

# Tema 1

1. Să se implementeze în C# o aplicație de tip WindowsForm Application care să conțină minim 5 tipuri de controale. Tema aplicației este la alegere.

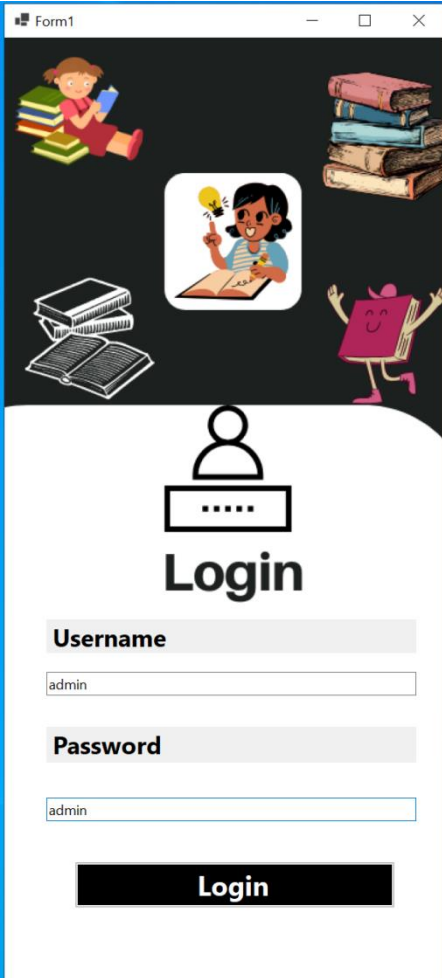
Pentru această temă, am ales să dezvolt o aplicație WindowsForm care implementează un catalog în care ne putem autentifica ca 'Admin'.

În acest catalog, putem vizualiza elevii școlii împreună cu mediile lor și mediile ponderate bazate pe notele lor, fiind atașată și o imagine pentru fiecare elev.

Pentru realizarea aplicației, am folosit TextBox-uri, Label-uri, butoane, liste, meniuri și un container pentru imaginea studentului.

## I) Interfata aplicației:

Pagina de login care are un design simplu unde utilizatorul se poate autentifica. Dacă autentificarea se face cu succes se deschide meniul utilizatorului dacă nu vom afișa un mesaj de alertă.

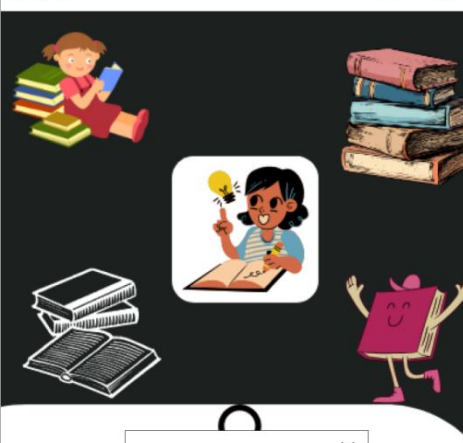


The screenshot shows a Windows Form titled 'Form1'. The background features a dark blue area with illustrations of a girl reading, a stack of books, a lightbulb, and a smiling book character. Below this, there is a white section with a user icon and the word 'Login'. The form includes two text boxes: 'Username' with the value 'admin' and 'Password' with the value 'admin'. A black 'Login' button is at the bottom.



The screenshot shows the same login form as the previous one, but with a small dialog box open in the center. The dialog box has a title bar with a close button and contains the text 'Autentificare reușită!' (Authentication successful!) and an 'OK' button. The login form's text boxes and button are still visible behind the dialog.

Form1



Invalid username or password!

