using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Data.SqlClient;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

using System.Windows.Forms.DataVisualization.Charting;

namespace Dashboard

{

public partial class DashboardForm : Form

{

string connectionString = @"Data Source=DESKTOP-MBJQ0QD;Initial Catalog=Демо;Integrated Security=True;Connect Timeout=30;Encrypt=True;TrustServerCertificate=True";

public DashboardForm()

{

InitializeComponent();

}

private void DashboardForm\_Load(object sender, EventArgs e)

{

LoadGroups();

}

private void LoadGroups()

{

using (SqlConnection connection = new SqlConnection(connectionString))

{

connection.Open();

var command = new SqlCommand("SELECT Номер\_группы, Специальность FROM Группа", connection);

var reader = command.ExecuteReader();

var table = new DataTable();

table.Load(reader);

comboBoxGroups.DisplayMember = "Специальность";

comboBoxGroups.ValueMember = "Номер\_группы";

comboBoxGroups.DataSource = table;

}

}

private void comboBoxGroups\_SelectedIndexChanged(object sender, EventArgs e)

{

if (comboBoxGroups.SelectedValue == null) return;

int groupId = Convert.ToInt32(comboBoxGroups.SelectedValue);

using (SqlConnection connection = new SqlConnection(connectionString))

{

connection.Open();

var command = new SqlCommand(@"

SELECT Номер\_студента, Фамилия + ' ' + Имя + ' ' + Отчество AS ФИО

FROM Студент WHERE Номер\_группы = @groupId", connection);

command.Parameters.AddWithValue("@groupId", groupId);

var reader = command.ExecuteReader();

var table = new DataTable();

table.Load(reader);

comboBoxStudents.DisplayMember = "ФИО";

comboBoxStudents.ValueMember = "Номер\_студента";

comboBoxStudents.DataSource = table;

}

}

private void comboBoxStudents\_SelectedIndexChanged(object sender, EventArgs e)

{

if (comboBoxStudents.SelectedValue == null) return;

int studentId = Convert.ToInt32(comboBoxStudents.SelectedValue);

using (SqlConnection connection = new SqlConnection(connectionString))

{

connection.Open();

var adapter = new SqlDataAdapter(@"

SELECT Дисциплина.Название, Оценки.Оценка

FROM Оценки

INNER JOIN Дисциплина ON Оценки.Код\_дисциплины = Дисциплина.Код\_дисциплины

WHERE Оценки.Номер\_студента = @studentId", connection);

adapter.SelectCommand.Parameters.AddWithValue("@studentId", studentId);

var table = new DataTable();

adapter.Fill(table);

dataGridViewGrades.DataSource = table;

chartGrades.Series.Clear();

var series = new Series("Оценки")

{

ChartType = SeriesChartType.Column

};

foreach (DataRow row in table.Rows)

{

series.Points.AddXY(row["Название"].ToString(), Convert.ToInt32(row["Оценка"]));

}

chartGrades.Series.Add(series);

}

}

private Dictionary<string, double> GetGroupAverageGrades(int groupId)

{

var result = new Dictionary<string, double>();

using (SqlConnection connection = new SqlConnection(connectionString))

{

connection.Open();

var command = new SqlCommand(@"

SELECT Дисциплина.Название, AVG(CAST(Оценки.Оценка AS FLOAT)) AS Средний\_Балл

FROM Оценки

INNER JOIN Дисциплина ON Оценки.Код\_дисциплины = Дисциплина.Код\_дисциплины

INNER JOIN Студент ON Оценки.Номер\_студента = Студент.Номер\_студента

WHERE Студент.Номер\_группы = @groupId

GROUP BY Дисциплина.Название", connection);

command.Parameters.AddWithValue("@groupId", groupId);

var reader = command.ExecuteReader();

while (reader.Read())

{

string subject = reader.GetString(0);

double average = reader.GetDouble(1);

result[subject] = average;

}

}

return result;

}

}

}

DESIGNER

using System.Windows.Forms;

namespace Dashboard

{

partial class DashboardForm

{

private System.ComponentModel.IContainer components = null;

private System.Windows.Forms.ComboBox comboBoxGroups;

private System.Windows.Forms.ComboBox comboBoxStudents;

private System.Windows.Forms.DataGridView dataGridViewGrades;

private System.Windows.Forms.Label labelGroup;

private System.Windows.Forms.Label labelStudent;

protected override void Dispose(bool disposing)

{

if (disposing && (components != null)) components.Dispose();

base.Dispose(disposing);

}

private void InitializeComponent()

{

System.Windows.Forms.DataVisualization.Charting.ChartArea chartArea1 = new System.Windows.Forms.DataVisualization.Charting.ChartArea();

