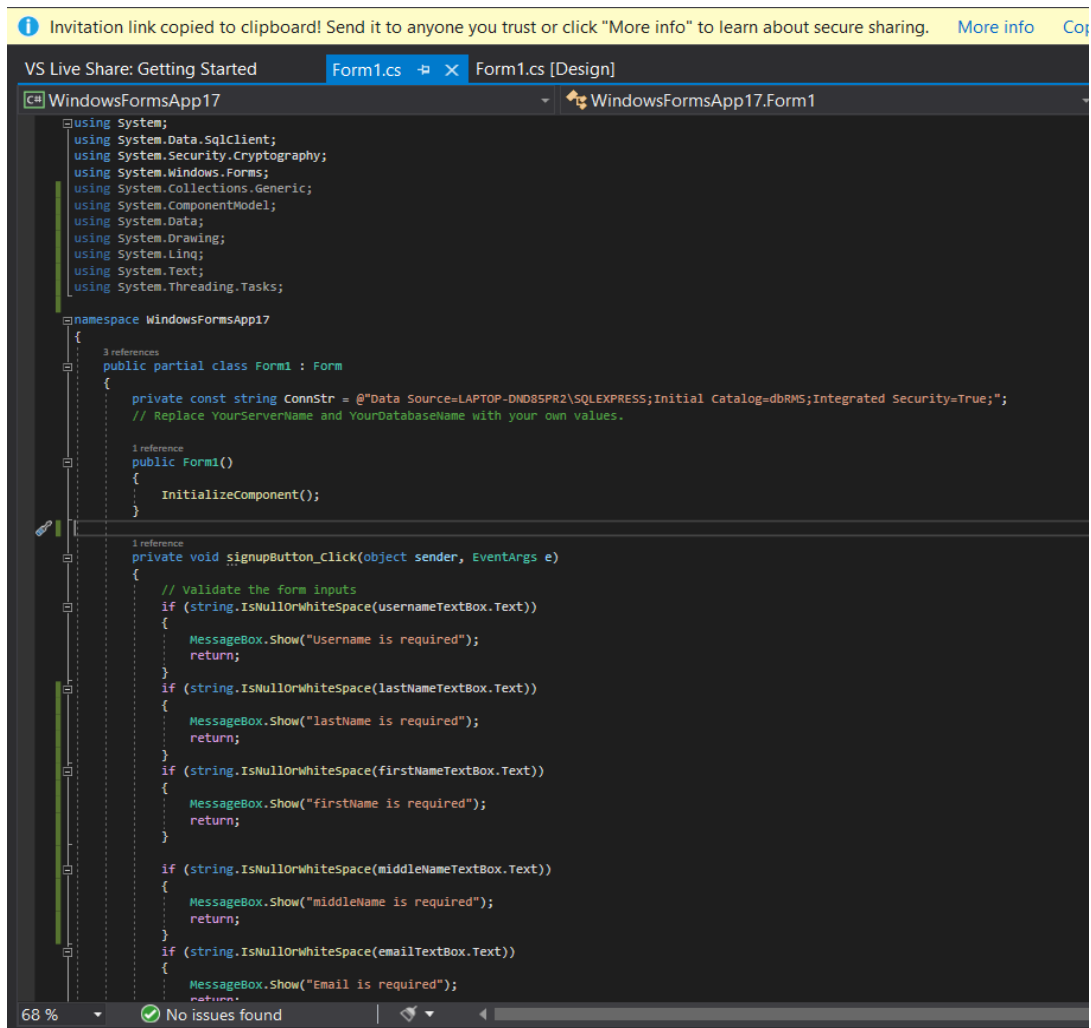
Query executed successfully.

LAPTOP-DND85PR2\SQLEXPRESS ... LAPTOP-DND85PR2\Rion (52) dbRMS

Ready Ln 1 Col 1 Ch 1 INS



The screenshot of Registration form code:

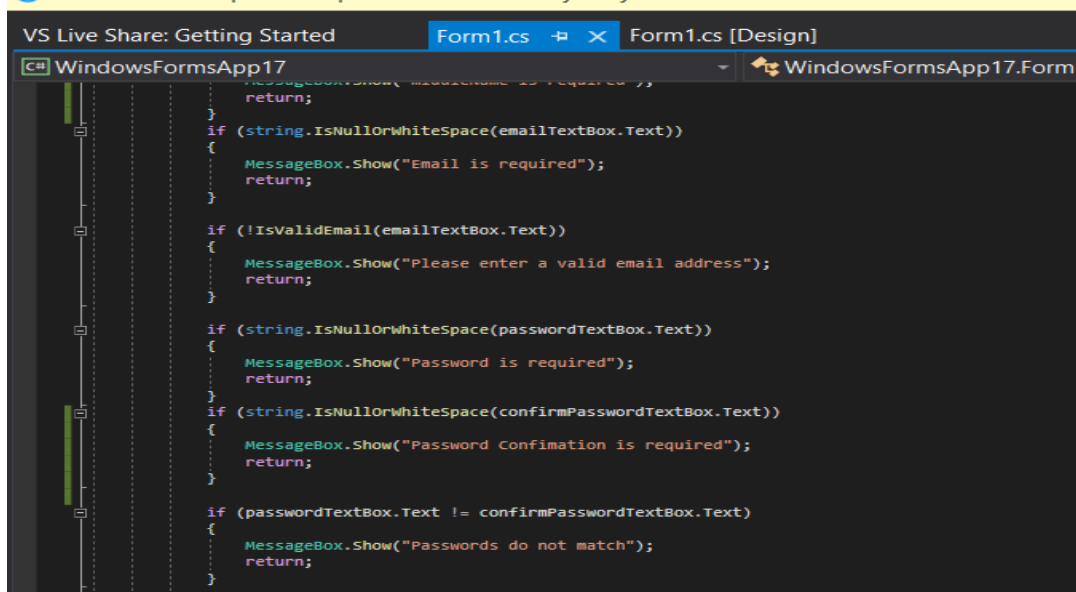


```
using System;
using System.Data.SqlClient;
using System.Security.Cryptography;
using System.Windows.Forms;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace WindowsFormsApp17
{
    3 references
    public partial class Form1 : Form
    {
        private const string ConnStr = @"Data Source=LAPTOP-DND8SPR2\SQLEXPRESS;Initial Catalog=dbRMS;Integrated Security=True;";
        // Replace YourServerName and YourDatabaseName with your own values.

        1 reference
        public Form1()
        {
            InitializeComponent();
        }

        1 reference
        private void signupButton_Click(object sender, EventArgs e)
        {
            // Validate the form inputs
            if (string.IsNullOrEmpty(usernameTextBox.Text))
            {
                MessageBox.Show("Username is required");
                return;
            }
            if (string.IsNullOrEmpty(lastNameTextBox.Text))
            {
                MessageBox.Show("lastName is required");
                return;
            }
            if (string.IsNullOrEmpty(firstNameTextBox.Text))
            {
                MessageBox.Show("firstName is required");
                return;
            }
            if (string.IsNullOrEmpty(middleNameTextBox.Text))
            {
                MessageBox.Show("middleName is required");
                return;
            }
            if (string.IsNullOrEmpty(emailTextBox.Text))
            {
                MessageBox.Show("Email is required");
                return;
            }
        }
    }
}
```



```
        if (string.IsNullOrEmpty(emailTextBox.Text))
        {
            MessageBox.Show("Email is required");
            return;
        }

        if (!IsValidEmail(emailTextBox.Text))
        {
            MessageBox.Show("Please enter a valid email address");
            return;
        }

        if (string.IsNullOrEmpty(passwordTextBox.Text))
        {
            MessageBox.Show("Password is required");
            return;
        }
        if (string.IsNullOrEmpty(confirmPasswordTextBox.Text))
        {
            MessageBox.Show("Password Confirmation is required");
            return;
        }

        if (passwordTextBox.Text != confirmPasswordTextBox.Text)
        {
            MessageBox.Show("Passwords do not match");
            return;
        }
    }
}
```

```
// Create the account
using (var conn = new SqlConnection(ConnStr))
{
    conn.Open();
    var salt = GenerateSalt();
    var hashedPassword = HashPassword(passwordTextBox.Text, salt);

    var cmd = new SqlCommand("INSERT INTO tblAcc (Username, LastName, FirstName, MiddleName, Email, accPassword, Salt) SELECT @Username, @LastName, @FirstName, @MiddleName, @Email, @Password, @Salt WHERE NOT EXISTS (SELECT 1 FROM tblAcc WHERE Username = @Username OR Email = @Email)", conn);
    cmd.Parameters.AddWithValue("@Username", usernameTextBox.Text);
    cmd.Parameters.AddWithValue("@LastName", lastNameTextBox.Text);
    cmd.Parameters.AddWithValue("@FirstName", firstNameTextBox.Text);
    cmd.Parameters.AddWithValue("@MiddleName", middleNameTextBox.Text);
    cmd.Parameters.AddWithValue("@Email", emailTextBox.Text);
    cmd.Parameters.AddWithValue("@Password", hashedPassword);
    cmd.Parameters.AddWithValue("@Salt", salt);
}
```

```
try
{
    var rowsAffected = cmd.ExecuteNonQuery();

    if (rowsAffected == 1)
    {
        MessageBox.Show("Account created successfully");
        ClearForm();
    }
    else
    {
        MessageBox.Show("Failed to create account: username or email already exists");
    }
}
catch (SqlException ex)
{
    if (ex.Number == 2601) // Duplicate key violation error code
    {
        MessageBox.Show("Failed to create account: username or email already exists");
    }
    else
    {
        MessageBox.Show($"Failed to create account: {ex.Message}");
    }
}
catch (Exception ex)
{
    MessageBox.Show($"Failed to create account: {ex.Message}");
}
}
```