OK

**Username**

utilizator

**Password**

utilizator\_gresit

**Login**

Meniul daca autentificarea se face cu succes:

Form2

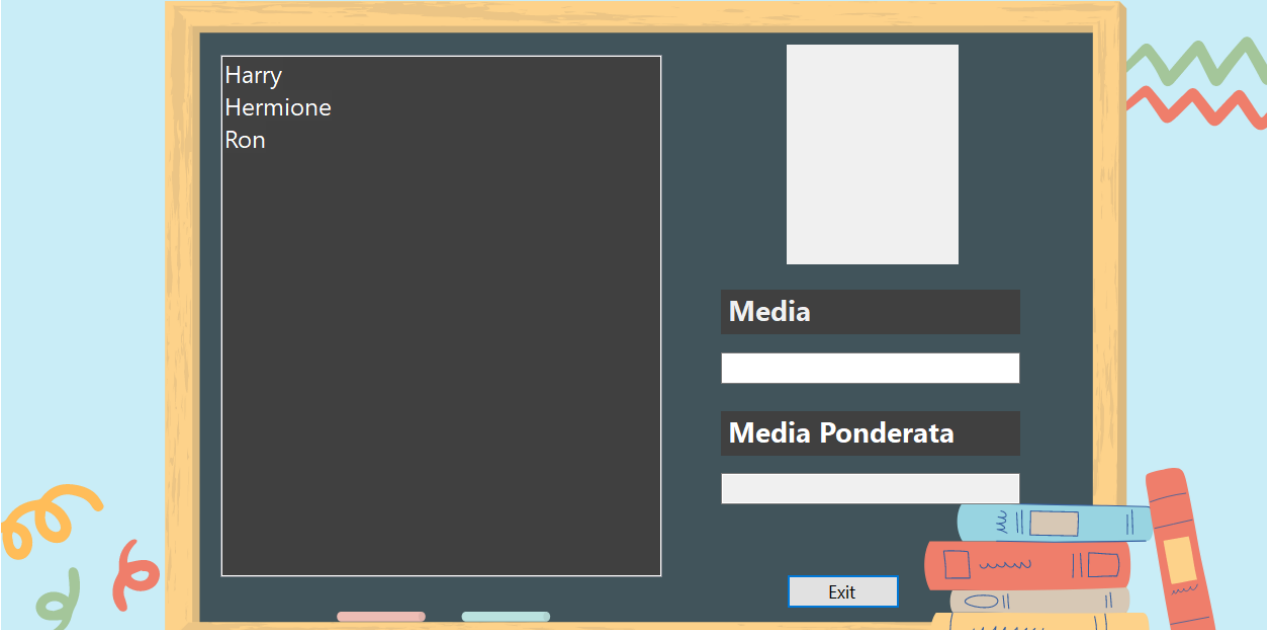
HELP LOGOUT

Harry  
Hermione  
Ron

**Media**

**Media Ponderata**


Exit



Form2

HELP LOGOUT

Harry  
Hermione  
Ron



**Media**  
9.5


**Media Ponderata**  
9.8

Exit

Form2

HELP LOGOUT

Harry  
Hermione  
Ron



**Media**  
8.7


**Media Ponderata**  
8.9

Exit

Form2

HELP LOGOUT

Harry  
Hermione  
Ron

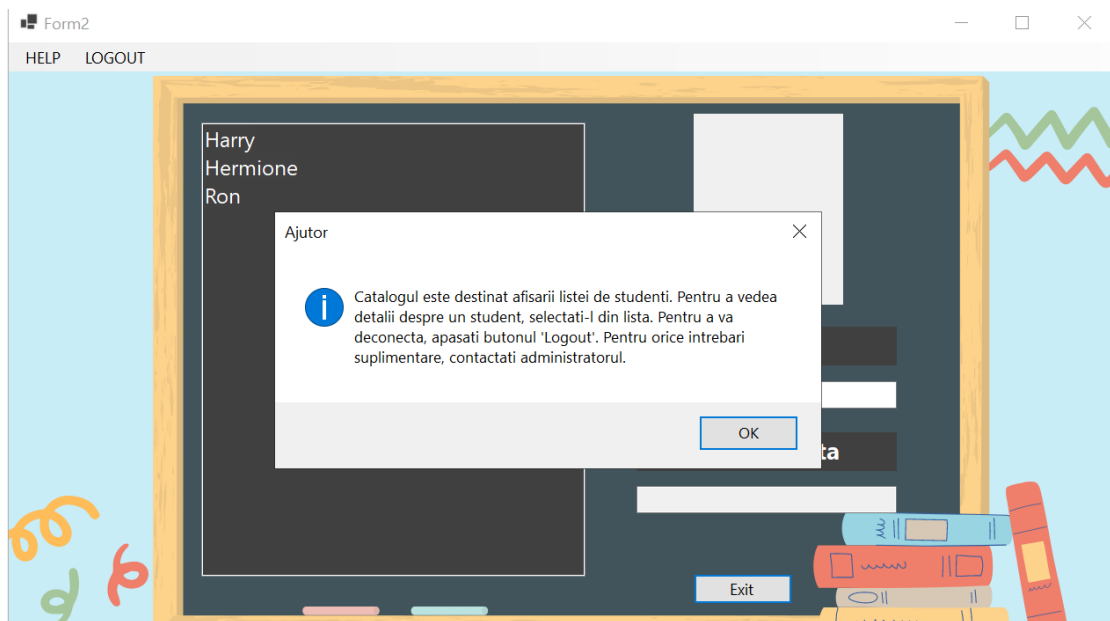


**Media**  
7.8

**Media Ponderata**  
7.5

Exit

Apasand butonul Help putem vedea mai multe informatii despre aplicatie si modul ei de folosire.



## II) Codul sursa aferent aplicatiei:

### 1. Formularul de logare:

```
1  using System.IO;
2
3  namespace WinFormsApp1_ex1
4  {
5      8 references
6      public partial class Form1 : Form
7      {
8          3 references
9          public Form1()
10         {
11             InitializeComponent();
12         }
13
14         1 reference
15         private void textBox1_TextChanged(object sender, EventArgs e)
16         {
17             string username = textBox1.Text;
18         }
19
20         1 reference
21         private void textBox2_TextChanged(object sender, EventArgs e)
22         {
23             string password = textBox2.Text;
24         }
25     }
```

```
1 reference
private void button1_Click(object sender, EventArgs e)
{
    string enteredUsername = textBox1.Text;
    string enteredPassword = textBox2.Text;
    bool userFound = false;

    try
    {