System.Windows.Forms.DataVisualization.Charting.Legend legend1 = new System.Windows.Forms.DataVisualization.Charting.Legend();

System.Windows.Forms.DataVisualization.Charting.Series series1 = new System.Windows.Forms.DataVisualization.Charting.Series();

System.Windows.Forms.DataVisualization.Charting.Series series2 = new System.Windows.Forms.DataVisualization.Charting.Series();

this.comboBoxGroups = new System.Windows.Forms.ComboBox();

this.comboBoxStudents = new System.Windows.Forms.ComboBox();

this.dataGridViewGrades = new System.Windows.Forms.DataGridView();

this.labelGroup = new System.Windows.Forms.Label();

this.labelStudent = new System.Windows.Forms.Label();

this.chartGrades = new System.Windows.Forms.DataVisualization.Charting.Chart();

((System.ComponentModel.ISupportInitialize)(this.dataGridViewGrades)).BeginInit();

((System.ComponentModel.ISupportInitialize)(this.chartGrades)).BeginInit();

this.SuspendLayout();

//

// comboBoxGroups

//

this.comboBoxGroups.FormattingEnabled = true;

this.comboBoxGroups.Location = new System.Drawing.Point(30, 30);

this.comboBoxGroups.Name = "comboBoxGroups";

this.comboBoxGroups.Size = new System.Drawing.Size(180, 21);

this.comboBoxGroups.TabIndex = 0;

this.comboBoxGroups.SelectedIndexChanged += new System.EventHandler(this.comboBoxGroups\_SelectedIndexChanged);

//

// comboBoxStudents

//

this.comboBoxStudents.FormattingEnabled = true;

this.comboBoxStudents.Location = new System.Drawing.Point(250, 30);

this.comboBoxStudents.Name = "comboBoxStudents";

this.comboBoxStudents.Size = new System.Drawing.Size(200, 21);

this.comboBoxStudents.TabIndex = 1;

this.comboBoxStudents.SelectedIndexChanged += new System.EventHandler(this.comboBoxStudents\_SelectedIndexChanged);

//

// dataGridViewGrades

//

this.dataGridViewGrades.ColumnHeadersHeightSizeMode = System.Windows.Forms.DataGridViewColumnHeadersHeightSizeMode.AutoSize;

this.dataGridViewGrades.Location = new System.Drawing.Point(30, 80);

this.dataGridViewGrades.Name = "dataGridViewGrades";

this.dataGridViewGrades.RowHeadersWidth = 51;

this.dataGridViewGrades.RowTemplate.Height = 24;

this.dataGridViewGrades.Size = new System.Drawing.Size(420, 200);

this.dataGridViewGrades.TabIndex = 2;

//

// labelGroup

//

this.labelGroup.AutoSize = true;

this.labelGroup.Location = new System.Drawing.Point(30, 10);

this.labelGroup.Name = "labelGroup";

this.labelGroup.Size = new System.Drawing.Size(45, 13);

this.labelGroup.TabIndex = 4;

this.labelGroup.Text = "Группа:";

//

// labelStudent

//

this.labelStudent.AutoSize = true;

this.labelStudent.Location = new System.Drawing.Point(250, 10);

this.labelStudent.Name = "labelStudent";

this.labelStudent.Size = new System.Drawing.Size(50, 13);

this.labelStudent.TabIndex = 5;

this.labelStudent.Text = "Студент:";

//

// chartGrades

//

chartArea1.Name = "ChartArea1";

this.chartGrades.ChartAreas.Add(chartArea1);

legend1.Name = "Legend1";

this.chartGrades.Legends.Add(legend1);

this.chartGrades.Location = new System.Drawing.Point(468, 12);

this.chartGrades.Name = "chartGrades";

series1.ChartArea = "ChartArea1";

series1.Legend = "Legend1";

series1.Name = "GroupSeries";

series2.ChartArea = "ChartArea1";

series2.Legend = "Legend1";

series2.Name = "StudentSeries";

this.chartGrades.Series.Add(series1);

this.chartGrades.Series.Add(series2);

this.chartGrades.Size = new System.Drawing.Size(420, 300);

this.chartGrades.TabIndex = 6;

this.chartGrades.Text = "chart1";

//

// DashboardForm

//

this.ClientSize = new System.Drawing.Size(900, 320);

this.Controls.Add(this.chartGrades);

this.Controls.Add(this.labelStudent);

this.Controls.Add(this.labelGroup);

this.Controls.Add(this.dataGridViewGrades);

this.Controls.Add(this.comboBoxStudents);

this.Controls.Add(this.comboBoxGroups);

this.Name = "DashboardForm";

this.Text = "Статистика успеваемости";

this.Load += new System.EventHandler(this.DashboardForm\_Load);