        using (StreamReader sr = new StreamReader("users.txt"))
        {
            string line;
            while ((line = sr.ReadLine()) != null)
            {
                string[] parts = line.Split(',');
                string usernameFromFile = parts[0].Trim();
                string passwordFromFile = parts[1].Trim();
```

```
                if (enteredUsername == usernameFromFile && enteredPassword == passwordFromFile)
                {
                    userFound = true;
                    break;
                }
            }
        }
    }
    catch (Exception ex)
    {
        MessageBox.Show("Error reading user data: " + ex.Message);
        return;
    }
}
```

```
if (userFound)
{
    MessageBox.Show("Autenticare reusita!");
    Form1 welcomeForm = new Form1();
    welcomeForm.Show();
    this.Hide();

    Form2 welcomeForm2 = new Form2(enteredUsername);
    welcomeForm2.Show();
    welcomeForm.Close();
}
else
{
    MessageBox.Show("Invalid username or password!");
}
}
```

## 2. Formularul pentru catalog:

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Windows.Forms.Design;
11 using static System.Windows.Forms.VisualStyles.VisualStyleElement.StartPanel;
12 using System.IO;
13
```

```
namespace WinFormsApp1_ex1
{
    5 references
    public partial class Form2 : Form
    {
        Dictionary<string, string> imaginiElevi = new Dictionary<string, string>();
        private const string FileName = @"D:\FACULTATE\AN III sem 2\II\LAB\WinFormsApp1_ex1\WinFormsApp1_ex1\bin\Debug\net8.0-windows\students.txt";