((System.ComponentModel.ISupportInitialize)(this.dataGridViewGrades)).EndInit();

((System.ComponentModel.ISupportInitialize)(this.chartGrades)).EndInit();

this.ResumeLayout(false);

this.PerformLayout();

}

private System.Windows.Forms.DataVisualization.Charting.Chart chartGrades;

}

}

LOGIN

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Data.SqlClient;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace Education

{

public partial class LoginForm : Form

{

public LoginForm()

{

InitializeComponent();

}

public void btnLogin\_Click(object sender, EventArgs e)

{

string login = txtLogin.Text;

string password = txtPassword.Text;

using (SqlConnection conn = new SqlConnection(@"Data Source=DESKTOP-MBJQ0QD;Initial Catalog=Демо;Integrated Security=True;Connect Timeout=30;Encrypt=True;TrustServerCertificate=True"))

{

conn.Open();

string query = "SELECT UserId, Role FROM Users WHERE Login = @login AND Password = @password";

SqlCommand cmd = new SqlCommand(query, conn);

cmd.Parameters.AddWithValue("@login", login);

cmd.Parameters.AddWithValue("@password", password);

SqlDataReader reader = cmd.ExecuteReader();

if (reader.Read())

{

int userId = reader.GetInt32(0);

string role = reader.GetString(1);

this.Hide();

if (role == "Student")

new StudentForm(userId).Show();

else if (role == "Teacher")

new TeacherForm(userId).Show();

else

MessageBox.Show("Неизвестная роль.");

}

else

{

MessageBox.Show("Неверный логин или пароль.");

}

}

}

}

}

LOGIN DESIGNER

namespace Education

{

partial class LoginForm

{

private System.ComponentModel.IContainer components = null;

private System.Windows.Forms.Label lblLogin;

private System.Windows.Forms.Label lblPassword;

protected override void Dispose(bool disposing)

{

if (disposing && (components != null)) components.Dispose();

base.Dispose(disposing);

}

private void InitializeComponent()

{

this.txtLogin = new System.Windows.Forms.TextBox();

this.txtPassword = new System.Windows.Forms.TextBox();

this.btnLogin = new System.Windows.Forms.Button();

this.lblLogin = new System.Windows.Forms.Label();

this.lblPassword = new System.Windows.Forms.Label();

this.SuspendLayout();

//

// txtLogin

//

this.txtLogin.Location = new System.Drawing.Point(120, 30);

this.txtLogin.Name = "txtLogin";

this.txtLogin.Size = new System.Drawing.Size(200, 20);

this.txtLogin.TabIndex = 0;

//

// txtPassword

//

this.txtPassword.Location = new System.Drawing.Point(120, 70);

this.txtPassword.Name = "txtPassword";

this.txtPassword.PasswordChar = '\*';

this.txtPassword.Size = new System.Drawing.Size(200, 20);

this.txtPassword.TabIndex = 1;

//

// btnLogin

//

this.btnLogin.Location = new System.Drawing.Point(160, 110);

this.btnLogin.Name = "btnLogin";

this.btnLogin.Size = new System.Drawing.Size(75, 23);

this.btnLogin.TabIndex = 2;

this.btnLogin.Text = "Войти";

this.btnLogin.Click += new System.EventHandler(this.btnLogin\_Click);

//

// lblLogin

//

this.lblLogin.Location = new System.Drawing.Point(40, 30);

this.lblLogin.Name = "lblLogin";

this.lblLogin.Size = new System.Drawing.Size(100, 23);

this.lblLogin.TabIndex = 3;

this.lblLogin.Text = "Логин:";

//

// lblPassword

//

this.lblPassword.Location = new System.Drawing.Point(40, 70);

this.lblPassword.Name = "lblPassword";

this.lblPassword.Size = new System.Drawing.Size(100, 23);

this.lblPassword.TabIndex = 4;

this.lblPassword.Text = "Пароль:";

//

// LoginForm

//

this.ClientSize = new System.Drawing.Size(380, 170);

this.Controls.Add(this.txtLogin);

this.Controls.Add(this.txtPassword);

this.Controls.Add(this.btnLogin);

this.Controls.Add(this.lblLogin);

this.Controls.Add(this.lblPassword);

this.Name = "LoginForm";

this.Text = "Авторизация";

this.ResumeLayout(false);

this.PerformLayout();

}

public System.Windows.Forms.TextBox txtLogin;

public System.Windows.Forms.TextBox txtPassword;

public System.Windows.Forms.Button btnLogin;

}

}