        1 reference
        public Form2(string username)
        {
            InitializeComponent();
            this.Load += new System.EventHandler(this.Form2_Load);
            imaginiElevi.Add("Harry", @"D:\FACULTATE\AN III sem 2\II\LAB\WinFormsApp1_ex1\WinFormsApp1_ex1\bin\Debug\net8.0-windows\harry.jpg");
            imaginiElevi.Add("Hermione", @"D:\FACULTATE\AN III sem 2\II\LAB\WinFormsApp1_ex1\WinFormsApp1_ex1\bin\Debug\net8.0-windows\pers1.jpg");
            imaginiElevi.Add("Ron", @"D:\FACULTATE\AN III sem 2\II\LAB\WinFormsApp1_ex1\WinFormsApp1_ex1\bin\Debug\net8.0-windows\pers3.jpg");
        }
    }
}
```

```
1 reference
private void label1_Click(object sender, EventArgs e)
{
    ...
}

1 reference
private void Form2_Load(object sender, EventArgs e)
{
    try
    {
        using (StreamWriter writer = new StreamWriter(FileName))
        {
            writer.WriteLine("Harry");
            writer.WriteLine("Hermione");
            writer.WriteLine("Ron");
        }
    }
}
```

```
using (StreamReader str = new StreamReader(FileName))
{
    string line;
    while ((line = str.ReadLine()) != null)
    {
        studentListBox.Items.Add(line);
    }
}
catch (Exception ex)
{
    MessageBox.Show("Eroare la operarea cu fisierul: " + ex.Message);
}
}
```

```
// Exit button
1 reference
private void button1_Click(object sender, EventArgs e)
{
    Application.Exit();
}
```

```
// Students List
1 reference
private void studentListBox_SelectedIndexChanged(object sender, EventArgs e)
{
    if (studentListBox.SelectedItem != null)
    {
        string studentName = studentListBox.SelectedItem.ToString();

        if (studentName == "Harry")
        {
            mediaTextBox.Text = "9.5";
            textBox2.Text = "9.8";
            pictureBox1.ImageLocation = imaginiElevi["Harry"];
        }

        else if (studentName == "Hermione")
        {
            mediaTextBox.Text = "8.7";
            textBox2.Text = "8.9";
            pictureBox1.ImageLocation = imaginiElevi["Hermione"];
        }
    }
}
```

```
        else if (studentName == "Ron")
        {
            mediaTextBox.Text = "7.8";
            textBox2.Text = "7.5";
            pictureBox1.ImageLocation = imaginiElevi["Ron"];
        }
    }
}

// logout menu
1 reference
private void LOGOUTToolStripMenuItem_Click(object sender, EventArgs e)
{
    this.Close();
    Form1 loginForm = new Form1();
    loginForm.Show();
}
```

```
// Help
1 reference
private void hELPToolStripMenuItem_Click(object sender, EventArgs e)
{
    string helpMessage = "Catalogul este destinat afisarii listei de studenti. " +
        "Pentru a vedea detalii despre un student, selectati-l din lista si apasati butonul 'View'. " +
        "Pentru a va deconecta, apasati butonul 'Logout'. " +
        "Pentru orice intrebari suplimentare, contactati administratorul.";

    MessageBox.Show(helpMessage, "Ajutor", MessageBoxButtons.OK, MessageBoxIcon.Information);
}

// Mean TextBox
1 reference
private void mediaTextBox_TextChanged(object sender, EventArgs e)
{
}
```

```
// MeanP TextBox
1 reference
private void textBox2_TextChanged(object sender, EventArgs e)
{
    :
    :
}

// View button
0 references
private void View_Click(object sender, EventArgs e)
{
    :
    :
}

1 reference
private void pictureBox1_Click(object sender, EventArgs e)
{
    :
    :
}
}
```